JYE Tech DSO 138 DIY Kit

- http://www.jyetech.com/Products/LcdScope/e138.php

DSO138 is a Cortex-M3 ARM processor (STM32F103C8) from ST. It uses 2.4-inch TFT LCD (320 X 240 dotmatrix, 262K colors)

t=0x8928600 [0,0]

Contents: [Dobrica PavlinuÅ¡iÄ 's random unstructured stuff]

analog GND

http://forum.banggood.com/forum-topic-61279.html?page=3

As you can see, I lifted C26 and the ground pin of C15, and connected them to analog GND at c8, and the positive of C26 to the output of L4.

I have also connected the VSSA pin to the "new" AGND of the C15 and attached an extra capacitor (tantalum 4.7 uF) to the output of the U4. These two mods have slightly improved the situation in my case.

https://www.youtube.com/watch?v=aIb3azRrJbc

http://www.jyetech.com/forum/viewtopic.php?f=18&t=542

I would estimate that this mod has reduced the noise evident in the display by 60-70% which is a significant reduction. For anyone who has built a DSO138 kit prior to the new release firmware, I would highly recommend this easy mod.

To recap on MorganFlint's work, it simply involves removing C26 from the board and laying it flat with its +ve lead soldered directly to the end of L4. The earthy end of C15 is lifted and a short cutoff component lead joins the negative of C26 to the lifted lead of C15. Then a short cutoff component lead joins the end of C15 to the earthy end of C8.

JP3

Using some ferrite bead or low inuctance instead of soldered jumper JP3 can partialy remove spikes.
I've used 4mm ferite ring with 3wounds of 0.4mm wire.

DLO 138 - open source firmware

- https://github.com/ardyesp/DLO-138
- http://www.stm32duino.com/viewtopic.php?f=19&t=1847

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# probably wrong, since it doesn't produce backup bin (protected chip?)
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pi@rpi2 /nuc/stm32/DLO-138 $ st-flash read backup.bin 0x8000000 0xb97000
pi@rpi2 /nuc/stm32/DLO-138 $ st-flash write binaries/DLO-138_switches_1.0.bin 0x8000000
st-flash 1.3.1-14-geb03b7c
2017-04-23T10:53:51 INFO src/common.c: Loading device parameters....
2017-04-23T10:53:51 INFO src/common.c: Device connected is: F1 Medium-density device, id 0x200364
2017-04-23T10:53:51 INFO src/common.c: SRAM size: 0x5000 bytes (20 KiB), Flash: 0x1904000 bytes (
2017-04-23T10:53:51 INFO src/common.c: Attempting to write 34300 (0x85fc) bytes to stm32 address:
Flash page at addr: 0x08008400 erased
2017-04-23T10:53:52 INFO src/common.c: Finished erasing 34 pages of 1024 (0x400) bytes
2017-04-23T10:53:52 INFO src/common.c: Starting Flash write for VL/F0/F3 core id
2017-04-23T10:53:52 INFO src/flash_loader.c: Successfully loaded flash loader in sram
2017-04-23T10:53:58 ERROR src/flash_loader.c: flash loader run error
2017-04-23T10:53:58 ERROR src/common.c: stlink_flash_loader_run(0x8000000) failed! == -1
stlink_fwrite_flash() == -1

# duh. press and hold reset button while powering up dso 138 from 9V power (not from st-link!)


dpavlin@nuc:/nuc/stm32$ st-flash write ./DLO-138/binaries/DLO-138_switches_1.0.bin 0x8002000
st-flash 1.3.1-14-geb03b7c
2017-04-23T13:06:23 INFO src/common.c: Loading device parameters....
2017-04-23T13:06:23 INFO src/common.c: Device connected is: F1 Medium-density device, id 0x200364
2017-04-23T13:06:23 INFO src/common.c: SRAM size: 0x5000 bytes (20 KiB), Flash: 0x10000 bytes (64
2017-04-23T13:06:23 INFO src/common.c: Attempting to write 34300 (0x85fc) bytes to stm32 address:
Flash page at addr: 0x0800a400 erased
2017-04-23T13:06:24 INFO src/common.c: Finished erasing 34 pages of 1024 (0x400) bytes
2017-04-23T13:06:24 INFO src/common.c: Starting Flash write for VL/F0/F3 core id
2017-04-23T13:06:24 INFO src/flash_loader.c: Successfully loaded flash loader in sram
 33/33 pages written
2017-04-23T13:06:25 INFO src/common.c: Starting verification of write complete
2017-04-23T13:06:26 INFO src/common.c: Flash written and verified! jolly good!

# this doesn't work, but re-compiled binary does

dpavlin@nuc:/nuc/stm32$ st-flash write ./stm32loader/STM32duino-bootloader/STM32F1/binaries/gener

dpavlin@nuc:/nuc/stm32$ st-flash write /tmp/arduino_build_954453/DLO-138.ino.bin 0x8002000
```