

# Teil 1

## 1.1 Verbinden

Erfolgreich mit der Drohne verbunden.

Config Error Baro getroffen.



## 1.2 Die Meldungen beim Start ansehen

Wieder Baro Error



## 1.3 Der entscheidende Test — Druck live beobachten

| Feld         | Anzahl 0 | Anzahl 1 |
|--------------|----------|----------|
| press_abs    | 0        | 0        |
| alt          | 0        | 0        |
| rangefinder1 | 0        | 0        |
| opt_qua      | 0        | 0        |

|                |   |               |          |                   |     |                    |   |
|----------------|---|---------------|----------|-------------------|-----|--------------------|---|
| accelsq        | 0 | altd1000      | 0        | battery_cell1     | 0   | battery_remaining2 | 0 |
| accelsq2       | 0 | altoffsethome | 0        | battery_cell2     | 0   | battery_remaining3 | 0 |
| accelsq3       | 0 | AOA           | 0        | battery_cell3     | 0   | battery_remaining4 | 0 |
| ahrs2_alt      | 0 | armed         | False    | battery_cell4     | 0   | battery_remaining5 | 0 |
| ahrs2_lat      | 0 | aspd_error    | 0        | battery_cell5     | 0   | battery_remaining6 | 0 |
| ahrs2_lng      | 0 | asratio       | 0        | battery_cell6     | 0   | battery_remaining7 | 0 |
| ahrs2_pitch    | 0 | ax            | 0        | battery_cell7     | 0   | battery_remaining8 | 0 |
| ahrs2_roll     | 0 | ax2           | 0        | battery_cell8     | 0   | battery_remaining9 | 0 |
| ahrs2_yaw      | 0 | ax3           | 0        | battery_cell9     | 0   | battery_remainmin  | 0 |
| airspeed       | 0 | ay            | 0        | battery_cell10    | 0   | battery_remainmin2 | 0 |
| airspeed1_temp | 0 | ay2           | 0        | battery_cell11    | 0   | battery_remainmin3 | 0 |
| airspeed2_temp | 0 | ay3           | 0        | battery_cell12    | 0   | battery_remainmin4 | 0 |
| alt            | 0 | az            | 0        | battery_cell13    | 0   | battery_remainmin5 | 0 |
| alt_error      | 0 | az2           | 0        | battery_cell14    | 0   | battery_remainmin6 | 0 |
| altasl         | 0 | az3           | 0        | battery_kmleft    | NaN | battery_remainmin7 | 0 |
| altasl2        | 0 | AZToMAV       | 0        | battery_mahperkm  | NaN | battery_remainmin8 | 0 |
| altd100        | 0 | Base          | 0, 0, 0, | battery_remaining | 0   | battery_remainmin9 | 0 |

|                  |   |                  |       |            |      |         |   |
|------------------|---|------------------|-------|------------|------|---------|---|
| battery_temp     | 0 | battery_usedmah9 | 0     | ch1in      | 0    | ch8out  | 0 |
| battery_temp2    | 0 | battery_voltage  | 0     | ch1out     | 0    | ch9in   | 0 |
| battery_temp3    | 0 | battery_voltage2 | 0     | ch1percent | -375 | ch9out  | 0 |
| battery_temp4    | 0 | battery_voltage3 | 0     | ch2in      | 0    | ch10in  | 0 |
| battery_temp5    | 0 | battery_voltage4 | 0     | ch2out     | 0    | ch10out | 0 |
| battery_temp6    | 0 | battery_voltage5 | 0     | ch3in      | 0    | ch11in  | 0 |
| battery_temp7    | 0 | battery_voltage6 | 0     | ch3out     | 0    | ch11out | 0 |
| battery_temp8    | 0 | battery_voltage7 | 0     | ch3percent | 0    | ch12in  | 0 |
| battery_temp9    | 0 | battery_voltage8 | 0     | ch4in      | 0    | ch12out | 0 |
| battery_usedmah  | 0 | battery_voltage9 | 0     | ch4out     | 0    | ch13in  | 0 |
| battery_usedmah2 | 0 | ber_error        | 0     | ch5in      | 0    | ch13out | 0 |
| battery_usedmah3 | 0 | boardvoltage     | 0     | ch5out     | 0    | ch14in  | 0 |
| battery_usedmah4 | 0 | brklevel         | 0     | ch6in      | 0    | ch14out | 0 |
| battery_usedmah5 | 0 | campointa        | 0     | ch6out     | 0    | ch15in  | 0 |
| battery_usedmah6 | 0 | campointb        | 0     | ch7in      | 0    | ch15out | 0 |
| battery_usedmah7 | 0 | campointc        | 0     | ch7out     | 0    | ch16in  | 0 |
| battery_usedmah8 | 0 | capabilities     | 63983 | ch8in      | 0    | ch16out | 0 |

