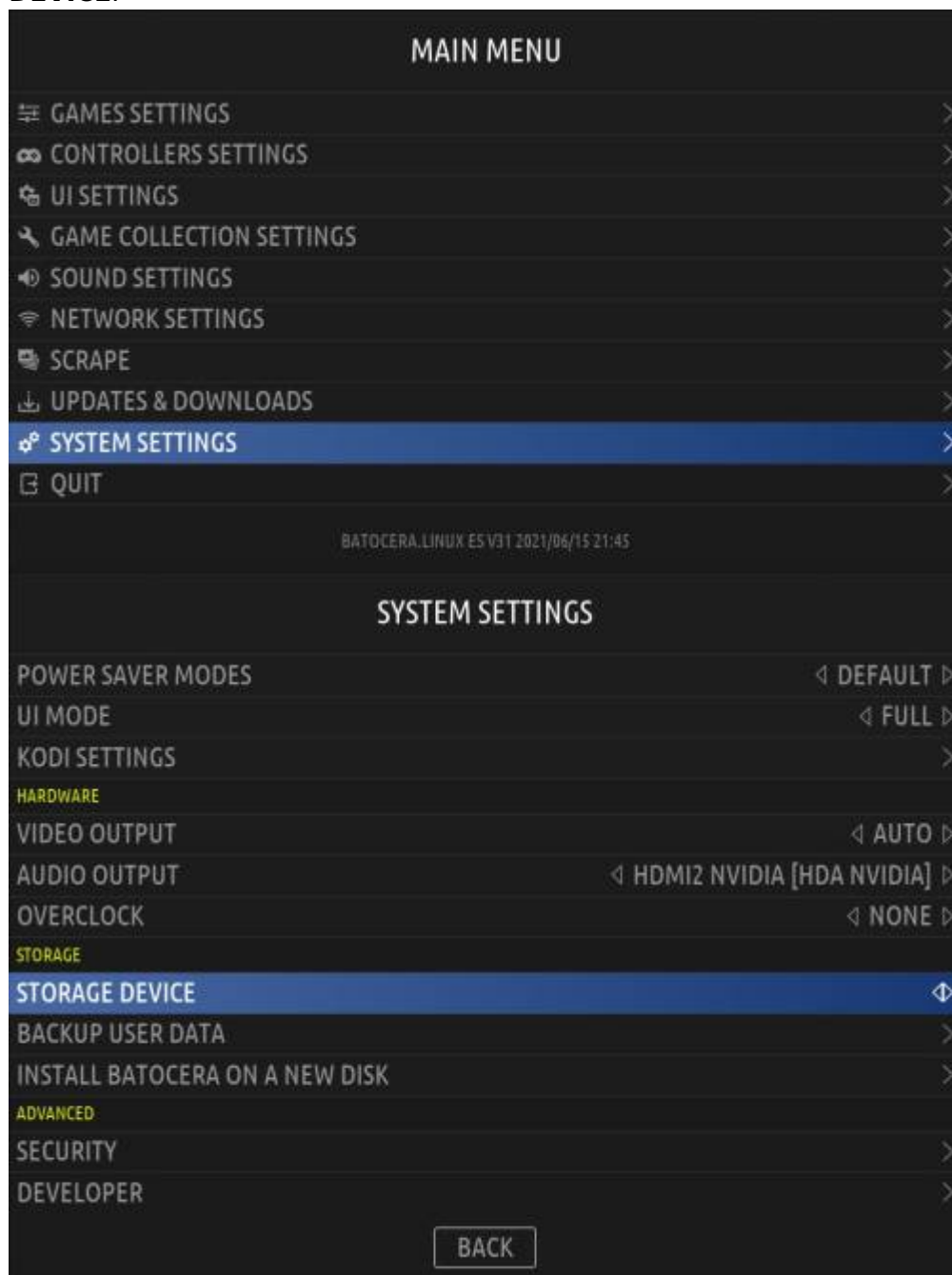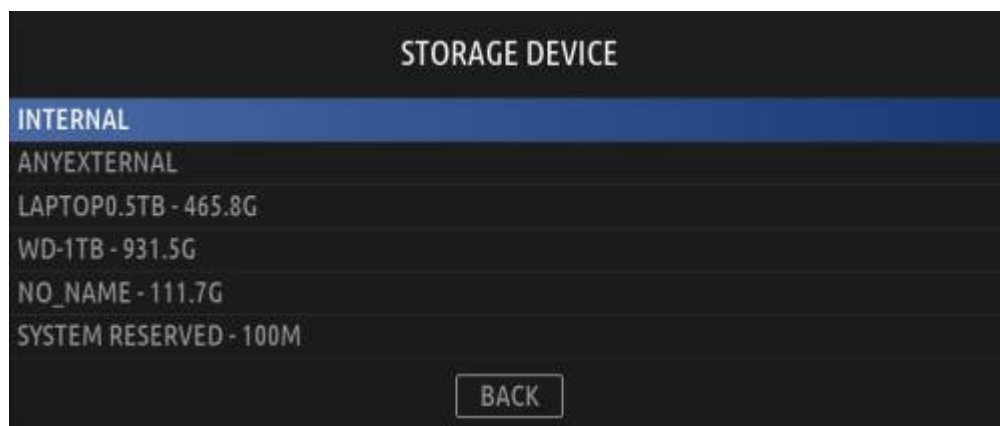# Using External Storage with Batocera

