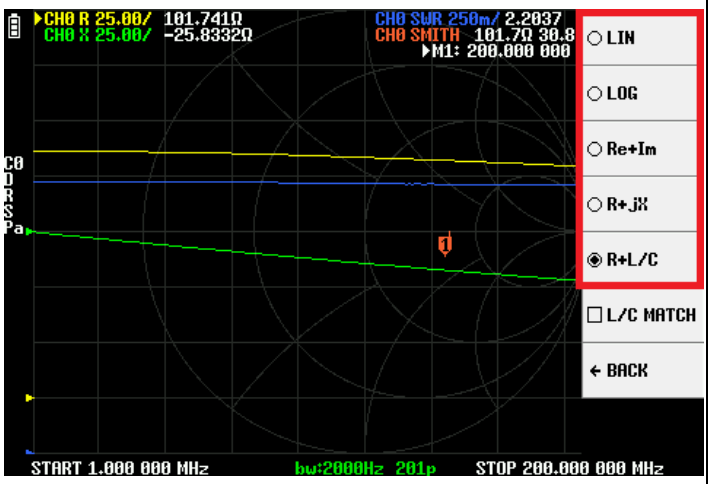
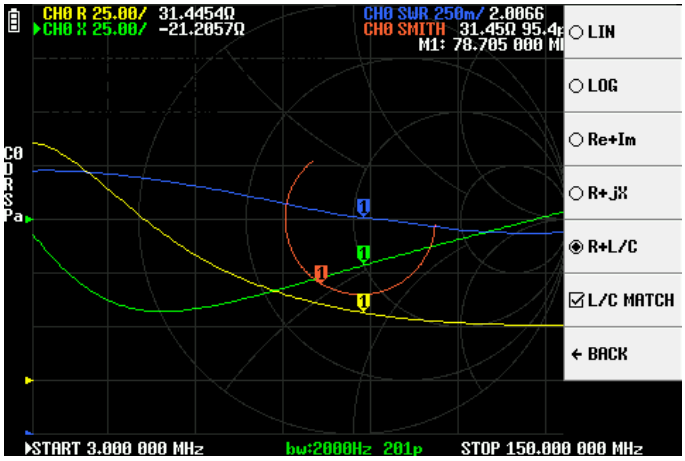


[NanoVNA v1.0.45.rar]

Fix some issues, less code size
Changes:
* Add warning if power settings in calibration not some as current (red power string)
* Disable marker track after marker start drag
* Fix LC Match text update on screen
* Fix marker frequency update in memory (return correct marker info from console command)
* Fix measure in 450-460MHz
* Disable AIC channel cache
* Code size fixes
* Increase 1 point measure wait time (hope this solve calibrate issue)
* Fix graphic update on trace/channel change (work also in pause sweep)
* Calibrate on 100Hz bw (30Hz bw before)

- More compact flash code
- Update power setting on pause sweep also



[NanoVNA H v1.0.40.dfu]

[NanoVNA H4 v1.0.40.dfu]

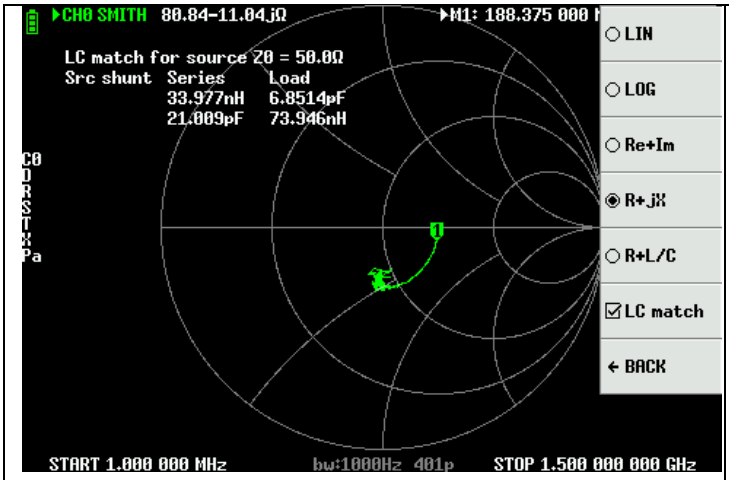
Change list ftom last v1.0.39:
* big code optomisation (allow save ~1k)
* add palette color for LC match text (LCD_LC_MATCH_COLOR 19)
* cache channel in sweep (possibly fix issue on calibration in one trace mode)
* fix LSE startup time (disable not tick time check, need more research in it)
* increase USART IRQ priority (prevent data lost on high speed exchange)
* disable calibration apply show after any calibtation collect data run
* for sin/cos calculation use extended FFT table (allow save additional 4.5k flash), this also fix hang if enter big edelay value

