# en/DC-16

22

LotharF
MikroKopter.de

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# 1 Info

The here described settings and procedures are related to the current version 1.07 Jeti.
You can download the latest software directly from the homepage of Jeti: Homepage

Already finished model memories for the DC-16 as well as a suitable setting for the FlightCtrl can be downloaded further below "Example Setting - Download".

# 2 Jeti DC-16

**Shoplink: Jeti DC-16**

The DC-16 is a perfect transmitter for the MikroKopter. With this transmitter you are able to use all 12 channels of the FlightCtrl.

The data:

- 16 channel for switches, buttons and potis
- 2,4GHz transfer technology
- Displays MikroKopter-Telemetry on the build-in and illuminated 3,8" display (320x240 Pixel)
- Voice output of the telemetry values (via connected loudspeaker or headset)
- 10 switches (5 three-way switches, 4 two-way switches and 1 push-button)
- 4 analog potis
- Future proofed through upgradeability via USB interface
- Recording of the telemetry data
- PC interface
- Different languages can be set (German, Cestina, English, Francais)



| Jeti DC-16 |
| --- |

The transmitter is only availabe in Mode5-configuration (with spring in the gas-stick also) in this Online Shop.

**INFO:**

The Jeti-EX-Telemetry is only supported from **FlightControl V2.1** and **software version V0.90**.
Informations about the Version 0.90 you can find here: V0.90

## 2.1 Instruction for the DC-16

The instruction for the currently valid version can be downloaded directly from Jeti: Jeti DC-16 Instruction manual

# 3 Set transmitter + bind receiver

The easiest way is (for beginners, too) to control the MikroKopter in **Mode2**.
The function "Throttle" and "Yaw" is on the left control stick, "Nick" and "Roll" on the right control stick.

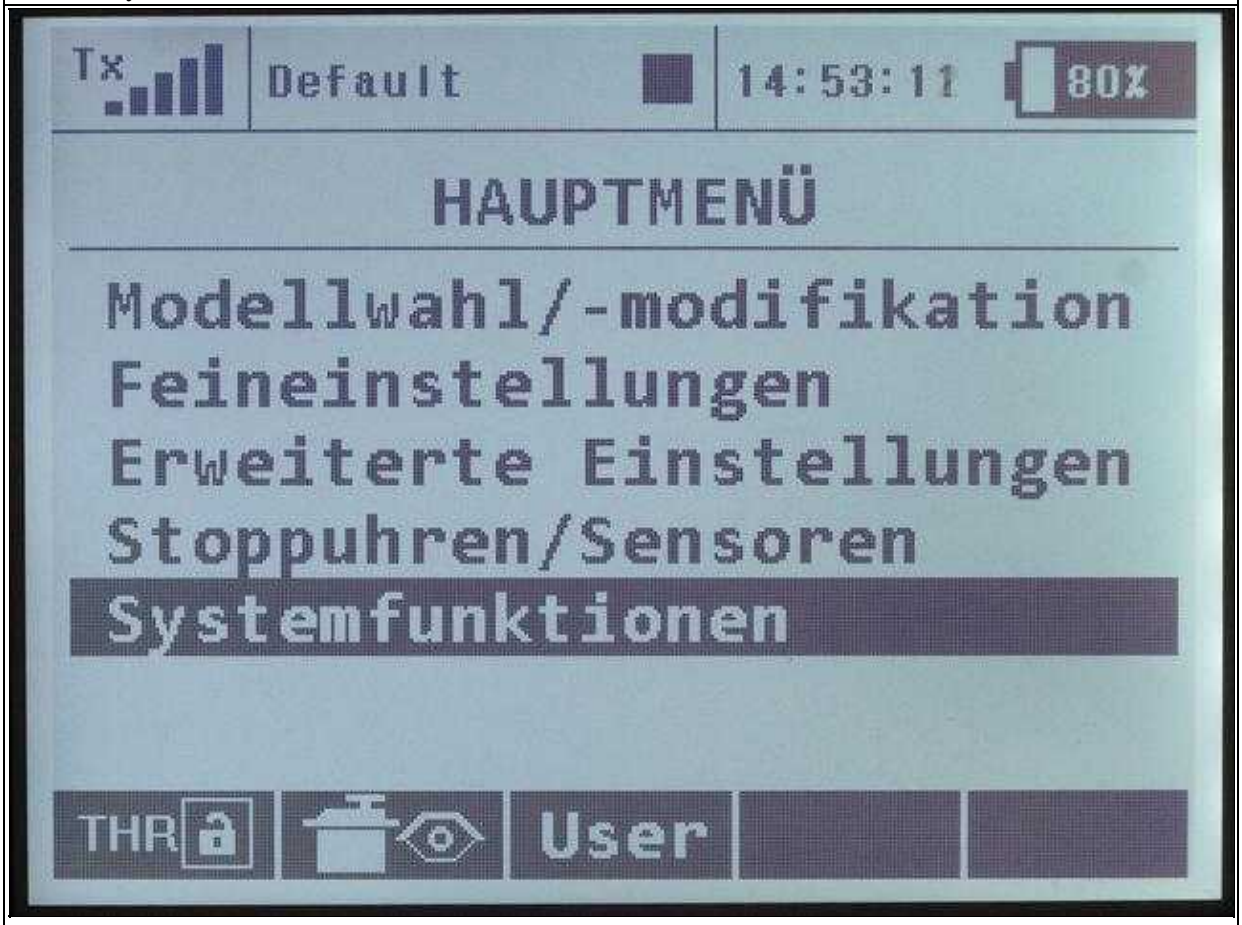
## 3.1 Set Stick Mode

You can get the Jeti DC-16 transmitter either way in mode 1/3 or 2/4. For the use of the MikroKopter the transmitter in mode 2/4 is recommended.

A subsequent change afterwards i.e. Mode1 to Mode2 is via an appropriate software possible. For this purpose the control sticks must be mechanically exchanged against each other. (See instruction: Changing the control mode)

To change the mode you proceed as follows:

**Step1:**
Main menu
choose "System functions"




**Step2:**
and open the
"Transmitter



(To enlarge -> click on the image)

### 3.1.1 Mode 5

There is a special hardware-version of this transmitter available in the MikroKopter-Shop (here). In that Mode 5 -transmitter the throttle stick (gas) has also a spring - that akes flying with vario altitude hold very comfortable.

## 3.2 Bind the receiver

The transmitter and the receiver need to be binded to each other.

**IMPORTANT:**
For the use on the MikroKopter a receiver with PPM sum signal is necessary. The receiver R9 which normally comes with the transmitter cannot be used.
Here you can use i.e. the RMK2 Duplex Receiver: Shoplink
⚠ If the transmitter was purchased in the MikroKopter-Shop, the right receiver will be in the package.

To bind the receiver you proceed as follows:

- Transmitter and receiver are switched OFF.
- Connect the **BIND PLUG** to the plug **EXT** on the receiver.
- Supply voltage to the receiver.
- Now switch ON the transmitter.

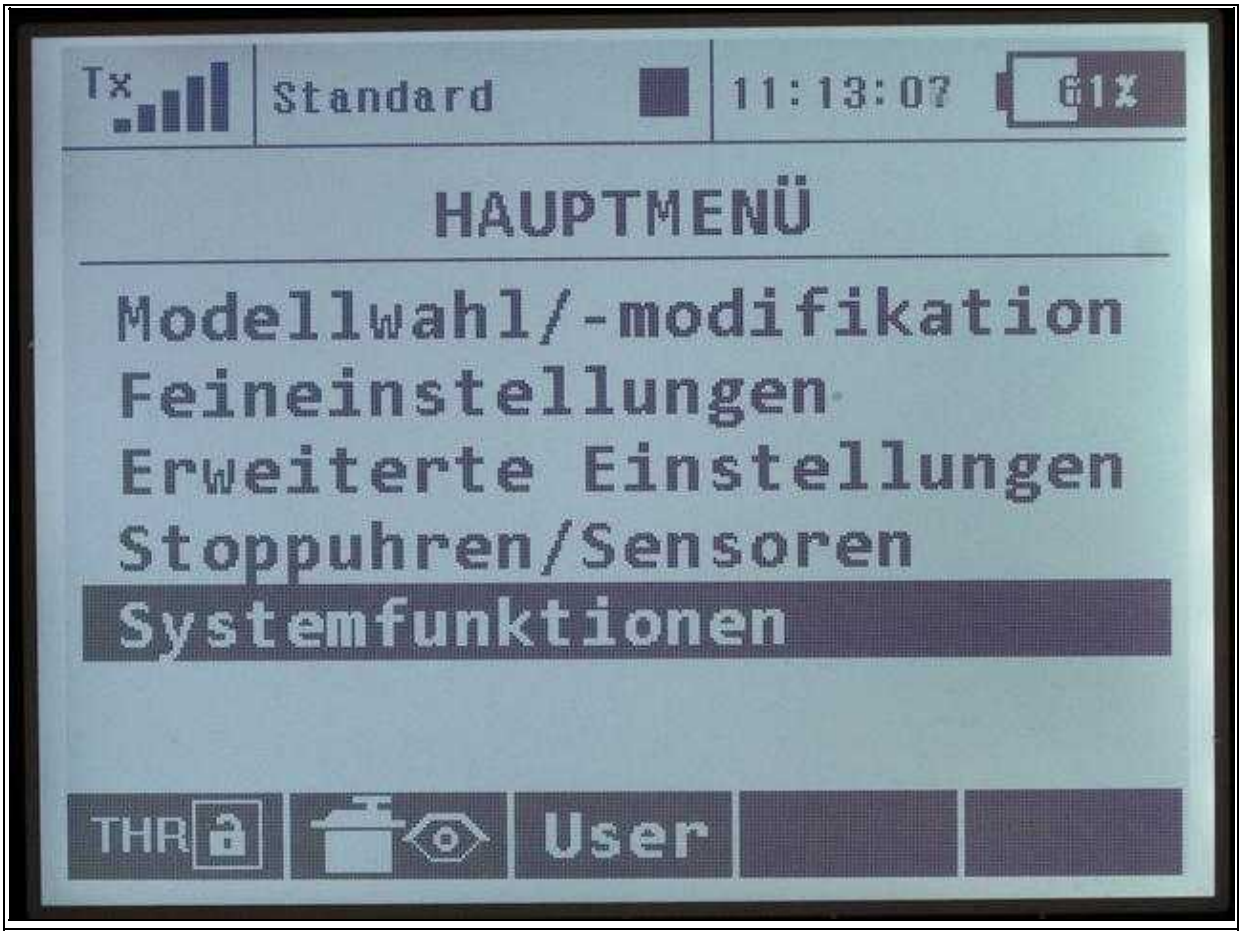
  The receiver will bind automatically with the transmitter.
  This procedure will be acknowledged with an acoustical signal on the transmitter.