To change the storage device from INTERNAL (the drive Batocera has been flashed to) to EXTERNAL (another drive connected to the machine), follow these steps:

1. Open the **Main Menu** with [START] and navigate to **SYSTEM SETTINGS → STORAGE DEVICE**.

2. Select the storage device. Selecting "AnyExternal" will use the first external storage device that connects. How does your system decide what the first external storage device is when there is more than one connected? I'd like to know too.

In most cases, using a second USB hard drive to host your ROMs separately from the Batocera system should be completely transparent when this method is used to enable it. According to Batocera, it will just appear as if though the `roms` folder on your external drive is actually on your `/userdata` partition.

> Batocera will automatically create the folder structure it needs on the drive you select after rebooting.

Batocera will only show drives it supports reading the filesystem of (with that said, it supports a lot of them).

Manual configuration with batocera-boot.conf (advanced)

In case the above isn't sufficient, or you'd like to use individual folders for each part of userdata, the "DEVICES" storage type can offer extended functionality.

> The NAS page contains more information on the syntax.

1. Open `/boot/batocera-boot.conf`
2. Set `sharedevice` to `DEVICES`
3. Add a new line containing `sharedevice_part1=`
4. Add the appropriate keyword followed by an @ character (eg. SHARE@ or ROMS@, full list of keywords here)
5. Add the UUID of the drive containing the folder (eg. `sharedevice_part1=SHARE@12e46ca9-xxxx-xxxx-xxxx-xxxxxxxxxx`)
6. If not using the root of the drive, append a : and then add the folder path (eg. `sharedevice_part1=ROMS@2efa1068-yyyy-yyyy-yyyy-yyyyyyyyyy:/Documents/roms`)
7. Add up to ten parts as needed.

These can also be combined to have individual keywords bound to individual folders. For example:

```
sharedevice=DEVICES
sharedevice_part1=SHARE@12e46ca9-xxxx-xxxx-xxxx-xxxxxxxxxx
sharedevice_part2=ROMS@2efa1068-yyyy-yyyy-yyyy-yyyyyyyyyy:/Documents/roms
```

DEV MODE

If the above steps aren't sufficient for your purposes, you can set up the external drive manually. This will be done by editing the /boot/batocera-boot.conf file in the [boot partition](#) and providing the information of the partition that hosts the ROMs.

The list of UUIDs of all drives connected to the system can be printed with the blkid [command](#). It will output something similar to the following:

```
  /dev/sdb2: LABEL="SHARE" UUID="12e46ca9-xxxx-xxxx-xxxx-xxxxxxxxxx"
TYPE="ext4"
  /dev/sdb1: LABEL="BATOCERA" UUID="zzzz-zzzz" TYPE="vfat"
  /dev/sda1: LABEL="SHARE" UUID="2efa1068-yyyy-yyyy-yyyy-yyyyyyyyyy"
TYPE="ext4"
```

In this example, /dev/sda1 is the partition on the drive hosting my ROM files. /dev/sdb1 is the Batocera boot partition and /dev/sdb2 is the rest of the Batocera USB pendrive (that I don't want to use).

Open the /boot/batocera-boot.conf file. Change the sharedevice to DEV [UUID of the desired partition]. For example:

```
sharedevice=INTERNAL
```

would be replaced with

```
sharedevice=DEV 2efa1068-yyyy-yyyy-yyyy-yyyyyyyyyy
```

If the drive is empty, the folder structure for the ROM files will be created on next reboot.

If you are using an external hard drive and it is not recognized correctly after doing this, then it might be that your external hard drive needs more time to spin up while Batocera boots. In those cases you have to edit the /boot/batocera-boot.conf file and add the line: sharewait=15 underneath the aforementioned line (if it still does not work, try with a higher number like sharewait=20 for example).