Marker fix:
- search closest marker for drag
- correct select previous on add/remove marker (fix problem then marker removed and mode can change to one marker show)
- fix some 'marker' console command errors

[NanoVNA v1.0.39.rar]

Current firmware use variable point count and 256 FFT for H or 512 FFT for H4

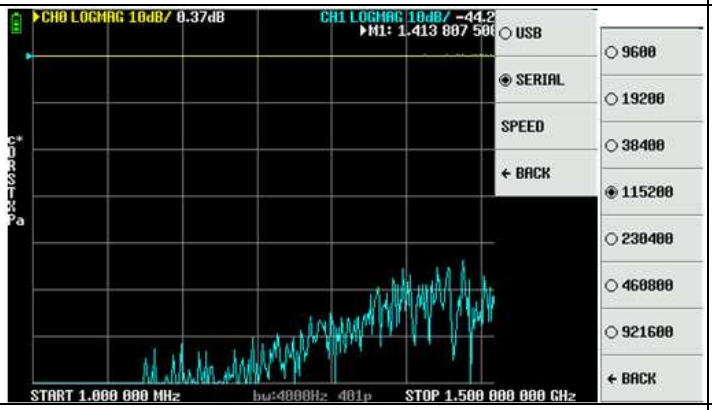
[NanoVNA.v1.0.38.zip]



First release my firmware modifiation for NanoVNA, NanoVNA-H, NanoVNA-H4
Features:

- Allow Serial connect and control
- Variable points count (up to 401 for H4)
- Custom color themes
- Fast data exchange vs CPU (use binary mode)
- Low noise measure on high speed ADC mode (192k for H and 384k for H4)
- Added L/C match calculation

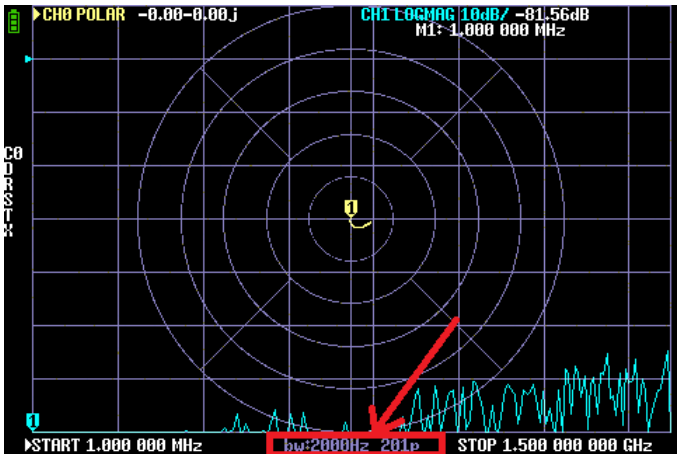
Support SD card save screenshots, s1p or s2p files



NanoVNA v1.0.33.rar
Firmware for H and H4 v1.0.33. For personal use, without any sources. Added serial connection mode. This allows you to connect NanoVNA via Bluetooth (HC-05 or some modules) or USB to TTL or WiFI to TTL (like ESP8285 DT-06 WIFI к TTL) module to CPU.

NanoVNA v1.0.30.rar
Firmware for H and H4 v1.0.30 For personal use. No sources provided. Added custom color themes. Now allow change any color used in NanoVNA by 'color' command. Custom colors theme

NanoVNA v1.0.28.rar
Firmware for H and H4 v1.0.28 For personal use, no any sources Last fixes: Auto detect LSI or LSE mode. Fix power command



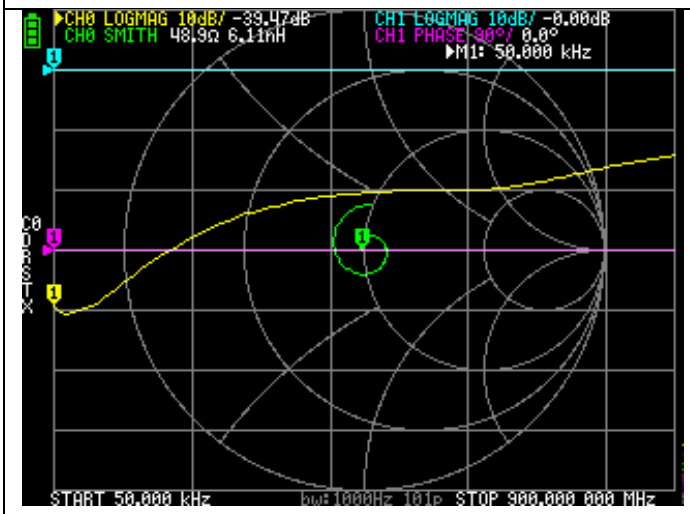
NanoVNA_0.9.3.4 -H and –H4 [SD card /w RTC]

added Q factor format trace (See FORMAT->MORE->Q FACTOR)
Now AntScope2 can detect NanoVNA
Small changes for time command (terminal prg):
time [y|m|d|h|min|sec] 0-99

