

TechniSat custom boot screen

⚠ This tutorial was made 2021, December 9th. Tools used here were still experimental and under development.

★ Keep your working directory well organized. It will help you work faster and make a proper modification.

Tools

- `MIB STD2 Toolbox` [from here](#).
- Alternative `compress-startup_x.boot.py` compression script from [this post](#).
- `Gimp` [from here](#).
- `mib2image` Gimp plugin from [this post](#).
- `python3` [from here](#).

Set up the environment

1. Download and install `Gimp`.
2. Download `mib2image` plugin and place it in the plugins directory of your `Gimp` installation.
3. Install `python3`.
4. Download `MIB STD2 Toolbox`.
5. Download alternative `compress-startup_x.boot.py` script.
6. Replace original ``/tools/compress-startup_x.boot.py` with the alternative one.

Get original boot screen

You can get the original boot screen file from firmware update package, by dumping it from the unit with the toolbox, or copy it manually via FTP access to your main unit. In this example I'm going to use `startup_4.boot` file from `VW ZR EU P0245T` and I'm going to place it in `startanim/1-original/` directory.

Extract files

1. Open `Command Line Interface` or `Terminal`.
2. Extract the file with command `python3 /Volumes/HDD/mib-std2-pq-zr-toolbox/tools/extract-startup_x.boot.py /Volumes/HDD/startanim/1-original/startup_4.boot /Volumes/HDD/startanim/2-original_extracted/`.
3. Open the `2-original_extracted/` directory and check if you see `.png` files inside. Those `.png` images will be black&white but you will be able to see which file is which.
4. Duplicate the `2-original_extracted/` and name the duplicate `3-original_with_mods/`.
5. Open the `3-original_with_mods/`. This is your working directory, so it's a good idea to keep it organized. I'm going to create `fender`, `dynaudio`, `bluemotion`, and `vw` directories inside to place the `.png` files inside them.
6. Change extensions from `.png` to `.mib` of all files from the `3-original_with_mods/` directory and subdirectories.
7. Right-click on a `.mib` file and open it with `Gimp`. If the file opens correctly, you can associate `.mib` extension with `Gimp` for future convenience.

Modify

1. Open `.mib` files that you wish to modify.
2. Use your graphic design skills to modify original files.
3. Export each modified file with `File > Export As...`, open the `Select File Type (By Extension)` section, highlight `MIB2STD BOOT image`, press `Export`, and `Replace`. Set the `Extract label to separate file` to `No`, and press `OK`.
4. Change extensions of `.mib` files back to `.png`.
5. Once again duplicate the `2-original_extracted/` and name the duplicate `4-mod_unpacked/`.
6. Use your custom `.png` files to overwrite stock ones in the `4-mod_unpacked/` directory.

Compress

1. Open `Command Line Interface` or `Terminal`.
2. Compress files with command `python3 /Volumes/HDD/mib-std2-pq-zr-toolbox/tools/compress-startup_x.boot.py /Volumes/HDD/startanim/1-original/startup_4.boot /Volumes/HDD/startanim/5-mod/startup_4.boot /Volumes/HDD/startanim/4-mod_unpacked/`.

Check

1. Check if `startanim/5-mod/startup_4.boot` files was created correctly.
2. Unpack it again, just to be sure that everything is fine. Use command `python3 /Volumes/HDD/mib-std2-pq-zr-toolbox/tools/extract-startup_x.boot.py /Volumes/HDD/startanim/5-mod/startup_4.boot /Volumes/HDD/startanim/6-mod_test/`.
3. If everything goes OK, you should be able to extract the modified file.

Upload to MIB

1. Use FTP access or MIB STD2 Toolbox to upload your modified file.
2. Review module `5F` long coding to make sure that the module is coded to use boot screen that you were working on.
3. Reboot the unit with button combination.

i Special thanks to everyone that was involved in making this possible: Olli991, jille, jtomtos, yox2019.