```
# diff all

# version
# Betaflight / STM32F7X2 (S7X2) 4.3.0 Jun 24 2022 / 19:03:27 (2022-06-24-1903) MSP API: 1.44
# config: manufacturer_id: DIAT, board_name: MAMBAF722, version: ec268d11, date: 2021-07-
26T13:10:45Z

# start the command batch
batch start

# reset configuration to default settings
defaults nosave

board_name MAMBAF722
manufacturer_id DIAT
mcu_id 0028001b3538510735343631
signature

# name: XL7

# feature
feature GPS

# serial
serial 2 2048 115200 57600 0 115200
serial 3 2 19200 115200 0 115200

# map
map TAER1234

# aux
aux 0 0 1 1700 2100 0 0
aux 1 1 3 1300 1700 0 0
aux 2 27 5 1700 2100 0 0
aux 3 46 3 1700 2100 0 0
aux 4 13 4 1700 2100 0 0
aux 5 35 5 900 1300 0 0

# adjrange
adjrange 0 0 2 900 2100 29 2 0 0

# vtxtable
vtxtable bands 6
vtxtable channels 8
vtxtable band 1 BOSCAM_A A FACTORY 5865 5845 5825 5805 5785 5765 5745 5725
vtxtable band 2 BOSCAM_B B FACTORY 5733 5752 5771 5790 5809 5828 5847 5866
vtxtable band 3 BOSCAM_E E FACTORY 5705 5685 5665    0 5885 5905    0    0
vtxtable band 4 FATSHARK F FACTORY 5740 5760 5780 5800 5820 5840 5860 5880
vtxtable band 5 RACEBAND R FACTORY 5658 5695 5732 5769 5806 5843 5880 5917
vtxtable band 6 IMD6     I CUSTOM  5732 5765 5828 5840 5866 5740    0    0
vtxtable powerlevels 4
vtxtable powervalues 14 26 29 32
```

REVISION

If present, this will be included in the file name when you save a diff all to file.

If this is not present, failsafe GPS-Rescue will not work. Note: It may appear to be selectable on Failsafe tab, but it wont save to config!

/master/docs/serial.md

2048 = VTX SMART AUDIO
2 = GPS

/master/docs/Modes.md

0 = ARM
1 = ANGLE
27 = FAILSAFE
46 = GPS RESCUE
13 = BEEPER ON
35 = FLIP OVER AFTER CRASH

1 = Aux 2
3 = Aux 4
5 = Aux 6
3 = Aux 4
4 = Aux 5
5 = Aux 6

Aux 3 Aux 3

29 = OSD PROFILE

vtxtable powerlabels 25 400 800 MAX

vtx
vtx 0 0 0 0 2 900 1200
vtx 1 0 0 0 3 1200 1800
vtx 2 0 0 0 4 1800 2100

} vtx power. Set with CLI

master
set gyro_lpf2_static_hz = 1000
set dyn_notch_count = 2
set dyn_notch_min_hz = 100
set dyn_notch_max_hz = 800
set gyro_lpf1_dyn_min_hz = 120
set gyro_lpf1_dyn_max_hz = 350
set acc_calibration = 16,9,135,1
set mag_hardware = NONE
set rc_smoothing_auto_factor = 250
set rc_smoothing_auto_factor_throttle = 100
set rc_smoothing_setpoint_cutoff = 6
set rc_smoothing_feedforward_cutoff = 6
set rc_smoothing_throttle_cutoff = 20
set serialrx_provider = CRSF
set dshot_bidir = ON
set failsafe_procedure = GPS-RESCUE ← For this to be selectable, GPS for navigation & telemetry must be selected on Configuration tab.
set vbat_min_cell_voltage = 290
set vbat_warning_cell_voltage = 300
set yaw_motors_reversed = ON
set small_angle = 180
set gps_provider = UBLOX
set gps_set_home_point_once = ON
set gps_rescue_angle = 35
set gps_rescue_descent_dist = 150
set gps_rescue_ground_speed = 1500 — 1500 cm/s = 54 km/hr
set gps_rescue_throttle_max = 1400
set gps_rescue_sanity_checks = RESCUE_SANITY_FS_ONLY
set gps_rescue_min_sats = 6
set gps_rescue_min_dth = 80
set gps_rescue_allow_arming_without_fix = ON
set gps_rescue_alt_mode = CURRENT_ALT
set simplified_gyro_filter = OFF
set osd_warn_rssi = ON
set osd_rssi_alarm = 10
set osd_alt_alarm = 5000
set osd_tim1 = 25601
set osd_tim2 = 25601
set osd_vbat_pos = 2446
set osd_rssi_pos = 218
set osd_link_quality_pos = 2263
set osd_rssi_dbm_pos = 2295
set osd_tim_1_pos = 14742
set osd_flymode_pos = 2433
set osd_throttle_pos = 4480

