en/MK-Parameter/Misc

14

LotharF
MikroKopter.de

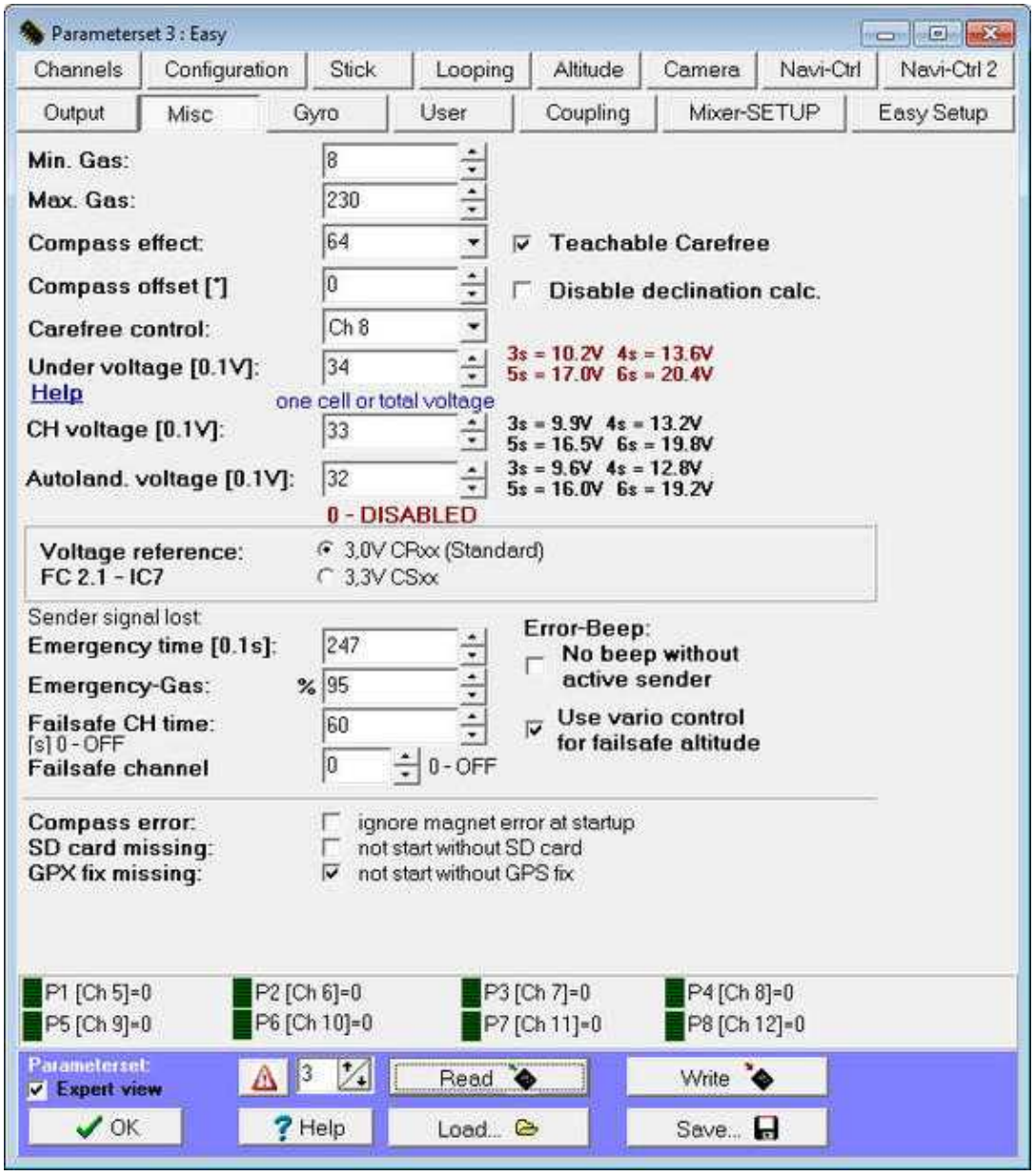
Quick selection
Open the description -> click Button

Channels	Configuration	Stick	Looping	Altitude
Camera	Navi-Ctrl	Navi-Ctrl 2	Output	Misc
Gyro	User	Coupling	Mixer-SETUP	Easy Setup

This page as an **PDF-Document**?
Click on that Symbol and wait a little moment... --->

