

# vLA128 Installation v1.1

The vLA128 is designed for both the Spectrum 128K (Toastrack) and Spectrum +2(Grey case). It can simply be plugged into the existing ULA socket.

**Note:** The Spectrum 128K (Toastrack) and +2(Grey) have the opposite orientation for the ULA when viewing the motherboard PCB from the front. Please refer to Fig. 1 and Fig. 2 below.

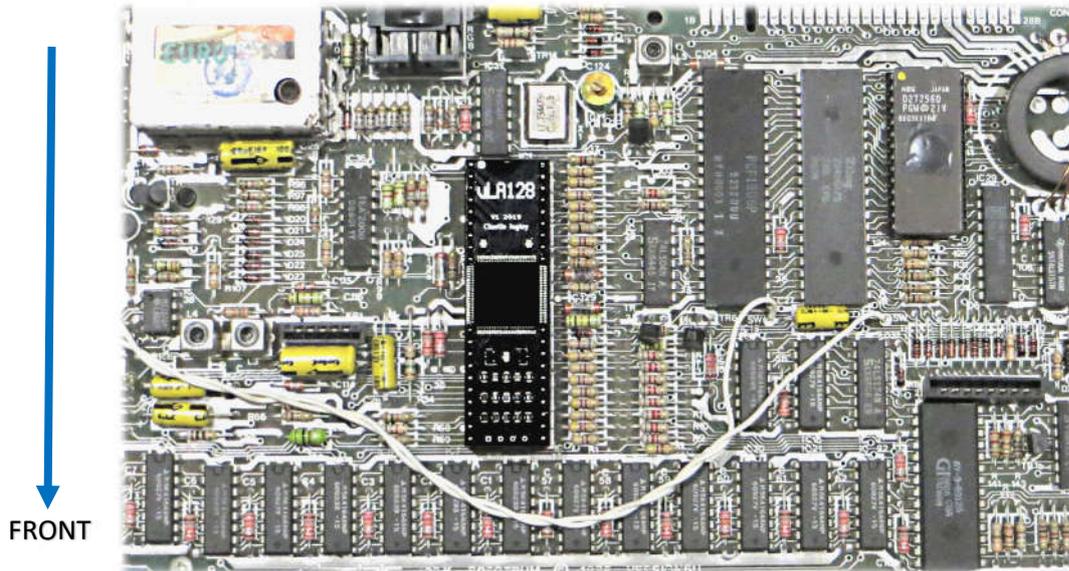


Fig.1 – vLA128 Toastrack installation



Fig.2 – vLA128 +2(Grey) installation

**Caution:** The vLA128 has SMD pins on the lower side, in the center region, of the chip carrier PCB. Although the assembly is designed to withstand the forces required during normal installation, it will not tolerate excessive pressure or any bending. Care also needs to be taken if the vLA128 is removed as there are printed tracks under the PCB which can easily be damaged.

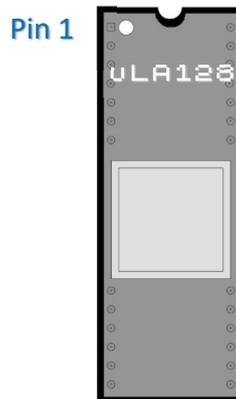
## INSTALLATION STEPS:

**Note:** Although the installation procedure is straightforward it is assumed that the installer has a basic knowledge of electronics and understands the terminology and concepts contained within this guide.

**Caution:** As the vLA128 is sensitive to static discharge please handle with care throughout the installation procedure. Avoid touching the vLA128 pins and the use of a grounding strap is recommended.

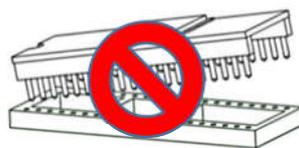
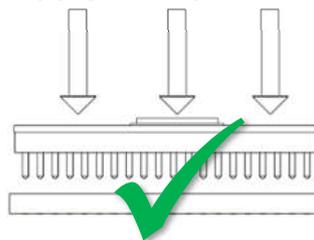
1. First repair any prior defects and check that all voltages are within tolerance.
2. Ensure the Spectrum 128K/+2(Grey) power supply is disconnected.
3. Remove the top case and unplug the keyboard membrane.
4. Remove the existing ULA.
5. Remove the vLA128 from the plastic antistatic shipping bag and orient correctly with pin 1 closest to the front of the Spectrum 128K (Toastrack) PCB or closest to the rear of the +2(Grey) PCB. Please refer to Fig.1 above.

Orient correctly



6. Apply even pressure across the vLA128 top surface and press into the ULA socket.

Apply even pressure



Do NOT bend vLA128 or insert at an angle

## REASSEMBLY AND TESTING:

1. Reconnect the keyboard membrane and replace the top cover.
2. Connect the Spectrum to a video monitor and apply power.
3. If successful, you will be greeted with the familiar menu screen.
4. Check that the video and keyboard are OK then check that both tape input (load a tape) and sound output (using the BEEP command) are working as expected.
5. If all is in order then, congratulations, the vLA128 is fully operational!

## TROUBLESHOOTING:

If the Spectrum 128K/+2(Grey) does not boot to the menu screen or any of the tests fail then it is possible that the vLA128 may not be seated correctly, may have been damaged during the installation or is faulty.

Some symptoms pointing to the vLA128 (assuming the Spectrum had no pre-existing faults) include a black border, single vertical lines, or corrupted screen data. Further fault diagnosis is beyond the scope of this guide and it is recommended to use one of the diagnostic boards (e.g. Smartcard) with Brendan Alford's excellent diagnostic rom.

If the vLA128 is suspected faulty or you have problems with the installation procedure then please contact me on [vdrivezx@gmail.com](mailto:vdrivezx@gmail.com).

Have fun!

Charlie Ingley

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