When Internal RTC please use LSI version, when installed External **32.768 kHz quartz** use LSE (Time tick while power off).
For made screenshot need tap on BW text at bottom
For save s1p or s2p file in MENU->SD Card-> SAVE
See this post for more information
https://groups.io/g/nanovna-users/message/14447

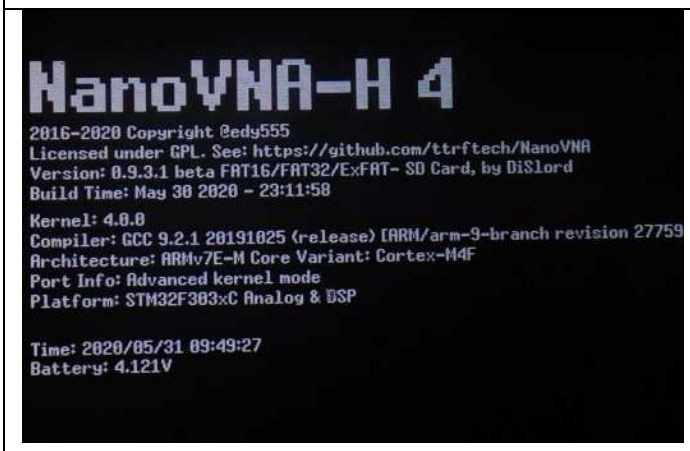
[NanoVNA-H 0.9.3.3 beta SD Card LSE.dfu]

The 32.768 kHz Quartz must be soldered between pin3 and pin4 of the STM32F072 so that the operation of the RTC is tied to quartz accuracy. The firmware allows power to be supplied to pin1 vbat via D2 diode when the device is turned off. The display shows the date and time in the version window in the menu.
https://groups.io/g/nanovna-users/attachment/14214/0/IMG_20200607_223253.jpg



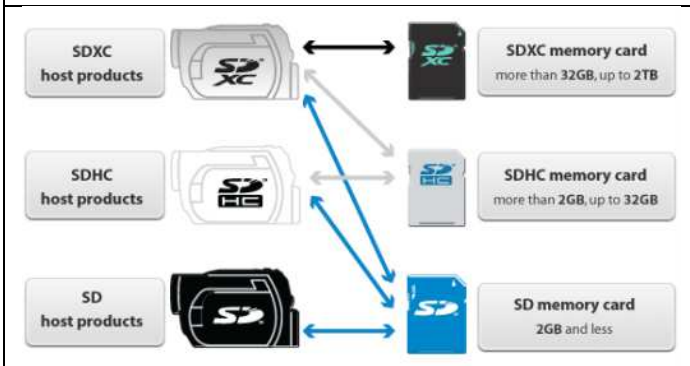
[NanoVNA-H 0.9.3.3 beta SD Card.dfu]

SD Card slot on old PCB can see in this post, if solder it and install this firmware now possible store screenshots and S1P or S2P files on it.
Some limits. Only FAT12/FAT16/FAT32 support (exFAT not supported). RTC clock not run while power off (hardware limits, need install external quartz and add software support).
Only short filenames.
Most limits comes from small flash size in H version CPU.
https://groups.io/g/nanovna-users/message/14154