Misc

- deutsch


Parameterset 3 : Easy
Channels
Configuration
Stick
Looping
Altitude
Camera
Navi-Ctrl
Navi-Ctrl 2
Output
Misc
Gyro
User
Coupling
Mixer-SETUP
Easy Setup
Min. Gas:
8
Max. Gas:
230
Compass effect:
64
Teachable Carefree
Compass offset [°]
0
Disable declination calc.
Carefree control:
Ch 8
Under voltage [0.1V]:
34
3s = 10.2V 4s = 13.6V
5s = 17.0V 6s = 20.4V
Help
one cell or total voltage
CH voltage [0.1V]:
33
3s = 9.9V 4s = 13.2V
5s = 16.5V 6s = 19.8V
Autoland. voltage [0.1V]:
32
3s = 9.6V 4s = 12.8V
5s = 16.0V 6s = 19.2V
0 - DISABLED
Voltage reference:
FC 2.1 - IC7
3,0V CRxx (Standard)
3,3V CSxx
Sender signal lost:
Emergency time [0.1s]:
247
Emergency-Gas:
%
95
Failsafe CH time:
[s] 0 - OFF
60
Failsafe channel
0
0 - OFF
Error-Beep:
No beep without active sender
Use vario control for failsafe altitude
Compass error:
ignore magnet error at startup
SD card missing:
not start without SD card
GPX fix missing:
not start without GPS fix
P1 [Ch 5]=0
P2 [Ch 6]=0
P3 [Ch 7]=0
P4 [Ch 8]=0
P5 [Ch 9]=0
P6 [Ch 10]=0
P7 [Ch 11]=0
P8 [Ch 12]=0
Parameterset:
Expert view
3
Read
Write
OK
Help
Load...
Save...

In these settings for example additional features such as CareFree or Emergency-throttle can be set.

- **Min. Gas**
  Minimal gas value, which goes to the motor.
- **Max. Gas**
  Maximal gas value which goes to the motor.
- **Compass effect**
  Is a compass connected the influence of the yaw can be set up here. In that case a small number has a small, one large number has a big influence.
- **Carefree control**
  Is the value "0" the function CareFree is off. To toggle the function at the transmitter you can set up a channel.
- **Under voltage**

The threshold is set in 0.1 V steps to report the battery-low voltage.
The default setting is 33 (3.3 V). This is the voltage of each cell in a lipo that should not be exceeded.
(Infos about the Lipo you can read here: Lipo)

When you turn on the Kopter it will detect automatically if, for example, a 3S or 4S Lipo is connected.
Info: After switching on (1 x a slightly longer beep) is heard, the detection of cells: 3S = beep 3x, 4x beep = 4S; ...

If the under voltage limit is reached, a battery warning issued over the Summer. IF you hear this warning, the Kopter should be landed.
If you set a wrong under voltage limit (maybe to low), you will hear the warning until this (wrong) voltage.
Are the cells (it already reaches 1 cell) then lower then 3V, the performance may decrease abruptly.

- **CH voltage [0.1V]**
  Here you can set the voltage where the copter should automatically fly back to the home position.
  Important The voltage should be less or equal than the *Under voltage*.

- **Autoland. voltage [0.1V]**
  Here you can set the voltage where the copter should automatically land.
  Important The voltage should be less or equal than the *Under voltage*.

- **Voltage reference**
  Normally you **do not** have to change this!!

  This setting is only for a few FlightCtrl V2.1 at the beginning who get's a other voltage regulator. With this you see in the KopterTool a lower voltage then it realy is. Here you can adjust this. More informations about this you can find here : UndervoltageSettings

- ***Loss of receiving :***

  INFO:
  The *emergency gas* is only active when a gas value was >40 for at least 4 seconds. This means the copter is flying!
  If the copter stay on the ground, you start the motors and switch off the transmitter, the motors will stop immediately and the function *emergency gas* is not working!

- **Emergency Time [0.1s]**
  Here the time is entered in tenths of seconds for which the gas is actively seeking emergency reception failure. As a value, a number 1-247 can be entered.
  So it is a maximum time of emergency-throttle/gas (247 x 0.1s) 24.7 seconds possible.
- **Emergency-Gas**

With this *emergency gas* value the copter goes into the descending flight when a) the time for the FailSafe is over or b) FailSafe is not set/enabled.
For the *emergency gas* there are two possibilities:

- Automatic

  If you activate ***Use vario control for failsafe altitude*** a percent sign appears before the input field *emergency gas*. Now you can set the *emergency gas* as a percentage value. Now the needed *emergency gas* will be calculated automatically - no matter how heavy the copter is.
  Applies here => 100 = 100% = Copter hovers / keeps the height.
  IMPORTANT: The function *Vario altitude control* must be the selected under the tab *Altitude*.
- Manual setting
  Depending on the total weight of the copter *emergency gas* and the settling velocity can be entered individually.
  The value should not be set too low or too high. Otherwise the copter can fall to fast down or climb into the sky if the signal is lost.
  (See below under *Obtaining Emergency-gas values*)

INFO: The set value (Manuell or Automatic) should be chosen so that the UAV to quickly lose altitude. Decreases the copter too slow, the emergency gas time can flow during the fall and the engines put off!