|           |   |              |      |                    |         |                  |   |
|-----------|---|--------------|------|--------------------|---------|------------------|---|
| ch17out   | 0 | connected    | True | customfield6       | 0       | DistToHome       | 0 |
| ch18out   | 0 | crit_AOA     | 25   | customfield7       | 0       | distTraveled     | 0 |
| ch19out   | 0 | current      | 0    | customfield8       | 0       | efi_baro         | 0 |
| ch20out   | 0 | current2     | 0    | customfield9       | 0       | efi_exhashtemp   | 0 |
| ch21out   | 0 | current3     | 0    | customfield10      | 0       | efi_fuelconsumed | 0 |
| ch22out   | 0 | current4     | 0    | customfield11      | 0       | efi_fuelflow     | 0 |
| ch23out   | 0 | current5     | 0    | customfield12      | 0       | efi_fuelpressure | 0 |
| ch24out   | 0 | current6     | 0    | customfield13      | 0       | efi_headtemp     | 0 |
| ch25out   | 0 | current7     | 0    | customfield14      | 0       | efi_health       | 0 |
| ch26out   | 0 | current8     | 0    | customfield15      | 0       | efi_intaketemp   | 0 |
| ch27out   | 0 | current9     | 0    | customfield16      | 0       | efi_load         | 0 |
| ch28out   | 0 | customfield0 | 0    | customfield17      | 0       | efi_rpm          | 0 |
| ch29out   | 0 | customfield1 | 0    | customfield18      | 0       | ekfcompv         | 0 |
| ch30out   | 0 | customfield2 | 0    | customfield19      | 0       | ekfflags         | 0 |
| ch31out   | 0 | customfield3 | 0    | datetime           | 2026/8/ | ekfposhor        | 0 |
| ch32out   | 0 | customfield4 | 0    | DistFromMovingBase | 0       | ekfposvert       | 0 |
| climbrate | 0 | customfield5 | 0    | DistRSSIRemain     | 0       | ekfstatus        | 0 |

|               |   |           |   |            |   |            |   |
|---------------|---|-----------|---|------------|---|------------|---|
| ekfteralt     | 0 | esc3_temp | 0 | esc7_volt  | 0 | esc12_curr | 0 |
| ekfvelv       | 0 | esc3_volt | 0 | esc8_curr  | 0 | esc12_rpm  | 0 |
| ELToMAV       | 0 | esc4_curr | 0 | esc8_rpm   | 0 | esc12_temp | 0 |
| errors_count1 | 0 | esc4_rpm  | 0 | esc8_temp  | 0 | esc12_volt | 0 |
| errors_count2 | 0 | esc4_temp | 0 | esc8_volt  | 0 | esc13_curr | 0 |
| errors_count3 | 0 | esc4_volt | 0 | esc9_curr  | 0 | esc13_rpm  | 0 |
| errors_count4 | 0 | esc5_curr | 0 | esc9_rpm   | 0 | esc13_temp | 0 |
| esc1_curr     | 0 | esc5_rpm  | 0 | esc9_temp  | 0 | esc13_volt | 0 |
| esc1_rpm      | 0 | esc5_temp | 0 | esc9_volt  | 0 | esc14_curr | 0 |
| esc1_temp     | 0 | esc5_volt | 0 | esc10_curr | 0 | esc14_rpm  | 0 |
| esc1_volt     | 0 | esc6_curr | 0 | esc10_rpm  | 0 | esc14_temp | 0 |
| esc2_curr     | 0 | esc6_rpm  | 0 | esc10_temp | 0 | esc14_volt | 0 |
| esc2_rpm      | 0 | esc6_temp | 0 | esc10_volt | 0 | esc15_curr | 0 |
| esc2_temp     | 0 | esc6_volt | 0 | esc11_curr | 0 | esc15_rpm  | 0 |
| esc2_volt     | 0 | esc7_curr | 0 | esc11_rpm  | 0 | esc15_temp | 0 |
| esc3_curr     | 0 | esc7_rpm  | 0 | esc11_temp | 0 | esc15_volt | 0 |
| esc3_rpm      | 0 | esc7_temp | 0 | esc11_volt | 0 | esc16_curr | 0 |