rescue

osd { ? not position ?

```
set osd_vtx_channel_pos = 2401
set osd_current_pos = 10529
set osd_mah_drawn_pos = 10616
set osd_craft_name_pos = 4103
set osd_gps_speed_pos = 2145
set osd_gps_lon_pos = 2064
set osd_gps_lat_pos = 2049
set osd_gps_sats_pos = 2094
set osd_home_dir_pos = 2159
set osd_home_dist_pos = 2241
set osd_altitude_pos = 2198
set osd_warnings_pos = 14538
set osd_avg_cell_voltage_pos = 4491
set osd_esc_rpm_pos = 8225
set osd_rtc_date_time_pos = 8234
set osd_flip_arrow_pos = 8426
set osd_stat_rtc_date_time = ON
set osd_stat_tim_1 = ON
set osd_stat_tim_2 = OFF
set osd_stat_max_dist = ON
set osd_stat_endbatt = ON
set osd_stat_battery = ON
set osd_stat_min_rssi = OFF
set osd_stat_max_alt = ON
set osd_stat_min_link_quality = ON
set osd_stat_flight_dist = ON
set osd_stat_total_time = ON
set osd_stat_min_rssi_dbm = ON
set vtx_band = 1
set vtx_channel = 7
set vtx_power = 3
set vtx_low_power_disarm = ON
set vtx_freq = 5745
set gyro_1_align_yaw = 1800
set name = XL7
```

also see page 1.

3. $\text{Mod}(10529, 32) = 1 \therefore$ column 1

$10240 \rightarrow$ Profile 1 and 3.

$\text{int}\left(\frac{10529 - 10240}{32} = 9.03125\right) = 9 \therefore$ row 9

position = $\text{Profile}_{10} + 32 \times \text{row} + \text{column}$.

Rows numbered 0 to 15 (16 rows)

Columns numbered 0 to 31 (32 columns)

Columns 30 and 31 not visible on OSD configurator.

Profile	hex	Decimal
1	0x0800	2048
2	0x1000	4096
1 & 2	0x1800	6144
3	0x2000	8192
1 & 3	0x2800	10,240
2 & 3	0x3000	12,288
1, 2 & 3	0x3800	14,336

See Betaflight OSD position and profile.txt

```
profile 0

# profile 0
set dterm_lpf1_dyn_min_hz = 0
set dterm_lpf1_dyn_max_hz = 0
set dterm_lpf1_dyn_expo = 0
set dterm_lpf1_static_hz = 80
set dterm_lpf2_static_hz = 140
set anti_gravity_gain = 4000
set p_pitch = 83
set i_pitch = 111
set d_pitch = 54
set f_pitch = 173
set p_roll = 72
set i_roll = 96
set d_roll = 46
```

```
set f_roll = 151
set p_yaw = 72
set i_yaw = 96
set f_yaw = 151
set d_min_roll = 46
set d_min_pitch = 54
set feedforward_smooth_factor = 40
set feedforward_jitter_factor = 16
set simplified_master_multiplier = 140
set simplified_i_gain = 75
set simplified_d_gain = 110
set simplified_pi_gain = 115
set simplified_dmax_gain = 0
set simplified_feedforward_gain = 90
set simplified_pitch_d_gain = 105
set simplified_pitch_pi_gain = 110
set simplified_dterm_filter = OFF

profile 1

profile 2

# restore original profile selection
profile 0

rateprofile 0

# rateprofile 0
set roll_expo = 20
set pitch_expo = 20
set yaw_expo = 20

rateprofile 1

rateprofile 2

rateprofile 3

rateprofile 4

rateprofile 5

# restore original rateprofile selection
rateprofile 0

# save configuration
save
#
```

References

- github.com/betaflight/betaflight/tree/master/docs
  ↳ /betaflight/blob/master/docs/Modes.md
- Instalation & Documentation
  github.com/betaflight/betaflight/wiki (see links on RHS.)