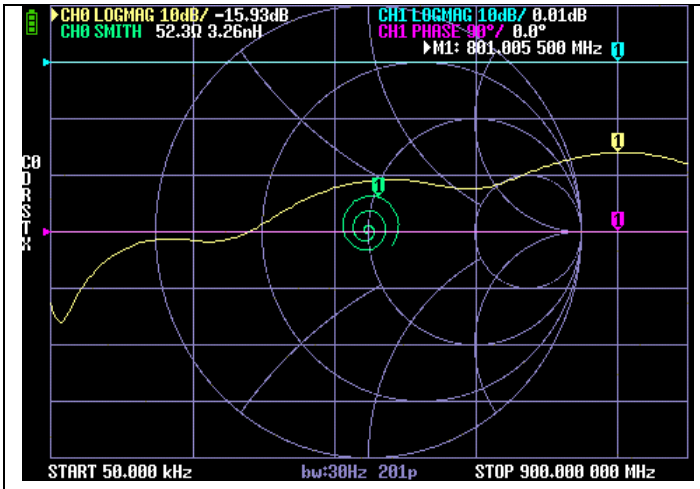
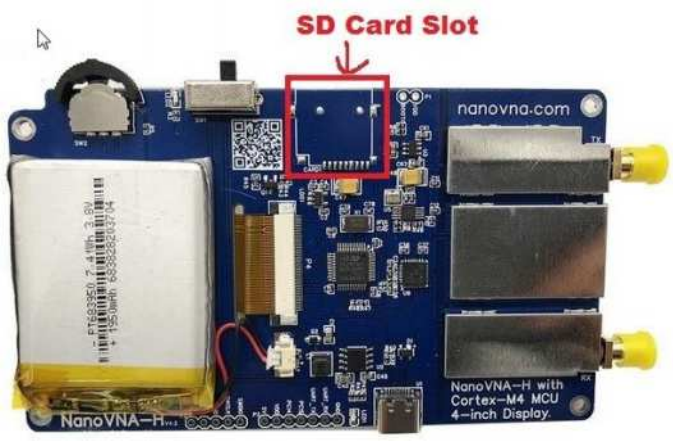
[NanoVNA H4 v0.9.3.2 beta - SD Card LSE_Clock.dfu]
LSE version if you install 32.768 kHz quartz on PC14 and PC15 pin (Time tick while power off)

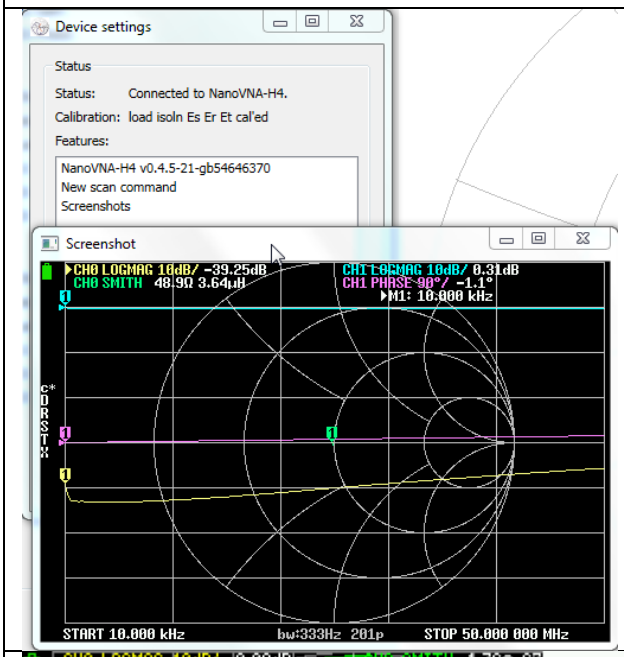
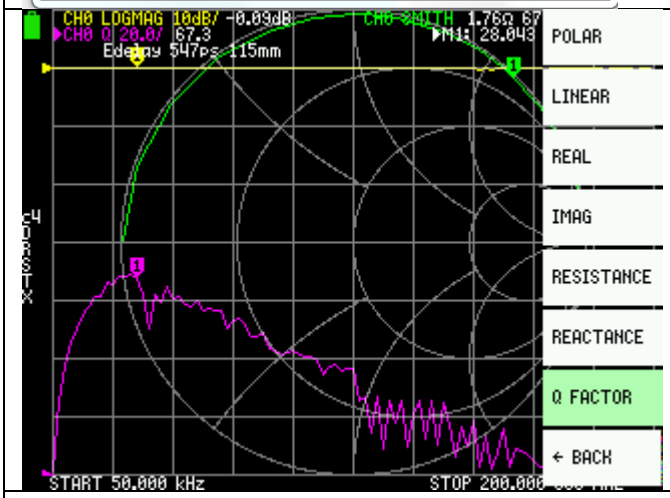
[NanoVNA H4 v0.9.3.2 beta - SD Card LSI_Clock.dfu]
LSI version - for not installed 32.768 kHz quartz (Time not tick while power off) RTC used for detect last file save and names



