Installing Kickstarts

On Vampire boards, a flash memory location in the Core contains a Kickstart ROM, as explained here.

There are 3 distinct ways to use a different Kickstart on a Vampire:

1. Running a "MapROM" program to load the Kickstart ROM image from disk
2. Letting the Core load the Kickstart ROM image from an SD card during power-on initialization
3. Running a "FlashROM" program to install the Kickstart ROM image into the Core's flash memory

These methods are detailed in their own sections below. Some general information:

- For method 1, you need `VampireMap314`. For method 3, you need `VampireFlash314`. Please obtain them from this archive and copy them to `C:`.
- The Vampire is compatible with all Kickstart versions from 1.1 to 3.1.4 to 3.9 to 3.X to AROS Kickstart. All ROM sizes (256 KB, 512 KB and 1 MB) are supported.
- Kickstart ROM variants for A1200, A600, A500 or CD32 are suitable. Other variants have not been tested.
- If you are using a 512 KB ROM image, then the methods described below will automatically add Vampire-specific Kickstart modules to the extended ROM area between $E00000 and $E7FFFF. These extended modules have been successfully tested with ROM images of Kickstart versions 2.0, 3.0, 3.1, 3.9 and various releases of Cloanto's 3.X.
    - If you are using a 1 MB ROM image, then it already occupies the extended ROM area, so you need to ensure that it already contains Vampire-specific Kickstart modules.
- If you are interested in Atari software, you can use an EmuTOS ROM as a Kickstart replacement.

Available methods for switching to a different Kickstart

1) Running a "MapROM" program to load the Kickstart ROM image from disk

The `VampireMap314` tool will map a Kickstart ROM image from disk to memory and reboot the system with it. The mapped Kickstart will survive through soft resets, but will be lost after a hard reset.

Usage:

```
>VampireMap314 <path_to_kickstart_file>
```

If you are planning to map Kickstart 1.3, you probably want to inject support for booting from an IDE storage device. You can do that with an "extended Kickstart ROM" file, as described in AmigaOS 1.3 on the Vampire. Then, you can include the "extended ROM" file in your mapping operation like this:

```
>VampireMap314 <path_to_kickstart_file> extrom13
<path_to_extended_kickstart_rom_file>
```

Once you confirm that the Kickstart ROM image works as intended, and you want to stay on it going forward, you can add the `VampireMap314` command to the beginning of your `S:Startup-`

Sequence. Or, you can even flash the ROM image into the Core using method 3.

Example usage in S:Startup-Sequence:

```
; Kickstart 3.1.4 has expansion.library V45.  For other Kickstarts, use the
appropriate version.
Version >NIL: expansion.library 45
If WARN
  ; Use the correct Kickstart file path.  If mapping an extended ROM file
with Kickstart 1.3, add the appropriate arguments.
  C:VampireMap314 DEVS:Kickstarts/kick.a1200
EndIf
```

Advantages:

- Useful for testing purposes as it avoids permanent changes to the Core.
- Makes it easy to switch to a different Kickstart, simply by changing the argument to the program.

Disadvantages:

- Needs the OS and the program to be installed and available permanently.
- Wastes a bit of time after every hard reset, due to booting (partly) into the OS and rebooting during mapping.

Note: If you want to map an AROS Kickstart ROM or an EmuTOS ROM, you need to use VControl MAPROM instead of VampireMap314.

2) Letting the Core load the Kickstart ROM image from an SD card during power-on initialization

After powering on the Amiga / Vampire, the Core will map a Kickstart ROM image from an inserted SD card to memory and run the system with it. The mapped Kickstart will survive through soft resets, but will be lost after a hard reset.

Usage:

1. Make sure the SD card is formatted with the FAT32 filesystem.
2. Save the Kickstart ROM image with the filename kick.rom in the root directory of the SD card.
3. Insert the SD card before powering on the Amiga / Vampire.

Once you confirm that the Kickstart ROM image works as intended, and you want to stay on it going forward, you can flash the ROM image into the Core using method 3.

Advantages:

- Useful for testing purposes as it avoids permanent changes to the Core.
- Makes it possible to switch to a different Kickstart **mechanically**, without needing access to the OS or a special program.

Disadvantages:

- Requires the SD card to be inserted at every hard reset.

Note: This method does not work on Vampire accelerator boards connected to a classic Amiga yet.

3) Running a "FlashROM" program to install the Kickstart ROM image into the Core's flash memory

The `VampireFlash314` tool will flash a Kickstart ROM image from disk into a location in the Core that is reserved for a Kickstart ROM, overwriting the existing Kickstart there. The flashed Kickstart will survive through soft and hard resets. However, a new Core installation will revert the Kickstart to the default one contained in the Core.

Usage:

Make sure that your system is idle before starting the flash procedure. The safest way to perform this operation is booting with no Startup-Sequence and typing the command from the CLI.

```
>VampireFlash314 <path_to_kickstart_file>
```

The tool will need about 5 minutes to compress the Kickstart ROM image, after a quick verification of the flash chip type and the Kickstart location inside it. The flashing may commence after the compression is finished. Please confirm the flashing procedure with YES (as shown, in caps), followed by Return.

> Do not interrupt the flashing process. Otherwise, the Vampire will not be able to boot anymore. Recovery from such a situation requires re-flashing the entire Core using a USB-Blaster, as described here.

You need to power-cycle your Amiga / Vampire after flashing is complete.

Advantages:

- Makes the Kickstart available immediately at power-on, so does not rely on booting into the OS and running a "MapROM" program.

Disadvantages:

- Installs the Kickstart semi-permanently, so switching to a different Kickstart is not easy.
- Not intended for Kickstarts that have not been tested well.
- Will need to be repeated after installing a new Core.

Note: This method does not work with AROS Kickstart ROMs and EmuTOS ROMs.

Note: This method does not work on the Vampire Standalone yet.

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