## 3.3 Update receiver

It could be possible that older RMK2 receiver provide only 8 channels. That you can change in the settings of the receiver.
If the change to 12 channels is not possible for some reason, you can update the receiver with the following software: Download
(Description of the Update: Link)

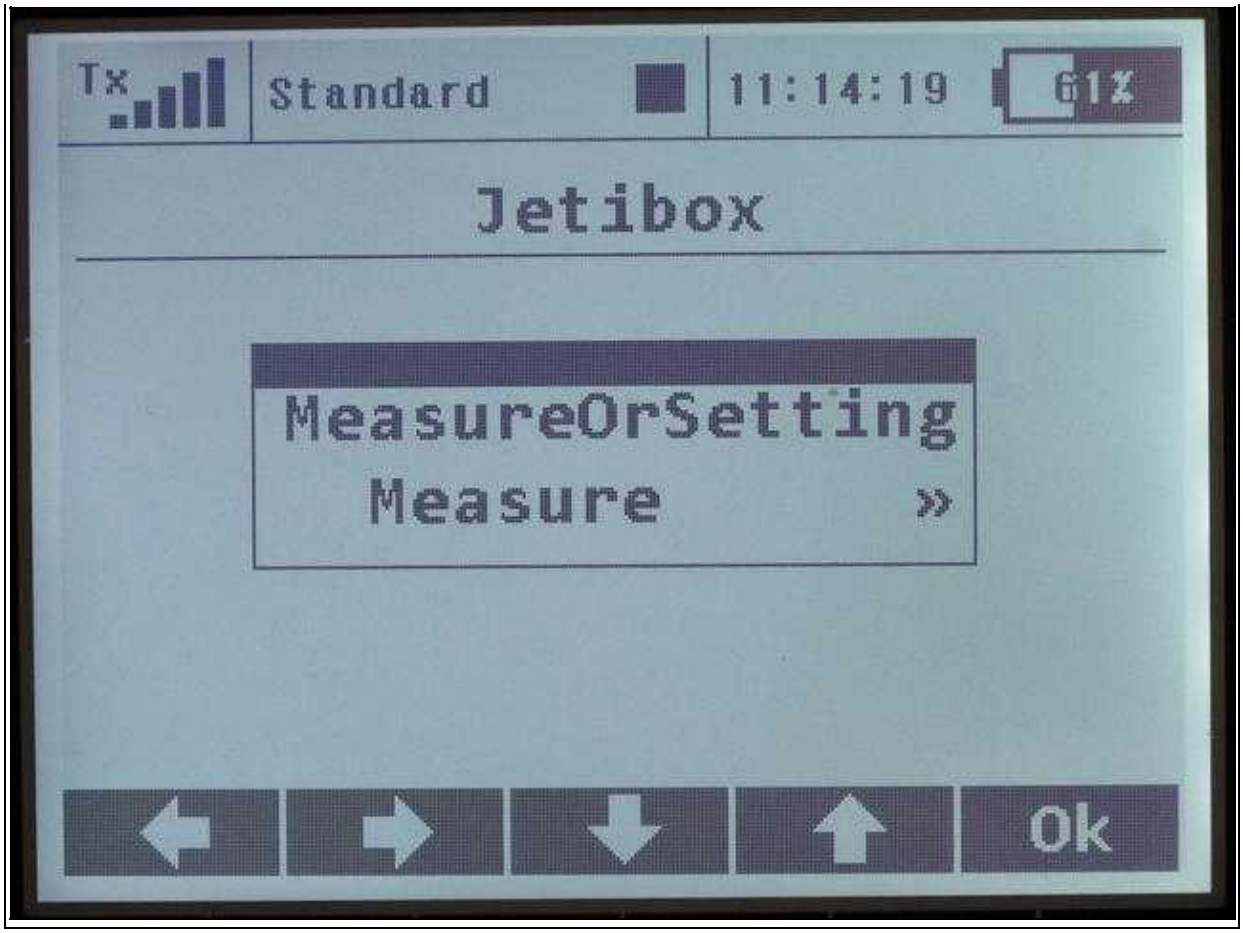
To set the receiver via the transmitter you proceed as follows:

| **Step1:** | **Step2:** |
| --- | --- |
| In the main menu<br>choose "System functions"... | ...down to "J<br>open it with |




(To enlarge -> click on the image)

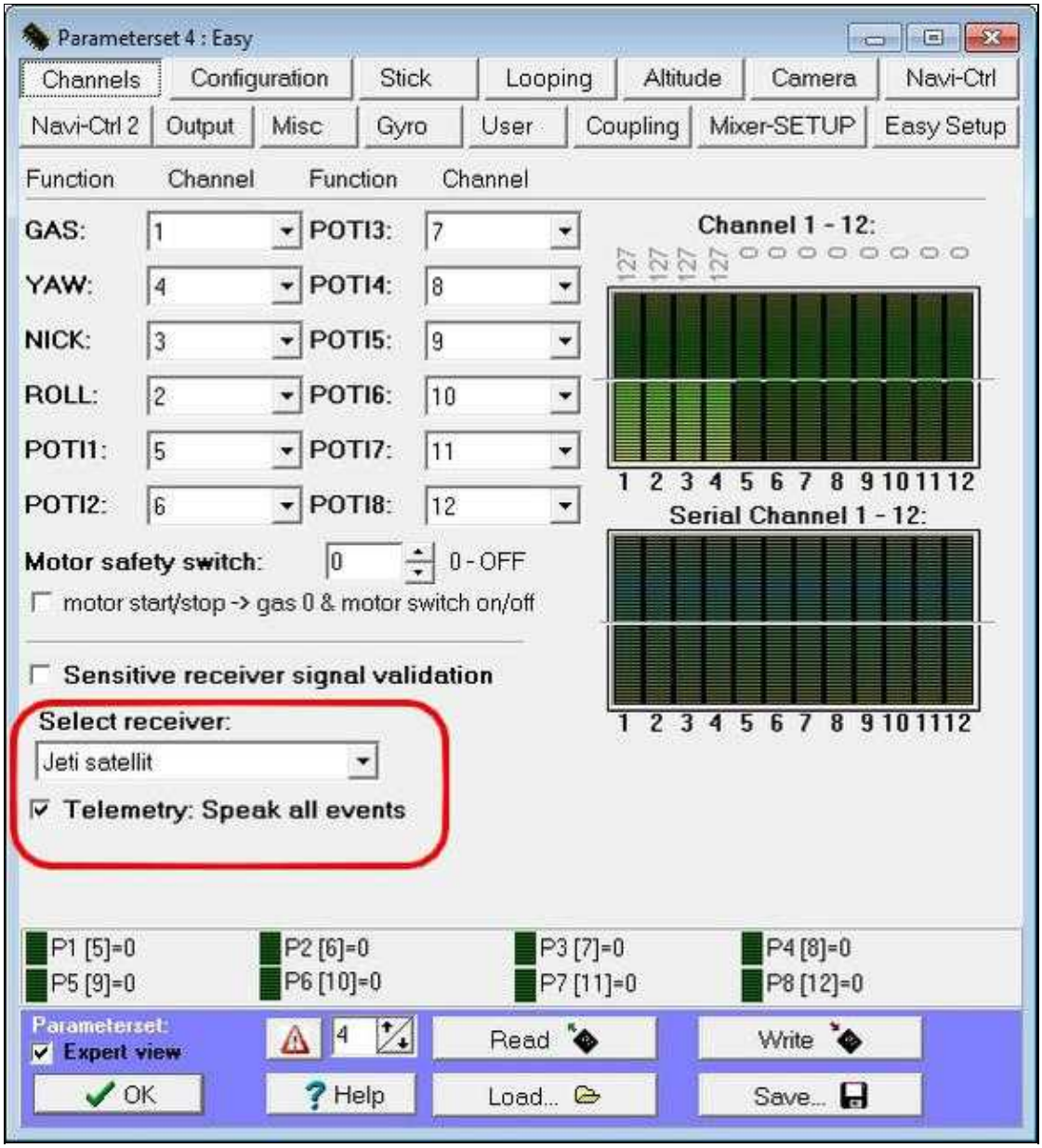
| **Step5:**<br>Down to<br>"MeasureOrSetting"... | **Step6:**<br>...right to the<br>sub-menu "M |
|---|---|




(To enlarge -> click on the image)

# 4 KopterTool

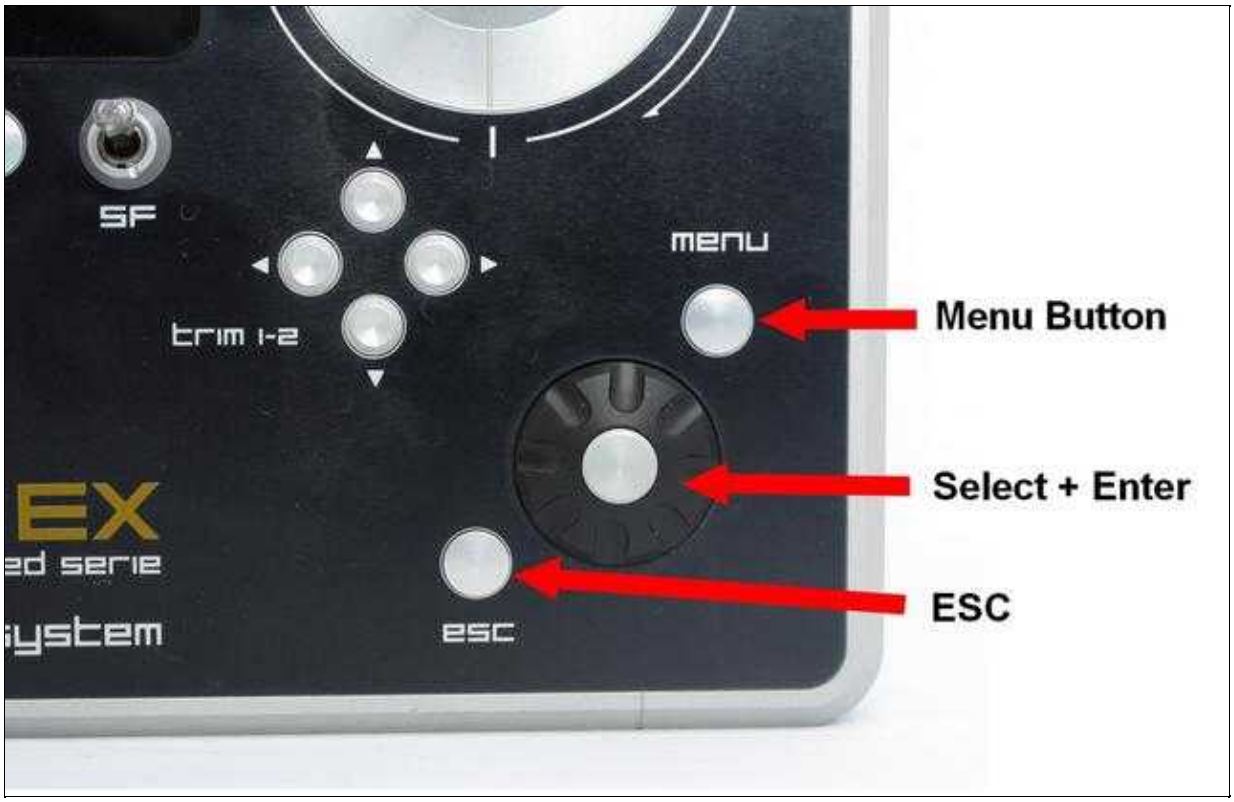
Is the receiver addressed properly and receives the telemetry data, **Jeti Satellite** need to be set in the settings. An additional checkmark should be set at *Telemetry: Speak all events*.



