

## SIO2SD 3.5 Instructions

Format the SD card (FAT) with the PC and create a folder named "ATARI". In the ATARI folder allows you to copy your files and other subfolders. It is recommended not to save more than 100 files in a folder. Better to have several subfolders create in the ATARI folder as many individual files in this copy. The first time after that switching on with the freshly formatted SD card, SIO2SD will generate a SIO2SD.CFG file. This contains the configuration (the assignment file -> Atari drive).

To update the firmware (AVR software), copy the SIO2SD.BIN file (28k in size) the root folder of the SD card, insert the card into SIO2SD and start with the corresponding one keyboard shortcut the update feature. **ATTENTION!** The ATARI folder must also be on the SD. Otherwise the card will not be recognized by SIO2SD and the update will not be executed.

### Keys

There are five buttons on the board that are placed roughly like this:

K1	K3	
K2	K4	SHIFT

#### Normal mode:

- K1: next drive: D1, D2, ..., D15, V1, ... (up to the first free virtual drive)
- SHIFT + K1: previous drive
- K2: next folder / next file
- SHIFT + K2: previous folder / previous file
- K3: higher-level folder (cd ..)
- SHIFT + K3: swap the current drive with the next virtual drive (**SWAP**)

For example: D1 → V1 → V2 → ... → D1, etc.

- K4: go to the folder / assign the current file to the drive
- SHIFT + K4: turn off the current drive (eject disc)
- SHIFT + K4: with the drive switched off (the display shows "OFF") a new empty ATR Create file (the display shows "EMPTY") **ATTENTION!** The drive still needs to be replaced by the Atari DOS will be formatted.
- SHIFT (double-click): SETUP mode

#### SETUP mode:

- K1: next setting
- SHIFT + K1: previous setting
- K2: next value
- SHIFT + K2: previous value
- K3: Exit SETUP mode
- SHIFT + K3: firmware update (confirm with K2)
- K4: Configurator mode (the configurator is assigned to drive D1)
- SHIFT + K4: Switch off SIO
- SHIFT (double-click): exit SETUP mode

### Settings

Depending on the AVR software version settings may differ.

- sio high speed (the transmission rate - the smaller the value the faster the Communication. To achieve the highest transfer rates, the SIO routines become needed by Matthias Reichl (Hias) <http://www.horus.com/~hias/atari/>.
  - off
  - hsindex from 0 to 16 (6 is the default)
- "Topdrive" mode (controlling the 7-bit AUX2)
  - on (hsindex = 6)
  - off

- Cfgtool mode (when should the configurator be loaded)
  - startup + shift (when the ATARI is turned on, the SIO2SD "Shift" key is pressed)
  - every startup (always after switching on the ATARI)
  - LED mode (what are the LEDs showing)
  - SD read / write - read and write commands of the SD card
- SIO read / write - read and write commands of the SIO
- SD act / SIO act - the first LED: SD activities, the second LED: SIO activities
- device id (device number - for the SIO2SD.XEX configurator - version 2.2 or higher)
- from 0 to 3
- write protect (write protection of ATR files - version 2.2 or higher)
- never - ATR files can be described
- obey ATR flag - the default, ATR write permissions decide if the files can be described or not
- always - ATR files are read-only
- key rep delay (the time from the first key press to the beginning of the automatic key Keystroke repeat in 1/50 seconds)
- from 0 to 50 (0s - 1s)
- key rep step (the time between automatic key repeat in 1/50 seconds)
- from 0 to 10 (0s - 0.2s)

### Short Selection

If one of the K1 to K4 keys is held down during power up, the drive becomes D1 overwritten with a virtual drive (corresponding to V1 to V4).

### Exchange drives (SWAP)

The prerequisite for this function is that the disk images are assigned to the virtual drives (V1, V2, etc.) are assigned.

With the key combination Shift + K3 you change the images: D1 → V1 → V2 → ... → D1, etc.

### The Configurator

First steps:

Sio2SD\_CFG\_PJ.HLP - Copy this file to the SD card in the ATARI folder

Sio2SD v35.xex - Rename this file (configurator) in Sio2SD.xex and on copy the SD card into the main folder

Sio2SDBootLoaderCfgTools.atr - This file could be an alternative to the configurator. The favorite games you can (for example, with the total Commander) into the Sio2SDBootLoaderCfgTools.atr Image directory.

If you want to do without the configurator, you can rename this file to Sio2SD.xex and to the SD card in copy the main folder.

Instead of the configurator then a game loader is loaded. From the list you can then quickly choose a game and load.

The first important decision is whether you want to use the "Topdrive" mode.

The advantage:

- fast loading even with ATARI OS

The disadvantage:

- compatibility issues

If the "Topdrive" mode is switched on, a start screen will be displayed and you will be asked where to load the turbo loader:

START = \$ 100

SELECT = \$ 600

OPTION + START = \$ 500

OPTION + SELECT = \$ 700

If you (despite the active "Topdrive" mode) renounce now once on the turbo-loader would like - just press the RESET button.