|                |        |              |         |               |   |              |        |
|----------------|--------|--------------|---------|---------------|---|--------------|--------|
| esc16_rpm      | 0      | gimballng    | 0       | gpsyaw2       | 0 | HomeAlt      | 0      |
| esc16_temp     | 0      | GimbalPoint  |         | groundcourse  | 0 | HomeLocation | 0,0,0, |
| esc16_volt     | 0      | glide_ratio  | NaN     | groundcourse2 | 0 | horizondist  | 0      |
| failsafe       | False  | gpush_acc    | 0       | groundspeed   | 0 | hwvoltage    | 0      |
| fenceb_count   | 0      | gpush_acc2   | 0       | groundspeed2  | 0 | hygrohumi1   | 0      |
| fenceb_status  | 0      | gpushdg_acc  | 0       | gx            | 0 | hygrohumi2   | 0      |
| fenceb_type    | 0      | gpushdg_acc2 | 0       | gx2           | 0 | hygrotemp1   | 0      |
| fixedp         | 0      | gpushdop     | 0       | gx3           | 0 | hygrotemp2   | 0      |
| freemem        | 146360 | gpushdop2    | 0       | gy            | 0 | i2cerrors    | 0      |
| gen_current    | 0      | gpsstatus    | 0       | gy2           | 0 | imu1_temp    | 0      |
| gen_maint_time | 0      | gpsstatus2   | 0       | gy3           | 0 | imu2_temp    | 0      |
| gen_runtime    | 0      | gpstime      | 1970/1/ | gyrosq        | 0 | imu3_temp    | 0      |
| gen_speed      | 0      | gpsv_acc     | 0       | gyrosq2       | 0 | KIndex       | 1      |
| gen_status     | 0      | gpsv_acc2    | 0       | gyrosq3       | 0 | landed       | False  |
| gen_voltage    | 0      | gpsvel_acc   | 0       | gz            | 0 | landed_state | 0      |
| GeoFenceDist   | 99999  | gpsvel_acc2  | 0       | gz2           | 0 | lat          | 0      |
| gimballat      | 0      | gpsyaw       | 0       | gz3           | 0 | lat2         | 0      |

|                |        |                    |         |                  |   |                    |        |
|----------------|--------|--------------------|---------|------------------|---|--------------------|--------|
| linkqualitygos | 100    | messageHighSeverit | CRITICA | opt_m_y          | 0 | pidSRatePitch      | 0      |
| lng            | 0      | messages           | System. | opt_qua          | 0 | pidSRateRoll       | 0      |
| lng2           | 0      | mode               | Stabili | opt_x            | 0 | pidSRateSteer      | 0      |
| load           | 0      | mx                 | 0       | opt_y            | 0 | pidSRateYaw        | 0      |
| localsnrdb     | 0      | mx2                | 0       | packetdropremote | 0 | pitch              | 0      |
| Location       | 0,0,0, | mx3                | 0       | parent           | 1 | PlannedHomeLocatio | 0,0,0, |
| lowairspeed    | False  | my                 | 0       | pidachieved      | 0 | posd               | 0      |
| lowgroundspeed | False  | my2                | 0       | pidaxis          | 0 | pose               | 0      |
| magfield       | 0      | my3                | 0       | pidD             | 0 | posn               | 0      |
| magfield2      | 0      | mz                 | 0       | piddesired       | 0 | prearmstatus       | True   |
| magfield3      | 0      | mz2                | 0       | pidfff           | 0 | press_abs          | 0      |
| mcumaxvolt     | 0      | mz3                | 0       | pidI             | 0 | press_abs2         | 0      |
| mcuminvolt     | 0      | nav_bearing        | 0       | pidP             | 0 | press_temp         | 0      |
| mcutemp        | 0      | nav_pitch          | 0       | pidPDmod         | 0 | press_temp2        | 0      |
| mcuvoltage     | 0      | nav_roll           | 0       | pidSRate         | 0 | QNH                | 0      |
| message        | Config | noise              | 0       | pidSRateAccZ     | 0 | radius             | 0      |
| messageHigh    | Config | opt_m_x            | 0       | pidSRateLanding  | 0 | rangefinder1       | 0      |