(To enlarge -> click on the image)

# 5 Buttons

On the DC-16 transmitter you go through the menu mainly with the three buttons down on the right side:




(To enlarge -> click on the image)

# 6 New model memory

So that you can use the MikroKopter an appropriate model memory need to be set before.
Here you assign the channels to the control sticks, switches, buttons etc.

## 6.1 Channels

This is an example assignment of the channels and is used in the following descriptions. Any other assignment is possible.

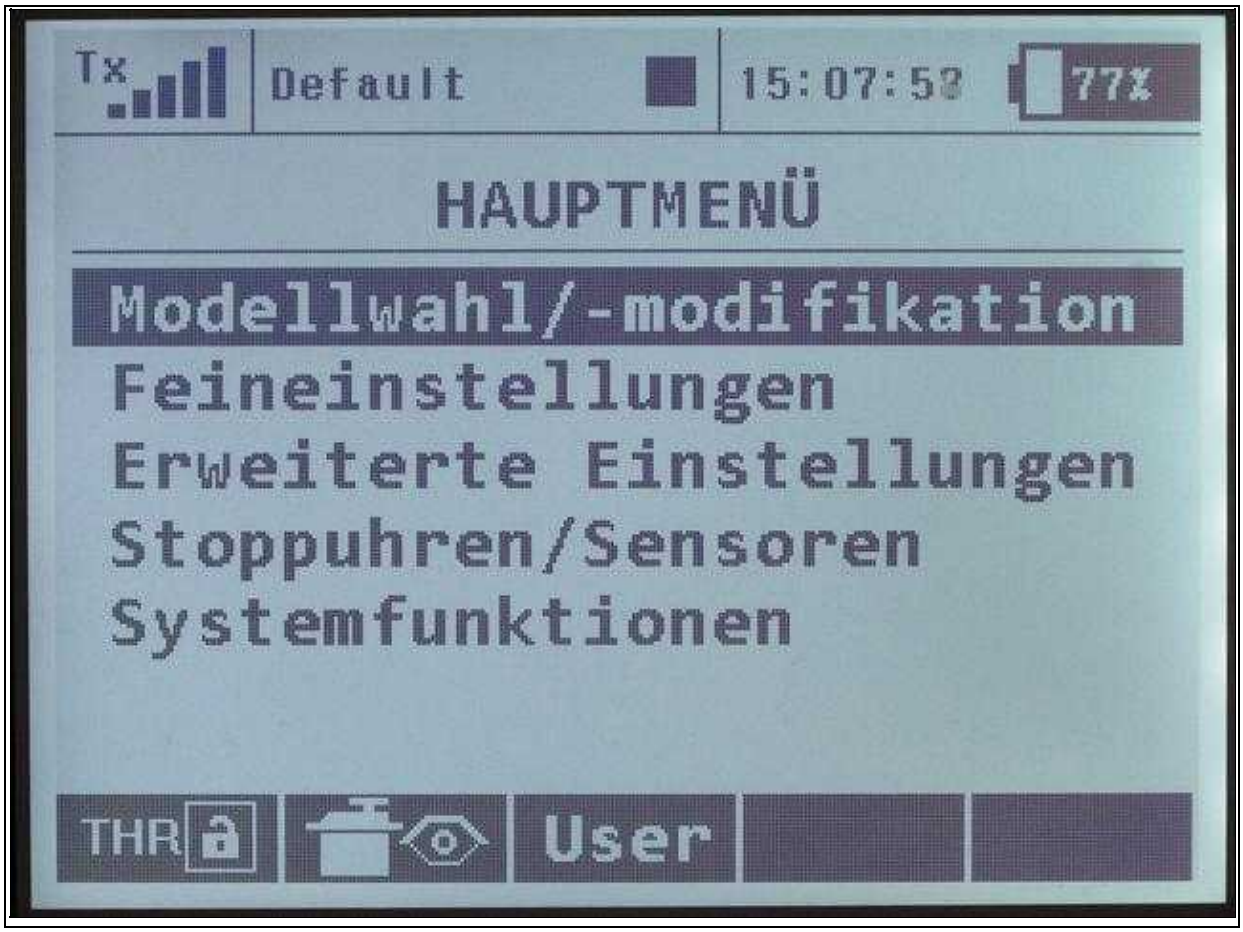
| | | | | |
|---|---|---|---|---|
| - | Channel 1 | - | => | Throttle |
| - | Channel 2 | - | => | Roll |
| - | Channel 3 | - | => | Nick |
| - | Channel 4 | - | => | Yaw |
| - | Channel 5 | (Poti1) | => | Function Hold Altitude |
| - | Channel 6 | (Poti2) | => | Function GPS (PositionHold / ComingHome) |
| - | Channel 7 | (Poti3) | => | Zoom |
| - | Channel 8 | (Poti4) | => | Function CareFree |
| - | Channel 9 | (Poti5) | => | Camera tilt (Nick) |
| - | Channel 10 | (Poti6) | => | Camera tilt (Roll) |
| - | Channel 11 | (Poti7) | => | Trigger camera & LED on/off |
| - | Channel 12 | (Poti8) | => | Function motor safety |

## 6.2 Set model memory

To have no mixers or other links in the new model we choose here directly the model type *Truck&Boat*.
The switches on the transmitter will be set in the new model memory in that way, that all switches are "OFF" when pointing away from you.
To achieve this, the function of some channels need to be reversed with **Rev.**.

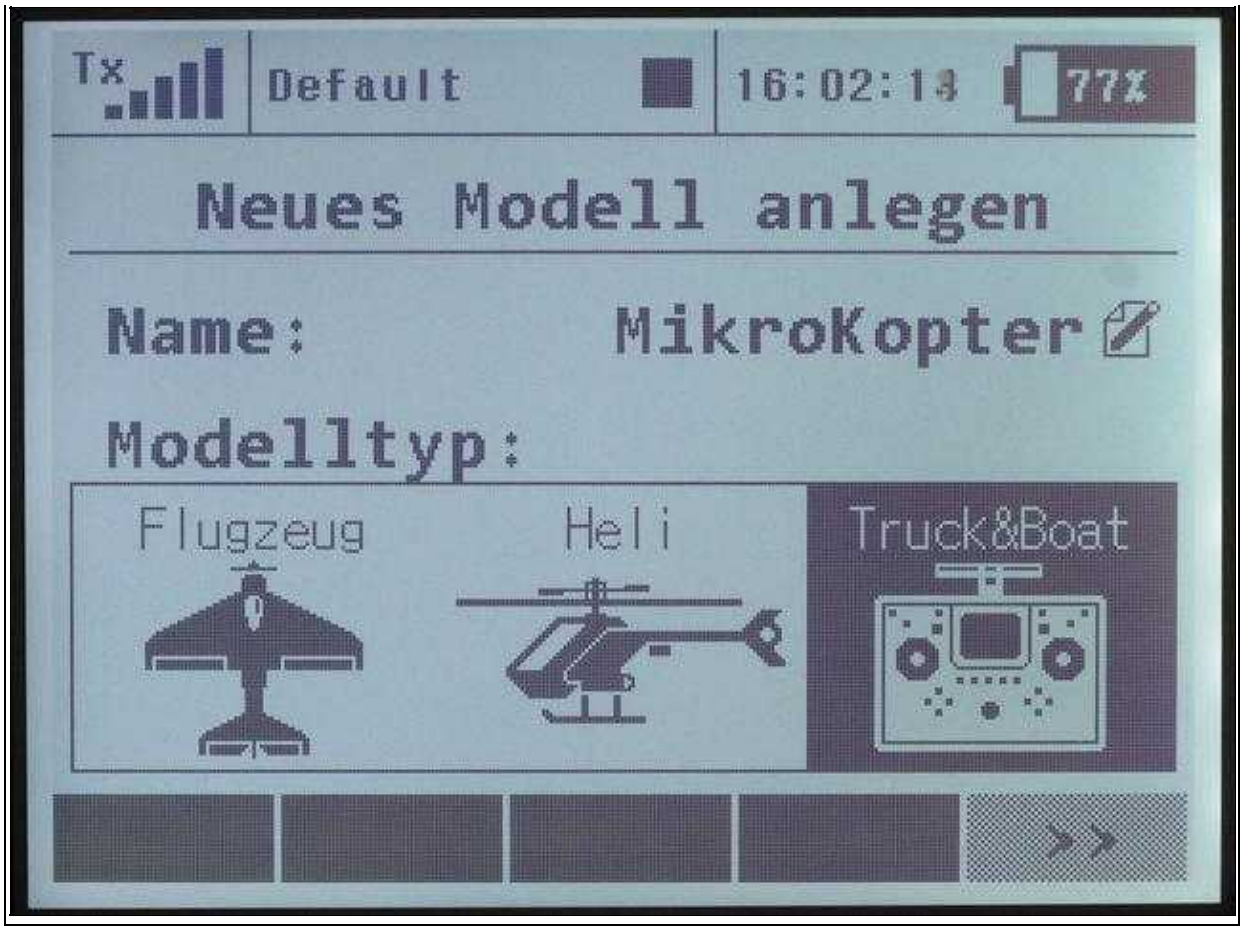
In our example, all channels have been reversed with "Rev." but not channel 1+3.

| | |
|---|---|
| **Step1:**<br>Choose in the main menu "Choose model/<br>-modification"... | **Step2:**<br>...and choos |



