A.L.I.S.H.A. Mini (AM3)
SD Card Formatting Instructions

Version 1.0 By Crash Works 3D

The A.L.I.S.H.A. Mini (AM3) has a DFPlayer Mini module installed on it which requires a specific SD card format and file naming convention. For more information please refer to the official DFPlayer Mini web site: https://wiki.dfrobot.com/DFPlayer_Mini_SKU_DFR0299

Pre-requisites

Micro SD card no larger than 8GB
Computer with latest Mac, Windows or Linux operating system
MP3 files downloaded from Crash Works 3D Github site:
https://github.com/crashworks3d/Iron_Man_Servo/

Formatting & File Copy Instructions

Mac OS

Plug your micro SD card into your computer and then In OSX open up a terminal and use the following commands:

```
$ sudo diskutil list
```

This will let you work out what logical disk is being used for your micro SD Card. In my case, I used the listed SIZE to work out that it was /dev/disk2. Now the card can be correctly formatted:

```
$ sudo diskutil eraseDisk FAT32 SOUND MBRFormat /dev/disk2
```

Now copy your MP3 files over to the micro SD card. They must be sequentially numbered like so:

0001.mp3
0002.mp3
0003.mp3

You will also need to copy these files across in order, the DFPlayer seems to use some sort of creation timestamp when the files are indexed. So don't copy 0003.mp3 and then 0001.mp3, otherwise wacky things will happen.

Finally, you will need to clear out any hidden files as that will also mess up the DFPlayer's indexing system.

```
$ dot_clean /Volumes/SOUND
```

Windows OS

Download and install the SD Card Formatter application from the following site:
https://www.sdcard.org/downloads/formatter/
Insert your Micro SD card into your computer
Launch the SD Card Formatter application
Select card
Select "Overwrite format"
In the "Volume label" text box, enter "SOUND"
Click the "Format" button and answer "Yes" to erase card

Once the formatting is completed, copy your MP3 files over to the micro SD card. They must be sequentially numbered like so:

0001.mp3
0002.mp3
0003.mp3

You will also need to copy these files across in order, the DFPlayer seems to use some sort of creation timestamp when the files are indexed. So don't copy 0003.mp3 and then 0001.mp3, otherwise wacky things will happen.

Linux OS

See the Crash Works Github site for more information.

Troubleshooting

When a sound effect "plays" you should see a blue LED light on the AM3 board right above the SD card slot. If the sound effects are not playing, you can try the following steps:

Ensure the Micro SD card is properly formatted. The most common problem is that the Micro SD card is not properly formatted using the FAT32 file system. Try reformatting the SD card and re-copying the files to the card. Ensure the files have been copied in the proper order and using the prescribed file naming convention. Try "playing" the sound effects from your computer.

See the following sites/documents:
https://wiki.dfrobot.com/DFPlayer_Mini_SKU_DFR0299
https://www.robotshop.com/media/files/pdf2/dfplayer_mini_manual.pdf
https://reprage.com/post/dfplayer-mini-cheat-sheet

Community

Facebook: www.facebook.com/groups/cosplayspecialeffectsprops
Instagram: www.instagram.com/crash_works_3d/
Github: https://github.com/crashworks3d/Iron_Man_Servo/tree/master/instructions
Thingiverse: https://www.thingiverse.com/crashworks3d/designs