|               |   |                |       |                   |        |                   |         |
|---------------|---|----------------|-------|-------------------|--------|-------------------|---------|
| rangefinder2  | 0 | roll           | 0     | targetalt         | 0      | turnrate          | 0       |
| rangefinder3  | 0 | rpm1           | 0     | targetaltd100     | 0      | txbuffer          | 0       |
| rangefinder4  | 0 | rpm2           | 0     | TargetLocation    | 0,0,0, | uid               | 0       |
| rangefinder5  | 0 | rsi            | 0     | ter_alt           | 0      | uid2              | 3600510 |
| rangefinder6  | 0 | rxerrors       | 0     | ter_curalt        | 0      | version           | 4.6.3.2 |
| rangefinder7  | 0 | rxrsi          | 0     | ter_load          | 0      | verticalspeed     | 0       |
| rangefinder8  | 0 | safetyactive   | False | ter_pend          | 0      | verticalspeed_fpm | 0       |
| rangefinder9  | 0 | satcount       | 0     | ter_space         | 0      | vibeclip0         | 0       |
| rangefinder10 | 0 | satcount2      | 0     | terrainactive     | False  | vibeclip1         | 0       |
| rateattitude  | 4 | satcountB      | 0     | timeInAir         | 0      | vibeclip2         | 0       |
| rateposition  | 2 | servovoltage   | 0     | timeInAirMinSec   | 0      | vibex             | 0       |
| raterc        | 2 | sonarrange     | 0     | timeSinceArmInAir | 0      | vibey             | 0       |
| ratesensors   | 2 | sonarvoltage   | 0     | timesincelastshot | 0      | vibez             | 0       |
| ratestatus    | 2 | speedup        | 0     | toh               | 0      | vlen              | 0       |
| remnoise      | 0 | SSA            | 0     | tot               | 0      | voltageflag       | 4       |
| remotesnrdb   | 0 | target_bearing | 0     | TrackerLocation   | 0,0,0, | vtol_state        | 0       |
| remrsi        | 0 | targetairspeed | 0     | turng             | 1      | vx                | 0       |