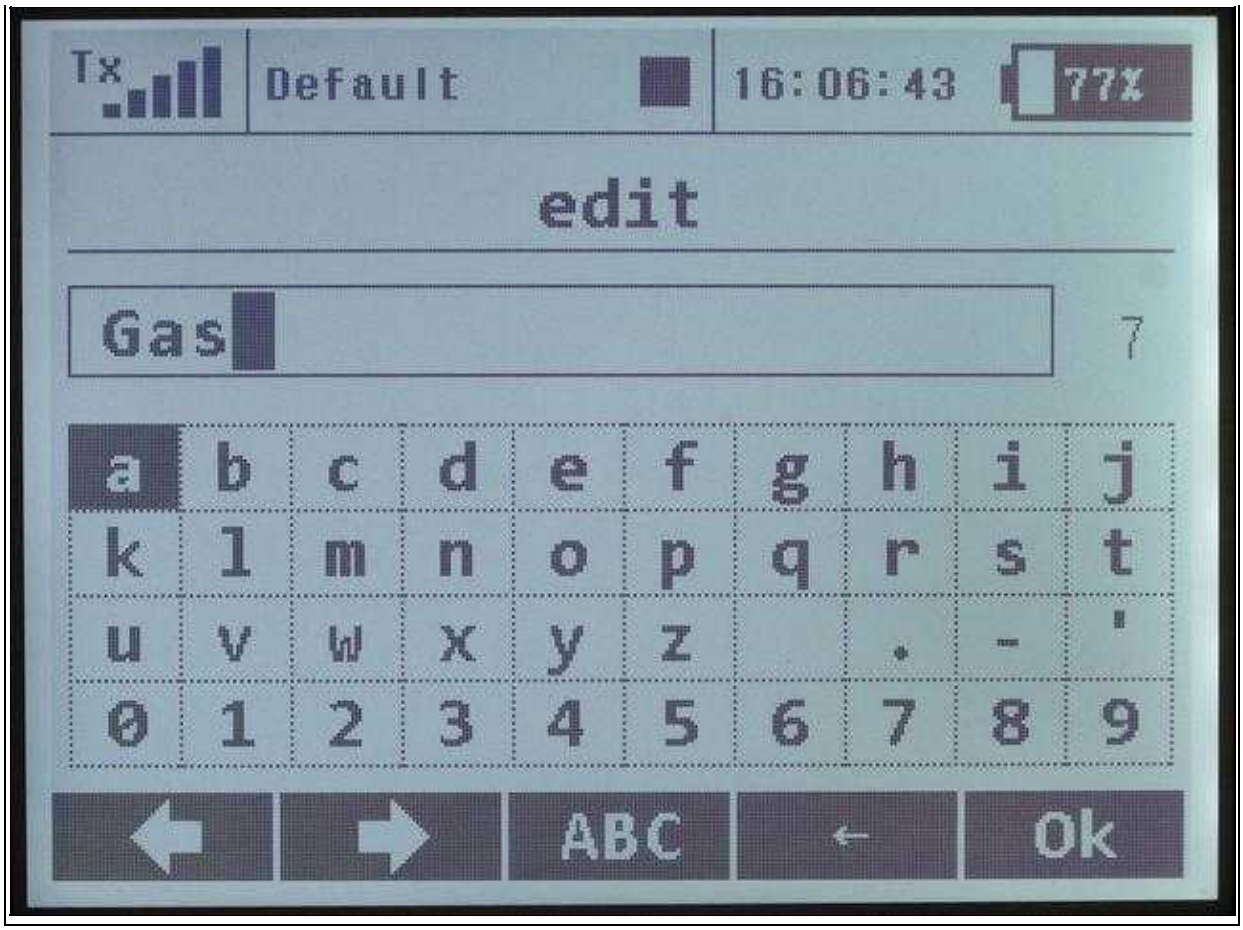

(To enlarge -> click on the image)

| **Step5:**<br>Choose now "Truck+Boat"<br>and with the double arrow<br>to the next window... | **Step6:**<br>...do not mak<br>continue wit<br>to the next w |
|---|---|
| | |



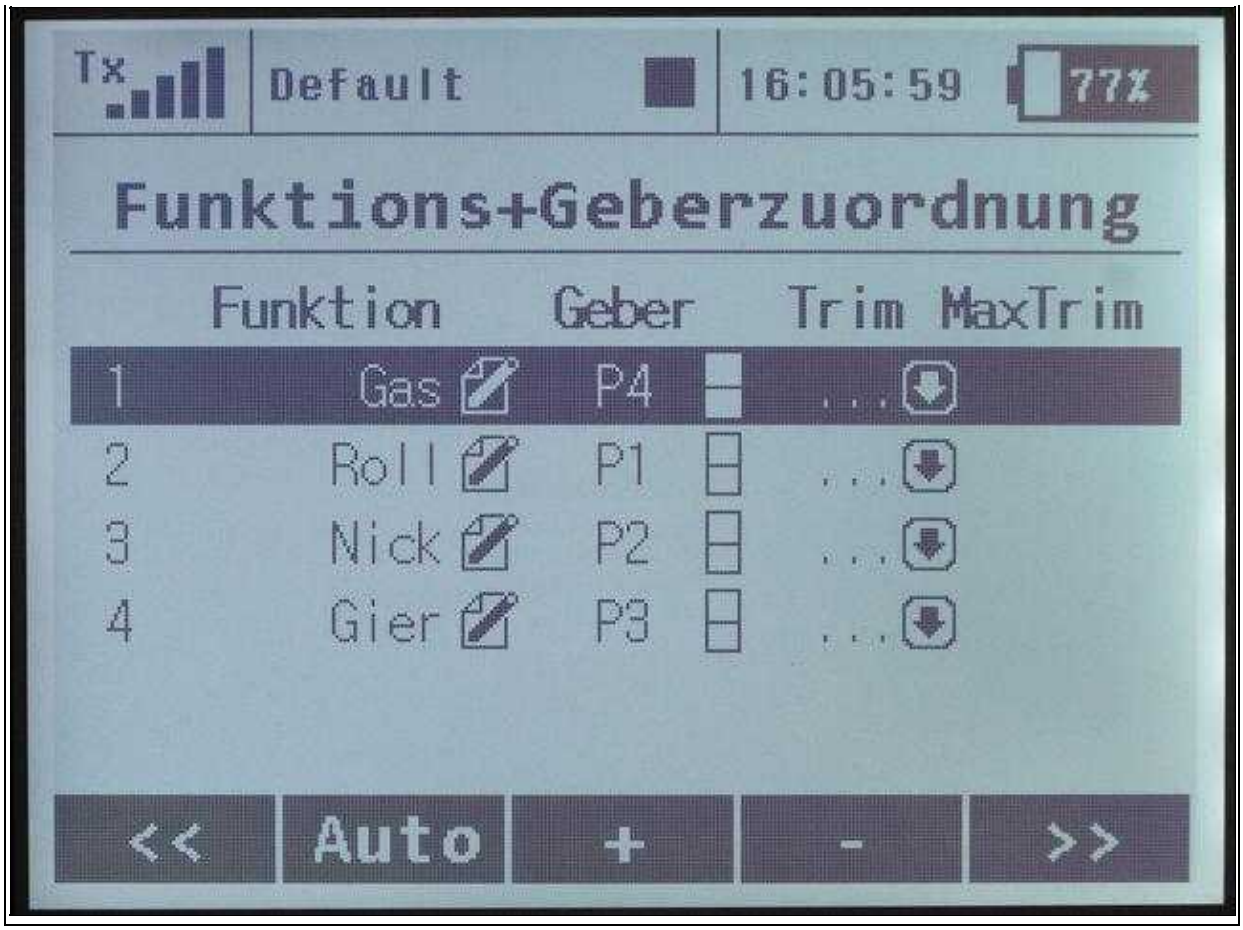

(To enlarge -> click on the image)

| **Step9:**<br>First the name<br>need to be set and<br>confirmed with "OK" | **Step10:**<br>then change<br>Control and<br>can assign it |
| --- | --- |
| | |




(to enlarge -> click on the image)

| **Step13:**<br>With the **"+"**<br>you set new Geber<br>as shown here | **Step14:**<br>Are all 12 ch<br>assigned, it s<br>look in that |
|---|---|
| | |




(To enlarge -> click the image)

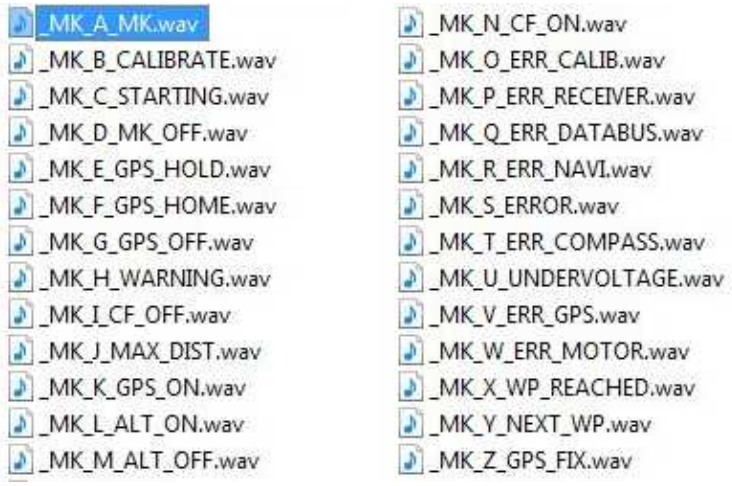
# 7 Telemetry Settings

With this transmitter, like the Graupner HoTT System, you are able to get warning messages for the individual functions via voice output.
The necessary voice file need to be downloaded to the transmitter.
The voice files need to be copied in the transmitter to \Audio\en and \Voice\en.
(Different languages need to be copied correspondingly, i.e. \fr \nl \es)

**Download**

Here you can download the appropriate voice file: Deutsch - Download + English - Download