The configurator operates all functions of the SIO2SD firmware Ver.3.1 and these Firmware is also required. The data transfer takes place with the transfer rate hindex = 6 instead of. The configurator starts from drive 1. If the drive does not respond, it will search Configurator after the next SIO device (2-4).

To start the configurator, you may want to use the SIO2SD Shift key at Keep power on (see "Cfgtool Mode" settings). If the ATARI already is switched on, you can double-click the SIO2SD Shift key and after the ATARI reset the configurator is loaded.

The picture is divided into two parts. Above are the drives D1-D15, below the folders and the files are displayed. In the middle there is a status line.

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After starting, the configurator loads the content from the current folder. The loading will followed by the configurator. With the **CAPS** key the behavior can be changed so that the first entry remains highlighted and the rest is reloaded in the background. The **TAB** key interrupts (and continues to push) the loading from the folder contents.

The **Logo** key is used for updating (the current folder is loaded again).

With the **"Return"** key one changes into the marked subfolder and with **"ESC"** key jumps you go back.

The arrow keys (up, down) or the joystick move the marking accordingly.

The same with pressed Ctrl (Control) key rolls the lower window and with pressed Ctrl and Shift keys - the upper window.

**Ctrl-Q** and **Ctrl-Z** work the same way as **"Home"** and **"End"** buttons on the PC.

In general, the buttons in the configurator retain their function, regardless of the working mode.

The following picture shows the effect of the arrow keys in the lower window:

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The following picture shows the effect of the arrow keys in the upper window (depending on the Working mode):

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The firmware 3.x supports 15 drives and 99 virtual drives.

The upper window shows 8 drives at the same time from D1 to D15 or from V1 to V99.

The D1-D15 drives are all accessible (using keys 1-9 and A-O).

In the upper window you can address 10 virtual drives (at once), then the next portion to be reloaded (**Shift + arrow keys**).

There are three display modes (switching with **Control + T**):

1. **'L'** (LCD) - it shows what can be seen on the SIO2SD display, ie the Files associated with the drives. If the assignment is overwritten, this is signaled by the letters v, d, x in the second column.
2. **'M'** (mapping) - this is where we determine how the drive's drive mapping is made from the first line (in the upper window) should be overwritten. To override the mapping of another drive you first have to top the Window with **Ctrl + Shift + arrow keys** ↓ ↑ scroll
3. **'V'** (Virtual) - the virtual drives are displayed

Examples:

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Drive D3 (Window 1) has the Laser Ants.xex file associated with it-no override (Mapping) is active. This is also confirmed by window 2 (drive D3 = D3).

The drive D4 (in window 1, in the second column is 'd') is with the drive D3 overwritten ("Laser Ants.xex"). This override can be seen in the window 3.

The drive D5 (in window 1, in the second column is 'x') is with the configurator (SIO2SD.XEX) overwritten. In window 4 we see the override with drive 00 (V100).

The drive D6 (in window 1, in the second column is 'v') is with the virtual drive V08 overwritten (window 5). In virtual mode (window 6) we find the confirmation for it.

To change the assignments and overrides, use the keys **1-9**, or **A-O** (if SDX is active or after pressing the key combination **Ctrl-Y**).

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To assign any file to a drive, press the key **1-9**. If this drive was previously overwritten, this override is deleted. In window 7 we can see that this happened after button 6 was pressed. To delete the assignments (and overrides), we use the key combination **Shift + 1-9** (window 8 shows the situation after Shift + 6 has been pressed).

To map the file to a virtual drive that overwrites a normal drive, press **Ctrl + 1-9** (window 9). After switching to virtual mode (window 10) we see the result. The same achieves in virtual mode with the buttons **1-9**.

To delete the assignment from a virtual drive use the key combination **Shift + 1-9** in virtual mode. The result is shown by windows 11 and 12. The key combination Ctrl + 1-9 does not work in virtual mode.

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## Search Function

To find a file, there is the search function (the '?' Key) for files that match the current one Search mask are consistent.

If the search was successful and we pressed the key combination **Shift +?**, the folder in which the currently marked file is loaded.