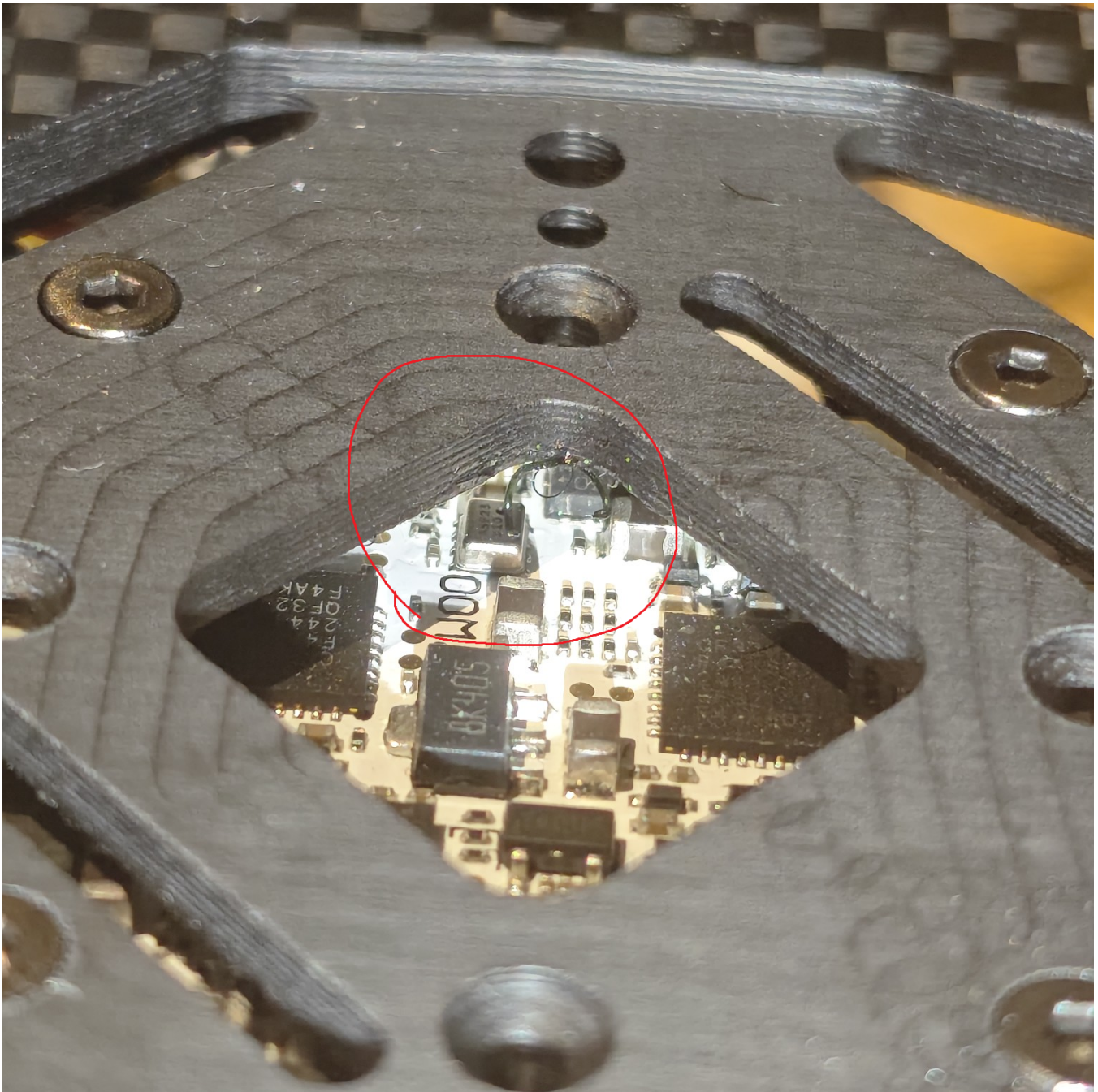
|                   |        |                   |         |                    |       |                    |       |
|-------------------|--------|-------------------|---------|--------------------|-------|--------------------|-------|
| targetalt         | 0      | turnrate          | 0       | vy                 | 0     | xpdr_mode_A_enable | False |
| targetaltd100     | 0      | txbuffer          | 0       | vz                 | 0     | xpdr_mode_A_squawk | 0     |
| TargetLocation    | 0,0,0, | uid               | 0       | watts              | 0     | xpdr_mode_C_enable | False |
| ter_alt           | 0      | uid2              | 3600510 | wind_dir           | 0     | xpdr_mode_S_enable | False |
| ter_curalt        | 0      | version           | 4.6.3.2 | wind_vel           | 0     | xpdr_nacp          | 0     |
| ter_load          | 0      | verticalspeed     | 0       | wp_dist            | 0     | xpdr_nic           | 0     |
| ter_pend          | 0      | verticalspeed_fpm | 0       | wpno               | 0     | xpdr_status_pendin | False |
| ter_space         | 0      | vibeclip0         | 0       | xpdr_adsb_tx_sys_f | False | xpdr_status_unavai | False |
| terrainactive     | False  | vibeclip1         | 0       | xpdr_airborne_stat | False | xpdr_x_bit_status  | False |
| timeInAir         | 0      | vibeclip2         | 0       | xpdr_board_tempera | 0     | xtrack_error       | 0     |
| timeInAirMinSec   | 0      | vibex             | 0       | xpdr_es1090_tx_ena | False | yaw                | 0     |
| timeSinceArmInAir | 0      | vibey             | 0       | xpdr_flight_id     |       |                    |       |
| timesincelastshot | 0      | vibez             | 0       | xpdr_gps_no_fix    | False |                    |       |
| toh               | 0      | vlen              | 0       | xpdr_gps_unavail   | False |                    |       |
| tot               | 0      | voltageflag       | 4       | xpdr_ident_active  | False |                    |       |
| TrackerLocation   | 0,0,0, | vtol_state        | 0       | xpdr_interrogated_ | False |                    |       |
| turng             | 1      | vx                | 0       | xpdr_maint_req     | False |                    |       |