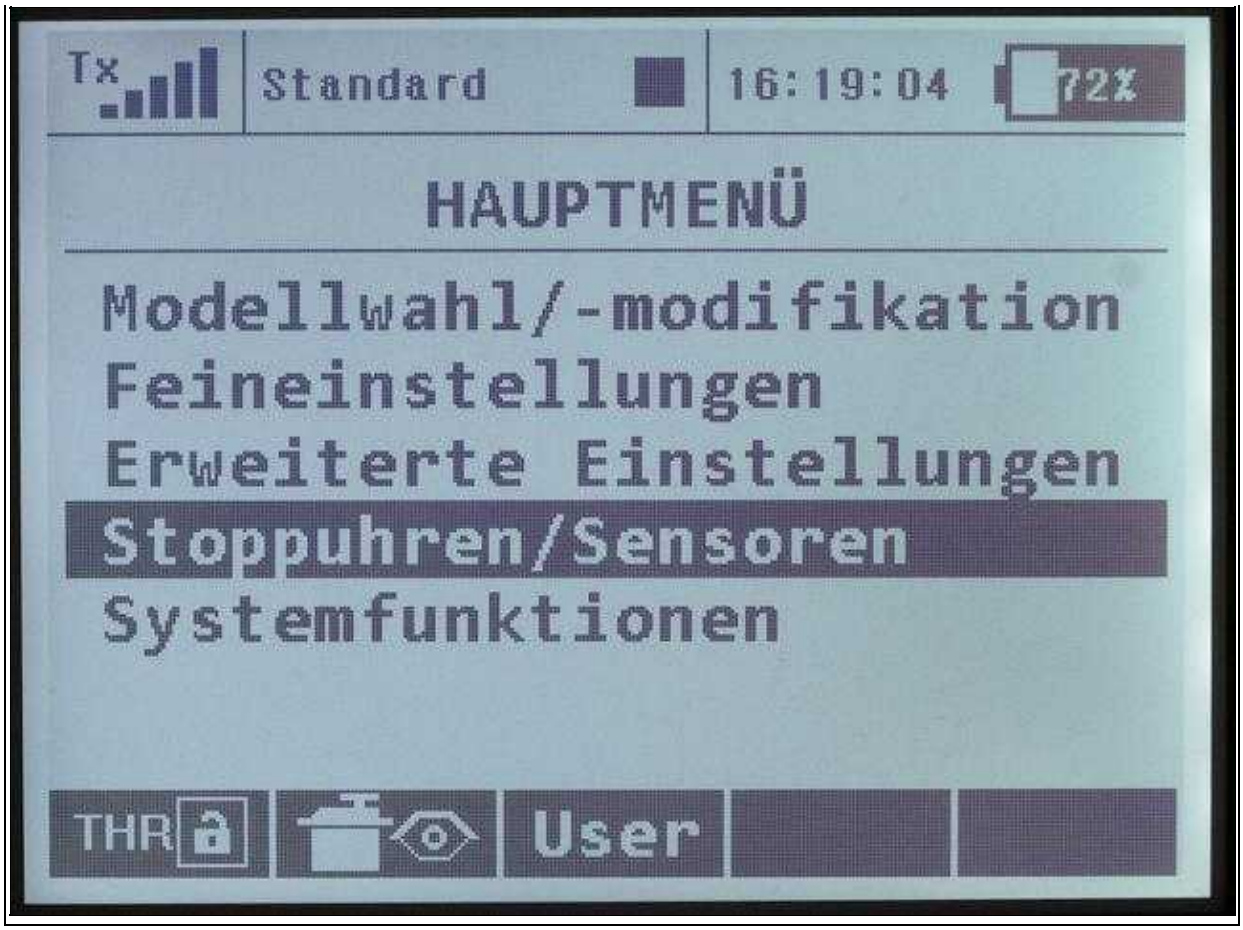
The voice files are listed here:




## 7.1 Assign voice files

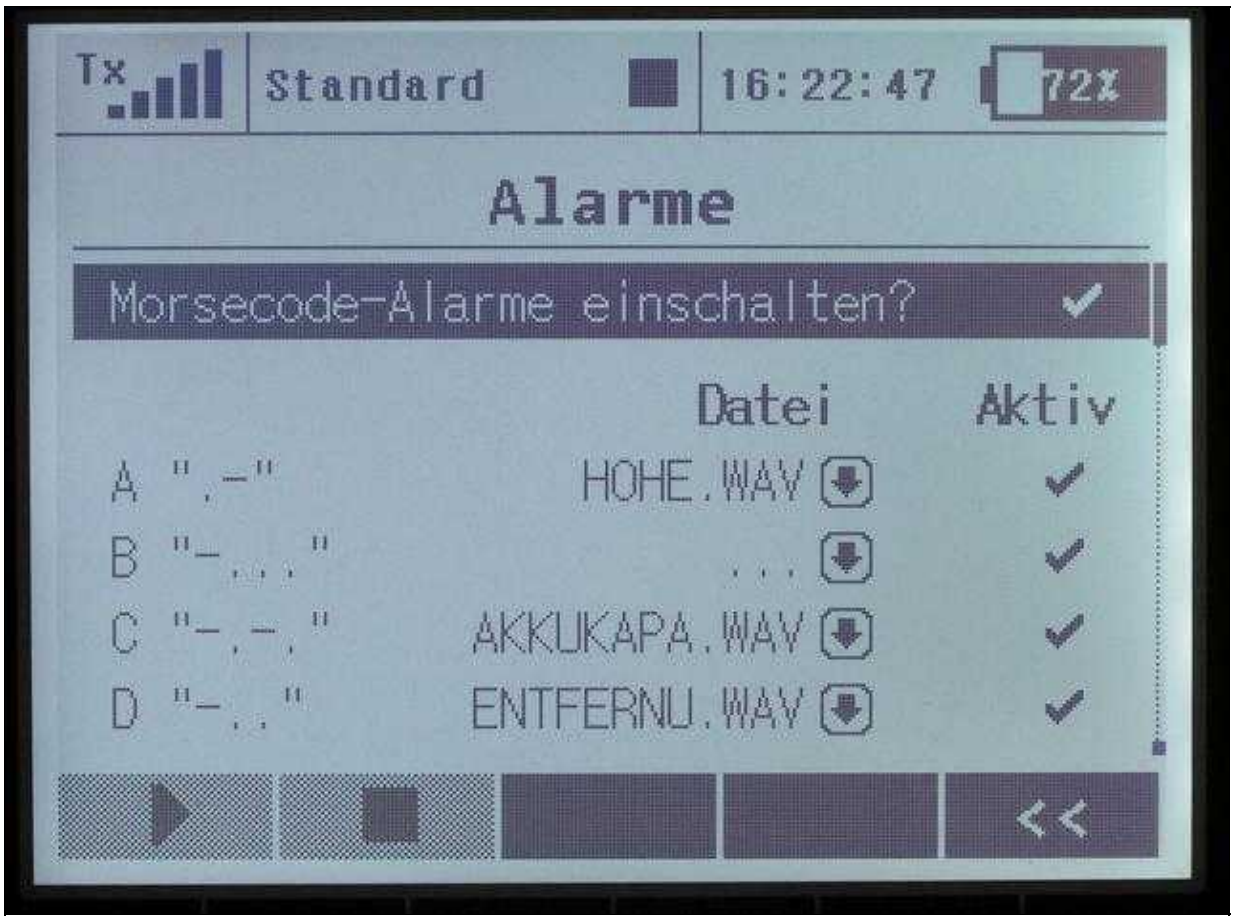
The voice files are assigned to the functions via a morse code. So that they are announced accordingly, you have to assign the newly copied voice files in the transmitter.

| **Step1:**<br>In the main menu choose<br>"Stopwatch/Sensors"<br>... | **Step2:**<br>...and the en<br>"Alarms"<br>- |
|---|---|
| | |




(To enlarge -> click on the image)

Now each morse code sign from **A** to **Z** will be displayed with the appropriate voice file:




(To enlarge -> click on the image)

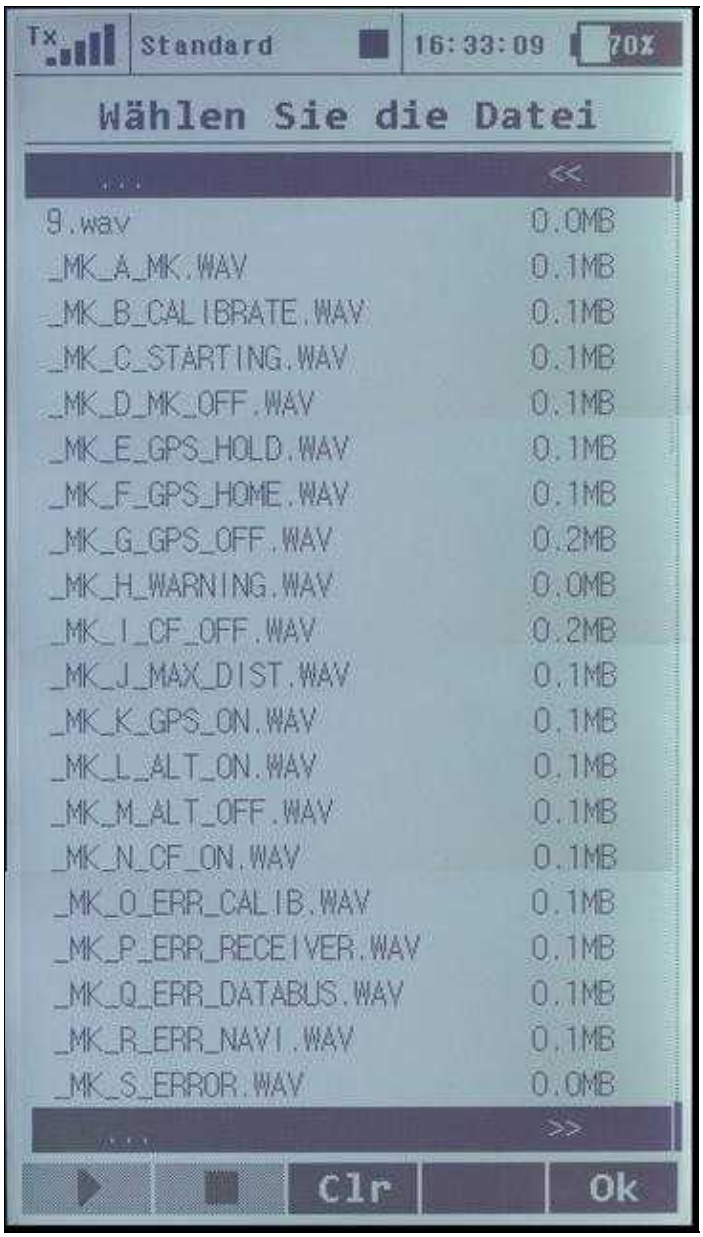
Now you need to assign to each morse code the before copied voice files new.

