

# HOW TO USE ATARI8WAREZ SIO2PC DEVICES WITH ASPEQT TO COPY YOUR ATARI DISKS INTO DISK IMAGES USING COPY2000

Couple of people asked me about how to use a sector copier program like Copy2000 with AspeQt and my SIO2PC/10502PC Dual-USB device to copy their Atari Disks to an ATR image file on the PC. Here's a step-by-step instructions

The following instructions are for copying unprotected disks, for protected disks AtariMax Prosystem must be used with the SIO2PC/10502PC Dual-USB in 10502PC mode.

1. Make sure you installed the proper drivers for the model of the device you purchased successfully before attempting this procedure (Refer to the [Installation Guide](#)). Also make sure there is no heavy CPU usage software running on your PC in the background. Following instructions are Windows specific, for Linux and Mac OS X make necessary substitutions where the PC OS functions are mentioned.
2. Connect your Atari disk drive (1050/810/Other) to the SIO port of your Atari,
3. Connect the SIO2PC/10502PC Dual-USB to the second SIO port of your disk drive,
4. Set the Drive ID of your disk drive to D2: (using the drive-id switch at the back of the drive, (refer to page 4 of the Atari DOS 2.5 user manual for switch settings
5. Insert the USB cable of the SIO2PC to the same port you used when you installed the drivers (you may use another USB port but you will then need to re-install drivers)
6. Go to device manager in Windows and expand the Ports (COM & LPT) branch of the device tree and note the COM port used by the SIO2PC device
7. Start AspeQt on the PC/Laptop and If you are using AspeQt for the first time you may be asked whether you want to change the Options, answer yes, otherwise click Tools/Options from the menu and select "Standard Serial Port" on the Options dialog.
8. Under "Port Name" type the port name you noted in step 6. above. Change "Handshake method" to DSR and high-speed mode baud rate to 57600 bps if you are using a high-speed capable OS or DOS on your Atari computer, otherwise select 19200 bps.

There are several choices for using a high-speed SIO capable Atari computer. For the purposes of this guide I included an Atari DOS 2.5 disk image enhanced with Hiassoft's high-speed OS patch. The patch will load automatically when your XL/XE computer is booted from AspeQt. Note that this patch will not work with 400/800 series. For those computers see [Hias's high-speed patch page](#) for instructions on how to create 400/800 compatible boot disk image. High speed SIO is also natively supported by SpartaDos 2.x and up and SDX in various maximum speeds (other DOS may also support high speed SIO). For the purposes of this tutorial we will stick with patched Atari DOS 2.5

Alternatively you may use non-standard speeds by checking the "Use non-standard speeds" check box on the Options dialog. If you check that option you need to specify a Pokey Divisor for AspeQt to calculate the actual baud rate. Many Virtual Com Ports (like the one that is created by this SIO2PC device) support non-standard serial port baud rates and AspeQt can take advantage of these. At Pokey Divisor 0 you will reach the highest SIO speeds possible but not all software may work reliably at that speed, it is best to experiment with speeds before settling with one. For this tutorial we will stick with the safe 3 X SIO speeds (57600 bps).

9. Click Save and accept "Standard Serial Port" settings as defined in step 8. above.
10. Now [download](#) and mount the attached AtariDOS 2.5 disk image (.ATR) to drive slot D1: in AspeQt by clicking the blue disk icon and browsing the folder in which the file resides (or drag the file out of the folder it resides and drop it onto drive 1 slot in AspeQt)
11. Next, [download](#) and mount COPY2000 disk image to AspeQt drive slot D4:
12. Turn your Atari drive ON and insert a single or enhanced density disk you want to make a disk image copy of.
13. Turn your Atari XL/XE ON and if everything was set properly so far you should see your Atari booting AtariDOS 2.5 from AspeQt drive number 1.
14. After the DOS boots and the Atari drops into BASIC type DOS to go to the DOS Menu.
15. At this point you should have DOS 2.5 disk image in D1:, no disk images mounted on D2: and D3, and COPY2000 disk mounted on D4: in AspeQt.
16. Swap drives D1: and D3: by dragging AtariDOS 2.5 disk image and dropping it onto drive slot D3:
16. Click Disk/New Disk Image from the AspeQt menu and click on either "Standard Single Density" or the "Standard Enhanced Density" radio button on the "Create a disk image" dialog depending on the density of the real disk to be copied. Click OK and an empty and untitled disk image will be mounted to the first available drive slot in AspeQt (that will be the drive slot 1). Now you are ready to start copying.
17. Go back to your Atari and type "L" from the DOS Menu, then type D4:COPY2000.COM and press Return, COPY2000 will load and will display:

```
SOURCE: D1
TARGET: D2
FORMAT: YES
MEMORY: (Will depend on the available RAM in your Atari)
DENSITY: - (Will be filled in later)
```

Since you really want to copy from D2: to D1, press OPTION console key to swap drive numbers so that SOURCE will be D2: and TARGET will be D1:

Press START console key on your Atari twice and COPY2000 will start a sector copy of disk in drive 2, to the blank disk image in drive 1

18. COPY2000 may perform more than one pass depending on the available memory your XL/XE has, also the copy speed will depend on the speed enhancement upgrade you may have in your Atari drive. With a stock Atari drive, reads will be at normal SIO speeds but writes to the disk image will be at the set AspeQt speed. Once the copy is finished, click on the "Show D1:'s Properties" button (the icon immediately to the left of the disk image name – Untitled image) to see a directory of the newly created disk image.

19. Next, click on the "Save D1:" button (the third icon to the left of disk image name) to permanently save the disk image file to your PC's hard drive. You could also give the image a meaningful name during this process. Note that the 2<sup>nd</sup> button to the left of the disk image name is used to "commit all changes to the disk automatically", if this button is clicked it will turn blue to indicate that auto-save is ON for this drive, meaning all changes to this disk will be saved to the PC's hard disk in real time. To turn it OFF, click on it one more time. This setting is turned OFF by default and won't be remembered in between AspeQt sessions, and you need to enable it each time you want to use it.

**There you have it;** you successfully created your first disk image from one of your existing floppy disks.