Alle Sensoren sind 0

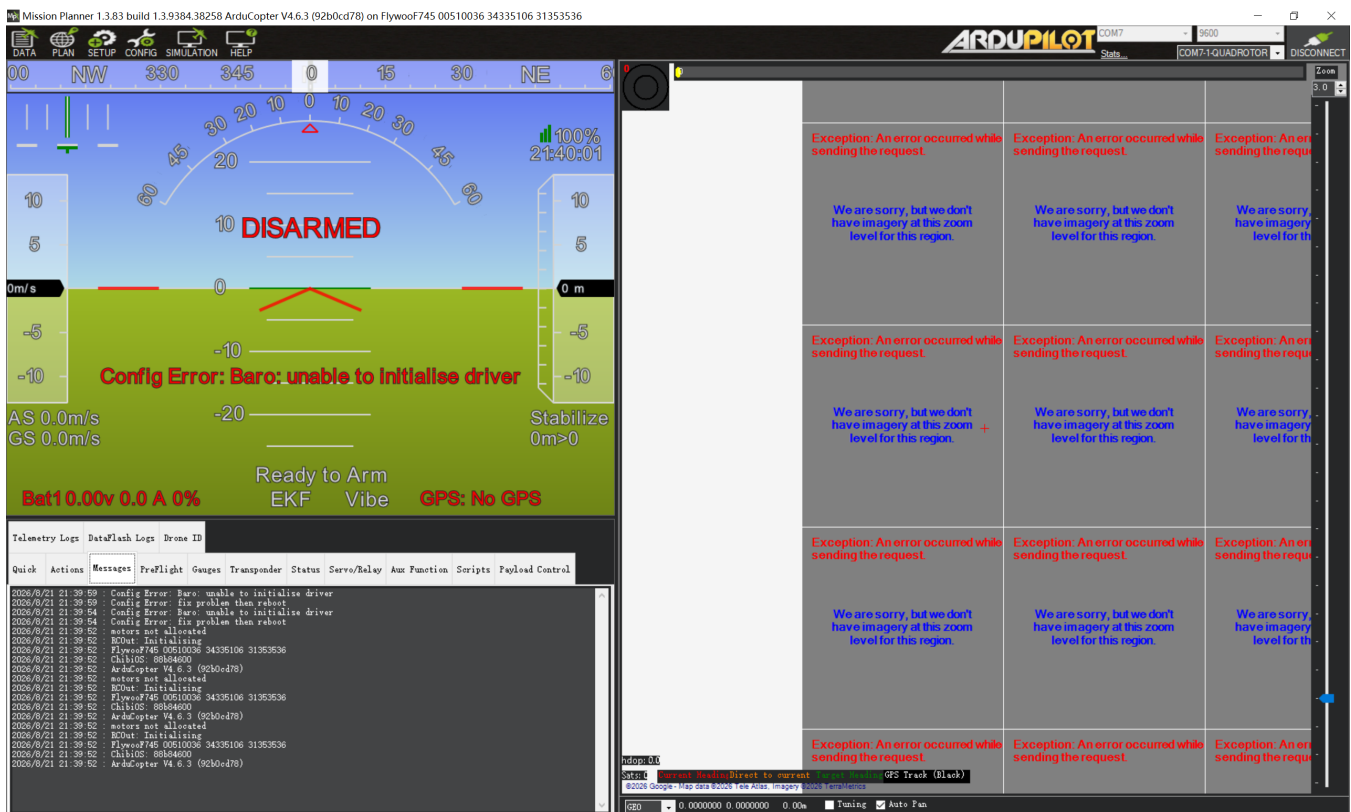
Vermutung: Alle Sensoren sind nicht initialisiert.

## 1.4 Optisch nachsehen

Kein Schaum gefunden.



Über dem mutmaßlichen Barometersensor befindet sich ein dünner Faden, der möglicherweise ein Grat vom Rahmen ist.



Nach dem Entfernen des Fadens meldet das Barometer weiterhin denselben Fehler.