You proceed as follows:

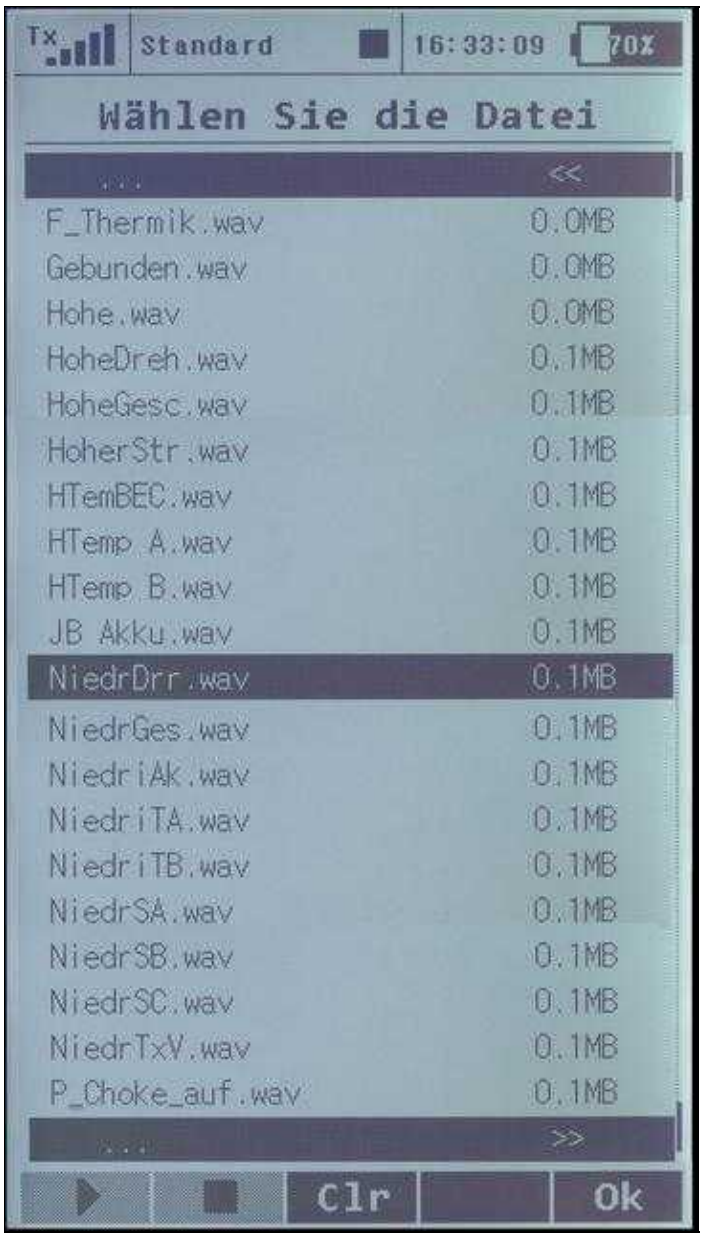
Morse code **A ".-"** contains the voice file "_MK_**A**_MK.wav.
Morse code **B "-..."** contains the voice file "_MK_**B**_CALIBRATE.wav.
Morse code **C "-.-."** contains the voice file "_MK_**C**_STARTING.wav.
.
.
.
Morse code **Z "--.."** contains the voice file "_MK_**Z**_GPS_FIX.wav.

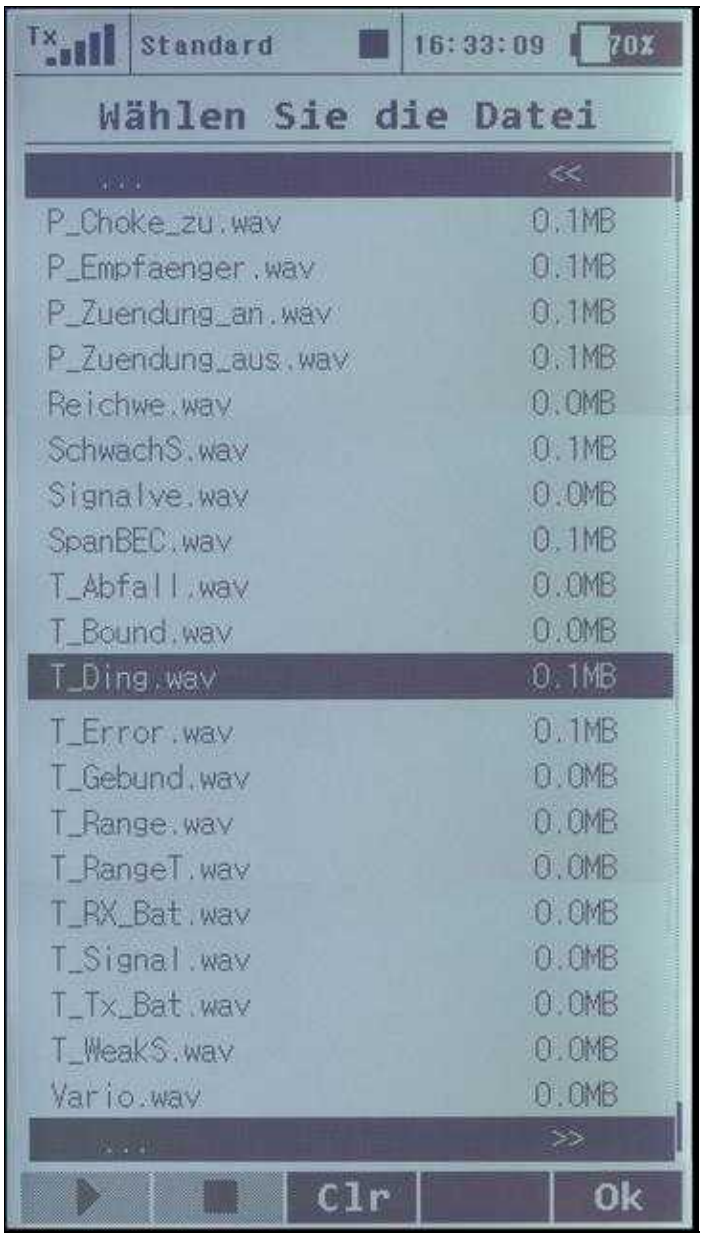
After selecting the file which need to be modified the available language files appear. Now you can look through all files using the double arrow.
Here are all voice files listed:


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
Kein
0.wav 0.0MB
1.wav 0.0MB
10.wav 0.0MB
1min.wav 0.0MB
2.wav 0.0MB
20sec.wav 0.1MB
2min.wav 0.0MB
3.wav 0.0MB
30sec.wav 0.1MB
3min.wav 0.1MB
4.wav 0.0MB
40sec.wav 0.1MB
4min.wav 0.1MB
5.wav 0.0MB
50sec.wav 0.1MB
5min.wav 0.1MB
6.wav 0.0MB
7.wav 0.0MB
8.wav 0.0MB
...
>>
Clr
Ok


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
...
<<
9.wav 0.0MB
_MK_A_MK.WAV 0.1MB
_MK_B_CALIBRATE.WAV 0.1MB
_MK_C_STARTING.WAV 0.1MB
_MK_D_MK_OFF.WAV 0.1MB
_MK_E_GPS_HOLD.WAV 0.1MB
_MK_F_GPS_HOME.WAV 0.1MB
_MK_G_GPS_OFF.WAV 0.2MB
_MK_H_WARNING.WAV 0.0MB
_MK_I_CF_OFF.WAV 0.2MB
_MK_J_MAX_DIST.WAV 0.1MB
_MK_K_GPS_ON.WAV 0.1MB
_MK_L_ALT_ON.WAV 0.1MB
_MK_M_ALT_OFF.WAV 0.1MB
_MK_N_CF_ON.WAV 0.1MB
_MK_O_ERR_CALIB.WAV 0.1MB
_MK_P_ERR_RECEIVER.WAV 0.1MB
_MK_Q_ERR_DATABUS.WAV 0.1MB
_MK_R_ERR_NAVI.WAV 0.1MB
_MK_S_ERROR.WAV 0.0MB
...
>>
Clr
Ok


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
...
<<
_MK_T_ERR_COMPASS.WAV 0.1MB
_MK_U_UNDERVOLTAGE.WAV 0.1MB
_MK_V_ERR_GPS.WAV 0.1MB
_MK_W_ERR_MOTOR.WAV 0.1MB
_MK_X_WP_REACHED.WAV 0.1MB
_MK_Y_NEXT_WP.WAV 0.1MB
_MK_Z_GPS_FIX.WAV 0.1MB
AbfallEm.wav 0.1MB
Akkukapa.wav 0.1MB
Alarm.wav 0.0MB
Entfernu.wav 0.0MB
F_Autorot.wav 0.1MB
F_Kunstflug.wav 0.1MB
F_Landung.wav 0.0MB
F_Normal.wav 0.0MB
F_Schwebe.wav 0.0MB
F_Speed.wav 0.0MB
F_Standard.wav 0.0MB
F_Start.wav 0.0MB
F_Strecke.wav 0.0MB
...
>>
Clr
Ok


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
...
<<
F_Thermik.wav 0.0MB
Gebunden.wav 0.0MB
Hohe.wav 0.0MB
HoheDreh.wav 0.1MB
HoheGesc.wav 0.1MB
HoherStr.wav 0.1MB
HTemBEC.wav 0.1MB
HTemp A.wav 0.1MB
HTemp B.wav 0.1MB
JB Akku.wav 0.1MB
NiedrDrr.wav 0.1MB
NiedrGes.wav 0.1MB
NiedriAk.wav 0.1MB
NiedriTA.wav 0.1MB
NiedriTB.wav 0.1MB
NiedrSA.wav 0.1MB
NiedrSB.wav 0.1MB
NiedrSC.wav 0.1MB
NiedrTxV.wav 0.1MB
P_Choke_auf.wav 0.1MB
...
>>
Clr
Ok


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
...
<<
P_Choke_zu.wav 0.1MB
P_Empfaenger.wav 0.1MB
P_Zuendung_an.wav 0.1MB
P_Zuendung_aus.wav 0.1MB
Reichwe.wav 0.0MB
SchwachS.wav 0.1MB
Signalve.wav 0.0MB
SpanBEC.wav 0.1MB
T_Abfall.wav 0.0MB
T_Bound.wav 0.0MB
T_Ding.wav 0.1MB
T_Error.wav 0.1MB
T_Gebund.wav 0.0MB
T_Range.wav 0.0MB
T_RangeT.wav 0.0MB
T_RX_Bat.wav 0.0MB
T_Signal.wav 0.0MB
T_Tx_Bat.wav 0.0MB
T_WeakS.wav 0.0MB
Vario.wav 0.0MB
...
>>
Clr
Ok


Tx
Standard
16:33:09
70%
Wählen Sie die Datei
...
<<
Warnung.wav
0.0MB
Zellensp.wav
0.1MB
...
>>
Clr
Ok

(To enlarge -> click on the image)