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## Keys

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### 1. Navigation

The lower window:

**Arrows** ↓ ↑ = move the mark

**Joystick** ↓ ↑ = move the mark

**Ctrl + arrows** ↓ ↑ = scroll the bottom window ("scroll")

**Space / Shift + Space** = move the marker ("page down / up")

**Joystick** ← → = move the marker ("page down / up")

**Ctrl + Q / Ctrl + Z** = Pos1 / End ("home / end")

The upper window:

**Ctrl + Shift + Arrows** ↑ ↓ = scroll the upper window ("scroll")

**Shift + Arrows** ↑ ↓ = reload the VirtualDisks (+/- 10 entries)

**Shift + arrows** (in 'M' mode) = overwriting the drive assignment ("mapping")

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### 2. Import entries (the lower window)

**RETURN (long press)** = assign the marked file to the D1 and a cold start carry out

**RETURN** = switch to the marked folder

**ESC** = switch to the higher-level folder

**Ctrl + ESC** = switch to the main folder (ATARI)

**LOGO** = reload the contents of the current folder

**TAB** = pause / resume loading from folder contents

**Shift + one of the above functions** = load the content from the back instead of the front

**Ctrl + V** = loads 99 virtualdisk entries

**CAPS** = turns the tracking on / off:

- on - the currently loaded entry is highlighted (the marking follows)
  - off - the first entry is highlighted and the remaining entries are in the background reloaded
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### 3. Display modes (the upper window)

**Ctrl + T** = change display mode ('L', 'M', 'V')

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### 4. Drive mapping

**1-9** = assign the marked file to drive 1-9

**A-O** = map the marked file to drive 1-15

**Shift + 1-9** = delete the assignment from drive 1-9 (-OFF-)

**Shift + A-O** = delete the assignment from drive 1-15 (-OFF-)

**Ctrl + 1-9** = map the file to the virtual drive (that overwrites drive 1-8)

**Ctrl + a-o** = map the file to the virtual drive (that overwrites the drive A-O)

**Ctrl + Y** = switch between drive names 1-8 and A-O (SDX)

**Shift + Delete (Bk Space)** = undo the last assignment

**Shift + Ctrl + Clear** = delete the allocations of defunct files

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### 5. The selection and editing of the mask

**Arrows** ← → = select the mask 0-9

The mask change interrupts loading from the folder contents.

- Ctrl + arrow ←** = edit the mask (the first character is highlighted)  
**Ctrl + arrow →** = edit the mask (the last character is highlighted)
- **Shift + DELETE** = delete the mask
  - **ESC** = undo the changes
  - **RETURN** = confirm the mask
  - **TAB, LOGO** = confirm the mask and reload the folder

The mask 0 (\*. \*) can not be edited!

You can only enter allowed characters (as in the file name).

Mask change (or mask editing) also updates the number of entries in the mask current folder.

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## 6. Exchange drives (SWAP)

- S** = activate from "Swap" mode (SwapTo)  
Choose two drives to swap
- 1-9** = the selection of drives 1-9
  - A-O** = the selection of drives 1-15
  - ESC** = cancel
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## 7. Bookmarks (history)

**Shift +;** = the marked entry (also a folder) from the lower window to the "Add" bookmarks.  
Each assignment and folder change automatically becomes the bookmarks (history) added.

- ;** = show the bookmarks (chronicle) (in the lower window)  
**ESC** = leave the bookmarks (history)  
**RETURN** = go to the marked folder (and leave the bookmarks)  
**1-9** = assign the marked file to drive 1-9  
**A-O** = map the marked file to drive 1-15  
**Ctrl + CLEAR** = delete the entries that are not marked as favorite entry  
**Ctrl + P** = mark the entry as a favorite

If the configurator is stopped with **Ctrl + X** or the settings with **Shift + Ctrl + S** are stored, the bookmarks are also saved and loaded at the next start.

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## 8. Search

- ?** = search for files that match the current mask (0-9)  
**BREAK** - interrupt the search  
**Shift + ?** = change to the folder where the found (marked) file is located. there the mask 0 (\*. \*) is activated.  
On a 1GB SD card, a search takes about 10 seconds.
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## 9. Create ATR

- INSERT** = create ATR (with the file length = 0)  
**Shift + INSERT** = create new folder  
**Ctrl + R** = rename the file  
**ESC** = cancel  
**RETURN** = confirm entry  
**TAB, LOGO** = Confirm entry and reload the folder  
**CLEAR** = delete the entry (not for folders), confirm with 'Y', cancel with 'N'
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## 10. Others

- Ctrl + Shift + 1-4** = change SIO device number (1-4)  
**Ctrl + Shift + S** = save the masks and the bookmarks

**X (long press)** = restart (cold start)

















**Ctrl + X** = save the masks and bookmarks and go back to DOS

**HELP** = help (displayed in the lower window)

**Shift + HELP** = Help (will be displayed in the lower window, the window will be deleted before)

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#### Special Character

		drive	Drive with another drive D1-D15 overwritten
		virtual	drive with a virtual drive V1-V99 overwritten
		sio2sd.XEX	drive overwritten with the configurator (00 = V100)
		Parent Folder	Use the RETURN key to go to the folder
		Current folder	
		single	
		medium	
		double	
		360kb	
		720kb	
		Subfolder	With the RETURN key you can change to the folder
		Favorite subfolders	With the RETURN key you can switch to the folder
		file	Long press file RETURN -> assign the file to the D1 and perform a cold start
		favorite file	