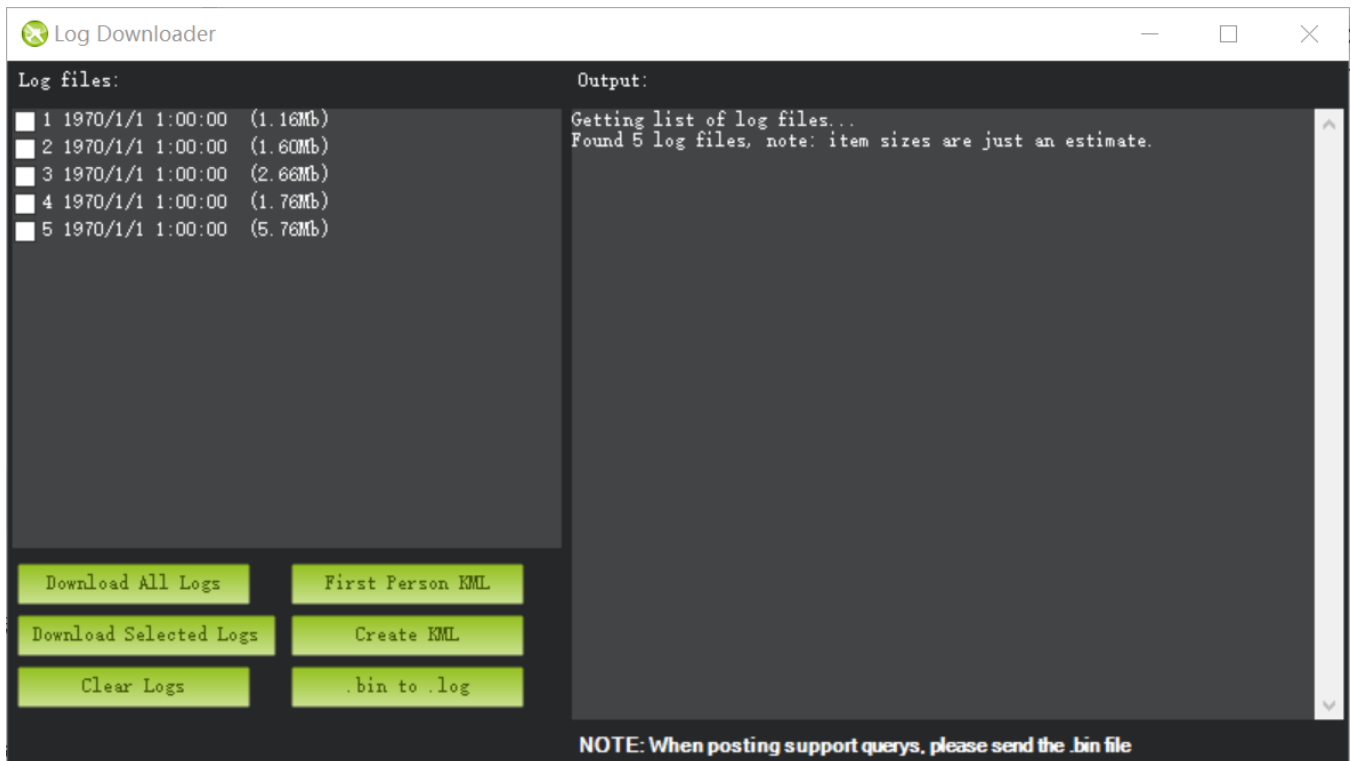
Es ist aufgefallen, dass sich dieses Teil in der Nähe des abgerissenen GPS-Anschlusses befindet. Daher ist es sehr wahrscheinlich, dass es beim Stoßen beschädigt wurde.

## 1.5 Diese Parameter ablesen

| Feld             | Anzahl |
|------------------|--------|
| BARO_PRIMARY     | 0      |
| BARO_PROBE_EXT   | 0      |
| RNGFND1_GNDCLEAR | 10     |
| RNGFND1_MIN_CM   | 1      |
| EK3_RNG_USE_HGT  | -1     |
| EK3_SRC1_POSZ    | 2      |
| SERIAL4_PROTOCOL | 2      |

| Feld         | Anzahl |
|--------------|--------|
| SERIAL4_BAUD | 921    |

## 1.6 Ein frisches Log mitnehmen



Kein neues Log generiert.

## Teil 2

```
PS C:\Users\zhang> ssh drone@dronePi.local
drone@dronepi.local's password:
Linux dronePi 6.18.34+rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.18.34-1+rpt1 (2026-06-09) aarch64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Aug 21 16:08:02 2026 from 100.113.92.35
drone@dronePi:~ $ cd ~/code/Pi-Code
drone@dronePi:~/code/Pi-Code $ python3 setparam.py EK3_RNG_USE_HGT 70 --reboot
Connecting to udpin:127.0.0.1:14550 ...

No autopilot heartbeat - target_system stayed 0.
Something is on the link, but nothing that identifies itself as a vehicle.
Check that:
  * the flight controller is powered (USB or battery),
  * mavlink-router is running:    systemctl status mavlink-router
  * it actually sees the FC:      journalctl -u mavlink-router -n 20
drone@dronePi:~/code/Pi-Code $ |
```

Connection Failed.