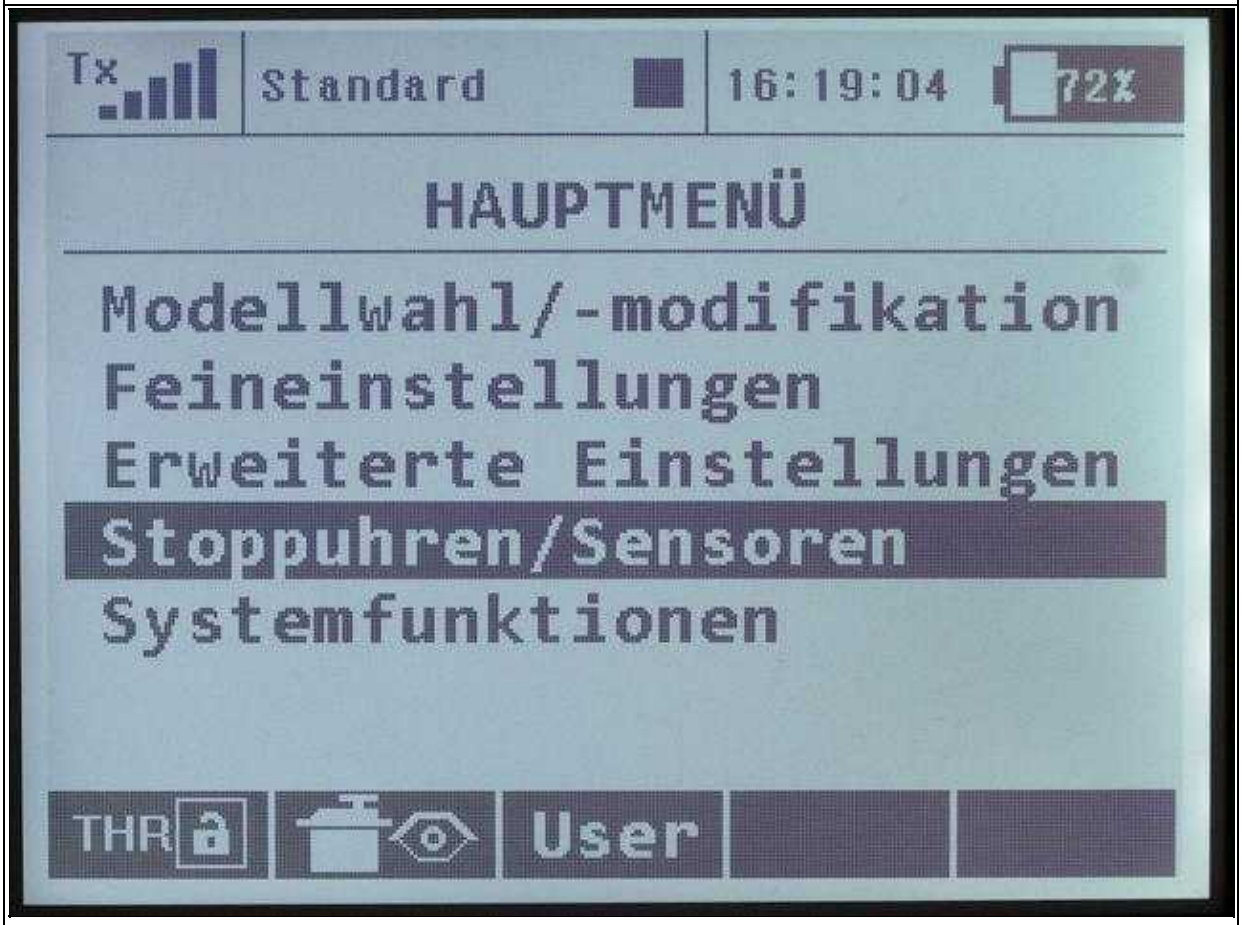
## 7.2 Create voice files by yourself

For that reason that the voice file is in *wav*-format you can create files by yourself.
This you can do i.e. with the Windows Audiorecorder and a microphone.
You can do those files also with a "Text-To-Speach" generator from the Internet (i.e.: Link).

## 7.3 Play VARIO-altitude regulator via loudspeaker

Like the voice output, a tone can be played via the loudspeaker automatically with switched on altitude regulator on the transmitter for climbing and falling.

**Step1:**
In the main menu choose
"Stopwatch/Sensors"

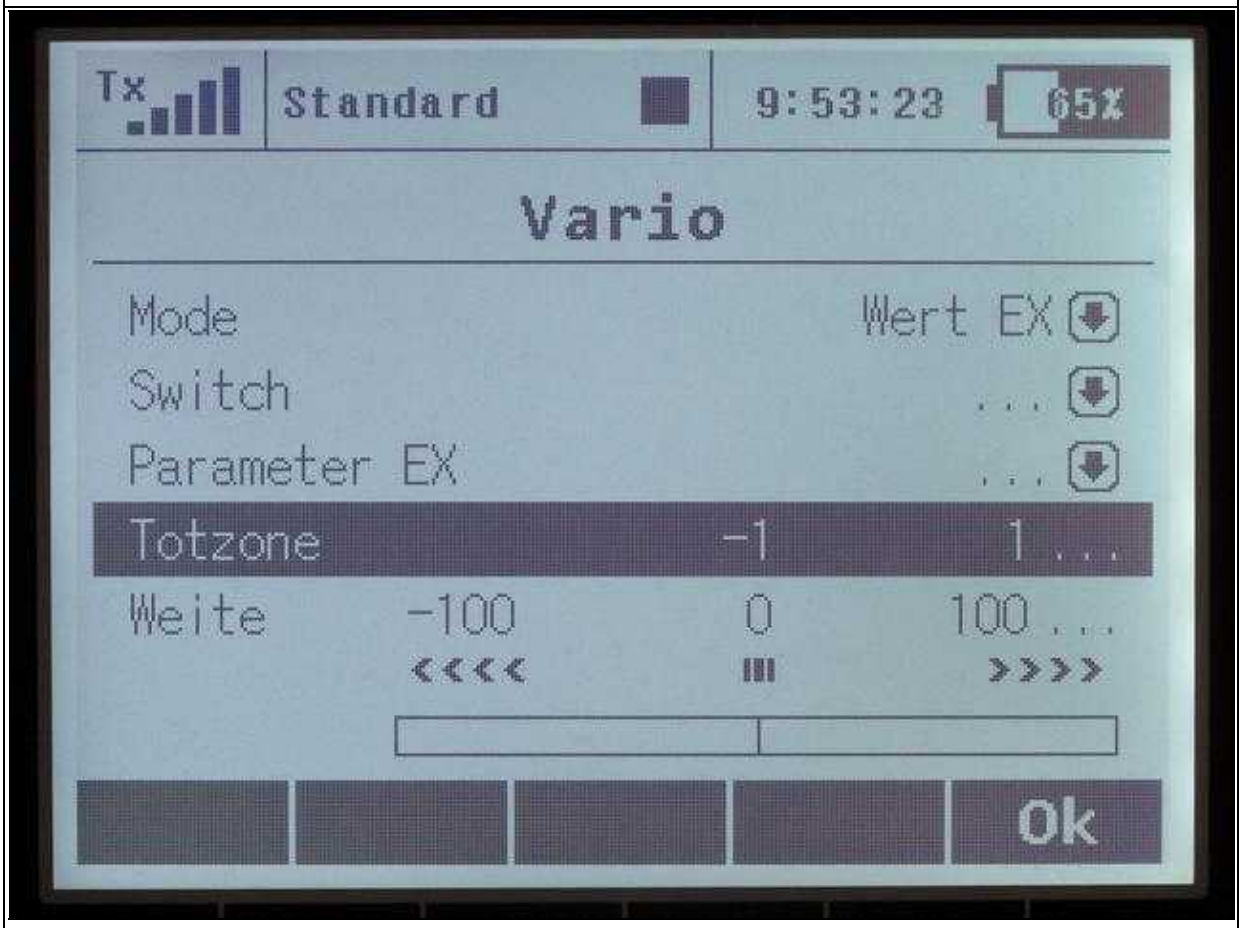



**Step2:**
Choose there
"Vario"
-



(To enlarge -> click on the image)

**Step5:**
Change here the
"Dead zone"
in "-1" and "1"




**Step6:**
Next step as
"Parameter
-

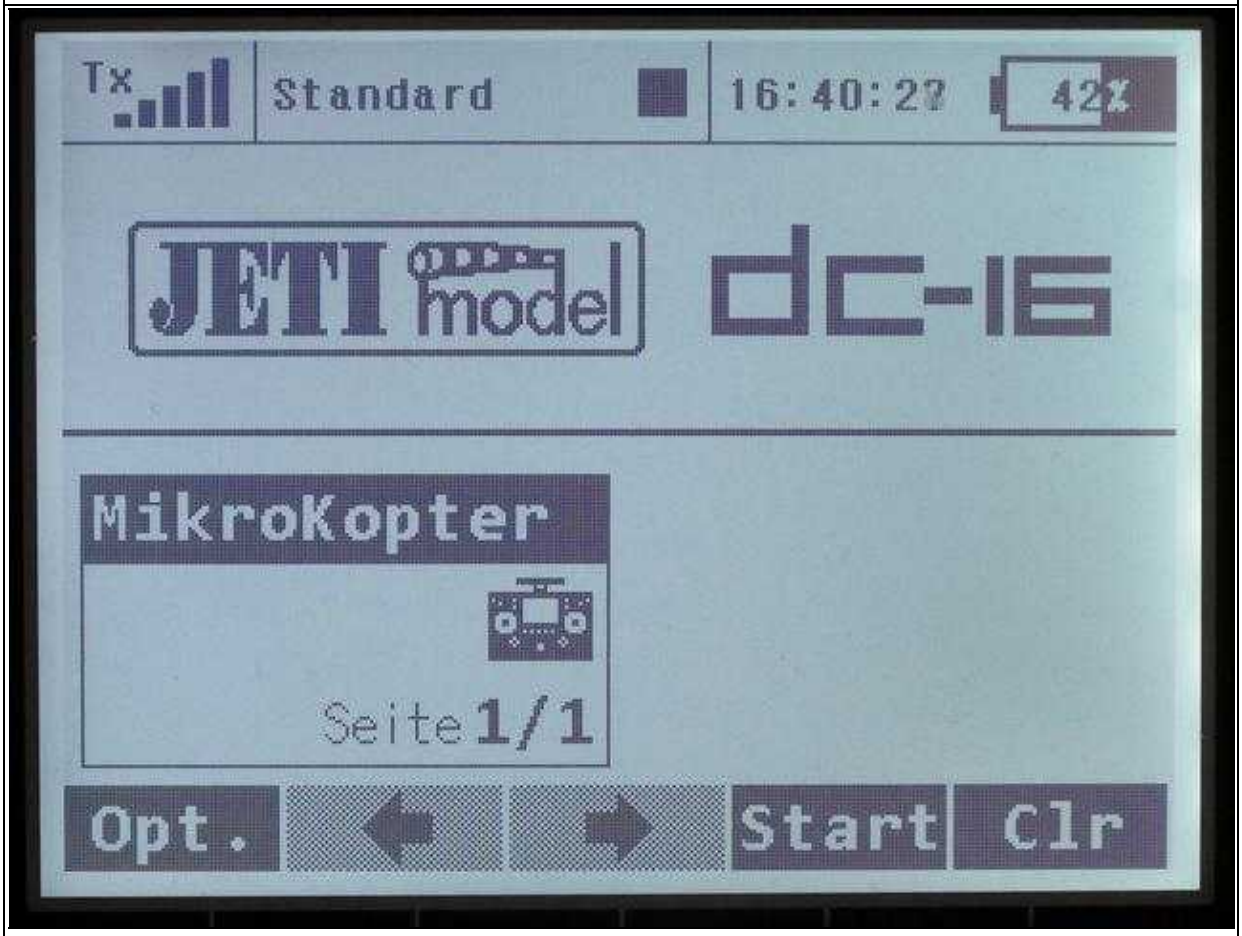


(To enlarge -> click on the image)

## 7.4 Telemetry ads in the display

Like with the Graupner HoTT System, you can display telemetry values on the main screen.
The data which need to be displayed in the main screen you can put together by yourself.