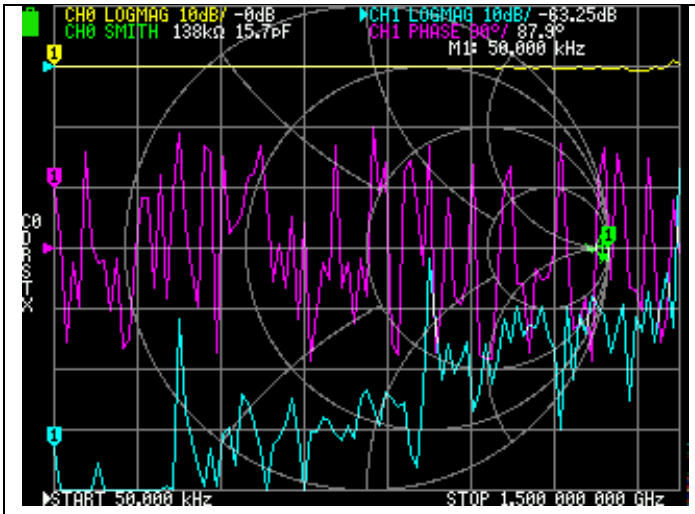
[NanoVNA H4 v0.9.2 beta - SD Card.dfu]
Add support ExFAT filesystem and check work on my SD card
Samsung EVO Plus 128Gb HD XL
All worked, support ExFat need additional 4kB flash and can`t be supported on NanoVNA-H (if add card slot in it)
But on H4 stiil more flash space (only ~89kB + 64kB for calibration save used from 256kB)

On Samsung EVO Plus 128Gb HD XL read speed ~300kB/sec write ~190kB/s

	[NanoVNA H4 v0.9.1 beta - SD Card.dfu] Work around errors in SD card support: Cleanup my SD card support code Implement read/write data CRC16 check Implement command CRC7 check Fix SPI bus problems Enable support short and long filenames SD cards work SD HC cards work SD XL cards should work if format to Fat32, but need test, possible I enable exFat support
	[NanoVNA H4 v0.9.0 alfa - SD Card.dfu] Used microCard slot pins: 2 - SD_CS 3 - SPI_MOSI 4 - VDD 5 - SPI_SCLK 6 - GND 7 - SPI_MISO some slot variants: XUNPU TF-115K and THD THD2528-11SD-GF read more [https://groups.io/g/nanovna-users/message/13743]
	[NanoVNA-H4 v0.8.4.7.dfu] Next H4 update: Cleanup ADC code (used for touch screen and battery measure). Reduce touch press check from 1kHz to 20Hz and set touch press ADC time to 1 tick (it allow little more reduce measure noise), for vbat, touch X and Y measure use bigger ADC time. Add Brightness setting to config menu. Now for set Brightness need select Config->Brightness and use leveler button Left or Right for adjust it. On done press leveler button Down for set. For save value need use Config->Save. Fix calibration reset error added in last patch, now this should work correct
	[NanoVNA-H4 v0.8.4.6_96kHz_ADC_800Hz_sweep_points.dfu] Change: IF to 12kHz Disable AIC3204 internal PLL clock, use direct MCLK as CODEC_CLKIN from si5351 More faster calibrate (measure only calibrated CH)

	allow reduce default bandwidth on calibrate to 30Hz Gain selected to get the lowest noise level for AIC3204 in some harmonic range
	Hardware.py The DiSlord Hardware.py fix, which I tested with two tools, works well. With 2.8 ”and 4” screens - I used nanoVNA-Saver version 0.2.2. I just copied Hardware.py to the NanoVNASaver directory, which is available in the C: / nanovna-saver folder. After installing Python 3.7.4, you can start it with the nanovna-saver.py command. link info: https://groups.io/g/nanovna-users/message/13096
	0.8.0-20200620 edy555 released • Add format `Quality Factor` • Fix label `R+Xj` to `R+jX` • Add `bandwidth` command • some fixes

	0.7.1-20200321
	
	edy555 released
	
	• Contributions from @DiSlord
	  ◦ shrink flash size
	  ◦ fasten sweep
	  ◦ added color command
	• added lever operation for the electrical delay
	
	fixed code style



[0.7.0-20200223]


[edy555] released

- Merged incredible contribution from [@DiSlord]
  - font face becomes smart, clear and having variable width
  - update trace color to have good contrast
  - update battery indicator
  - changed marker icon
  - changed focus sign of the lever mode
  - replaced number formatting scheme
  - remove the shell from chibios
  - remove some unused command (info, thread)
  - shrink the size of flash and SRAM
  - cleaned a large amount of the codes
- Lever operation updated
  - disable lever mode change by frequency change
  - clicking lower edge of the left and right changes lever mode to adjust the frequency of the stimulus
  - dragging marker or clicking upper side makes lever mode to adjust the frequency of markers