- **FailSafe CH time**
  In case of RC transmission-lost the MK will fly now automatically for 60 sec. to the Home-Position. (Commercial users can determine up to 247 Seconds.)
  The function and settings of the FailSafe themselves are described here: FailSafe
- **!Failsafe channel**
  If a receiver is used which is not showing a receiving failure a loss of the received signal will be not detected and the Kopter would continue to fly with the last received settings.
  Here you can enter a free channel. This channel must be set over the "!Failsafe" of the receiver so that the channel is switched off during a loss of a received signal.
  Is that channel available on a button at your transmitter you can use actually that button as a test-button for the function "!Failsafe".
- **Error-Beep (No beep without active transmitter)**
  If you power on your Kopter and the transmitter is not switched on, the Kopter give you a beep signal. This beep signal will stop if you switch on the transmitter.
  After activating this function, the copter will not beep after you power on the Kopter and forgot the transmitter.
  (The signal loss is still displayed)
- **Use vario control for failsafe altitude**
  If this function is enabled, a percent sign appears in front of "emergency gas" (%).
  See above => emergency gas > Automatik
- **Compass error**
  NOTE: This function should only be used for testing purposes!
  If you click here "ignore magnet error at startup" magnet failure messages will be ignored which are avoiding a start of the Kopter.
  When using this function a flying with GPS function (PositionHold, ComingHome, CareFree) is expressly not recommended. Existing magnetic errors can affect the flight and cause a malfunction of the compass.
  This can lead to the crash of copter.
- **SD card missing**
  If you click here "not start without SD card" the Kopter will start only with the insert SD-Card.

If the card is missing the motors can be maybe started. But then a lift of / increase of the engine speed is not possible.
That can be necessary for the commercial use of the Kopter if certain legal requirements are requested.
(i.e. range limit, Emergency program within an unforeseen exit of a prescribed radius, etc.)
(see also: FailSafe)

- **GPS fix missing**
  If you click here "not start without GPS fix" the Kopter will only start with a made Sat-Fix.
  If the GPS fix is missing the motors can be maybe started. But then a lift of / increase of the engine speed is not possible.
  Without a Sat-Fix the GPS-Functions like PositionHold, ComingHome or FailSafe are not possible.
  To ensure that the GPS functions can be used you can activate this function.

- **Info:**
  This Emergency-Gas function is used at your own risk. In the event of a loss of reception the Kopter may come down with a sink rate defined here.
  The Kopter comes down there where the loss was of the reception. Damage to the MikroKopter can not be ruled out!

⚠ To display this feature, the receiver must receive the loss. This can easily be checked:
- Receiver is connected to FlightCtrl. Transmitter and FlightCtrl are switched on (powered).
- Now, the transmitter is turned off the red LED lights on the Flight-Ctrl. and the buzzer gives a warning signal.

If there is a loss of reception (e.g. from out of range or transmitter off), the gas emergency regulation becomes effective.

Find the right emergency gas value for *manual* emergency gas:
On an open field with plenty of space, the required emergency gas value and the function can be flown easily tested.
To read the values??, perhaps, a second person could be there and help.
💡 You can store different emergency gas levels in the various settings !!!
💡 If, for example, a camera is carried later on the MikroKopter the UAV is heavier and therefore it must be another/different Emergency-gas time adjusted !!!

The easiest way to determine the needed gas value is in the KopterTool. This should include a data link between the MikroKopter and the PC (or laptop) to see the data in KopterTool.
This can be done over a Bluetooth modul or a Wi232 modul (Link).
If the connection is available you can change in the Kopter-Tool into the following display (with the red arrows):

Now the Kopter can be started and you can hover in a height of approx. 15 - 20mtr (or higher). All additional features such as height, PositionHold, etc. are off.
The value now displayed next to **Gs:** is the gas float value.
Now, the gas can be reduced slowly so that the MikroKopter falls. If you have a proper rate of descent and if this value is reached, the value can be read next to **Gs:**.
This value can be entered now as **emergency-gas**.

If the value is entered and stored in the !Flight-Ctrl. the MikroKopter can hover in the air and you can turn off the radio once.
The copter should come down now with the emergency gas setting and shut down after the set time, the engines.