**Step1:**
The main menu looks like in that way
without displayed telemetry

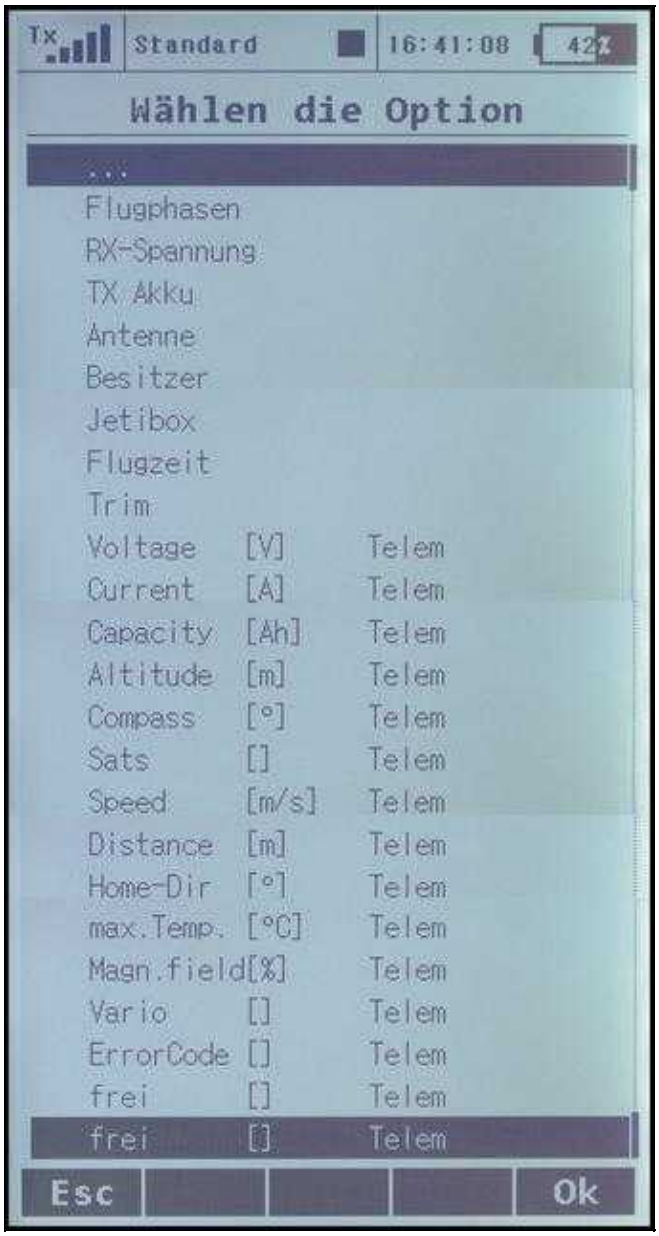



**Step2:**
In the main
"Stopwatch/
-



(To enlarge -> click on the image)

Then select the following telemetry values:



(To enlarge -> click on the image)

The example settings look in that way:

**Page1:**
Display with:
Voltage, Capacity, Current,
Altitude, Distance, Home-Dir




**Page2:**
Display with
Jetibox, rcvc
Speed

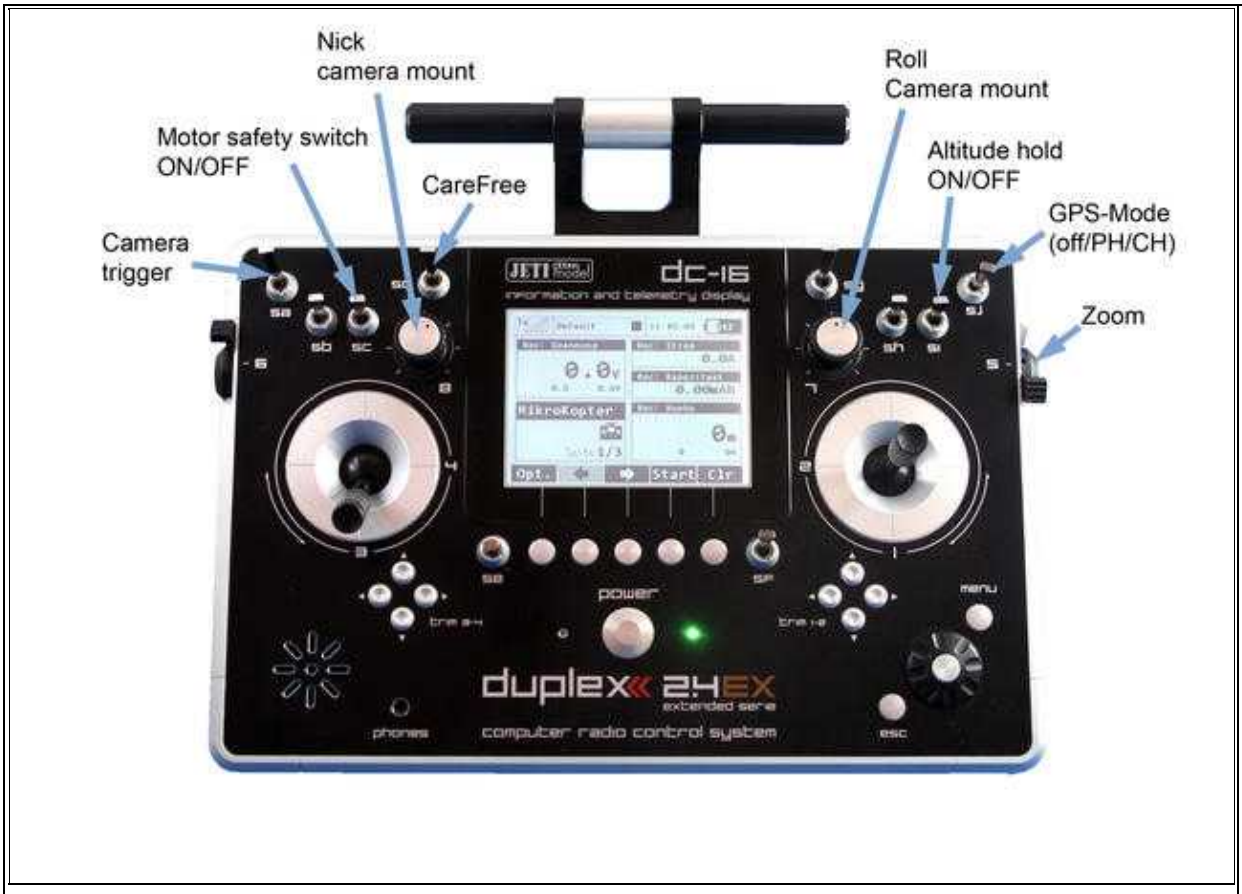


(To enlarge -> click on the image)

# 8 Example Setting - Download

## 8.1 Model memory for transmitter 12 channels

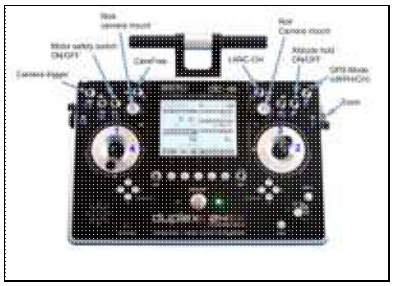
Already pre-made model memories with the above described channel- and telemetry settings can be downloaded here.
The model memories 1+2 differ only in the use of the camera triggering (3-way switch for LANC or button for the Shuttercable).
Everything else is identical.



| | |
|---|---|
| Download Model memory 1 | Download M |

(To enlarge -> click on the image)

## 8.2 Model memory for transmitter 16 channels



16 channel

After downloading the files (0001Mikr.jsn), you can copy them directly in the transmitter into the folder **/Model** .
If you use a camera with the trigger on a button as well as the LANC, you can save both model memories in the transmitter.
Here you need to switch only between the both model memories , depending on the use.
How to read or import model memories from the transmitter can be read in the instruction manual on page 93.

The channel assignment is like listed above.
Using this model memories you must set the functions / channels in the FlightCtrl.
(Or download the setting for the FlightCtrl listed below)

**TIPP:** Who uses a different mode rather than **Mode 2**, can also use the model memory.
After the import of the model memories you need to set the desired mode (1,3,4) by yourself.

## 8.3 Settings FlightCtrl

The latest software and an appropriate setting for the FlightCtrl can be downloaded here: **Download**
The settings for the channels and the model memories need to be adjusted accordingly for the DC-16.

To import the settings into the FlightCtrl, open the settings in the KopterTool.
Here you "click" now on the button **Load** in the lower bar and open the downloaded setting.
With a click on the button **Write** you transfer the setting into the FlightCtrl.

ATTENTION:
The FlightCtrl has 5 memories (Settings). If you want to use the downloaded setting in all memories, you need to choose every memory (1-5) and save the setting with **Write**.
After writing the setting into the FlightCtrl you must (if not already done) set the right mixer (Link).

# 9 SinglePoint + Fixed/Relative Waypoints save/load with the transmitter

With Jeti remote control you have the option to:

- save or load **SinglePoint Waypoints** during flight
  or
- an to open an already existing **Fixed/Relative Waypoints**-flight .

How to do this, can be read here: **SinglePoint + Fixed/Relative Waypoints**

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- KategorieFernsteuerung