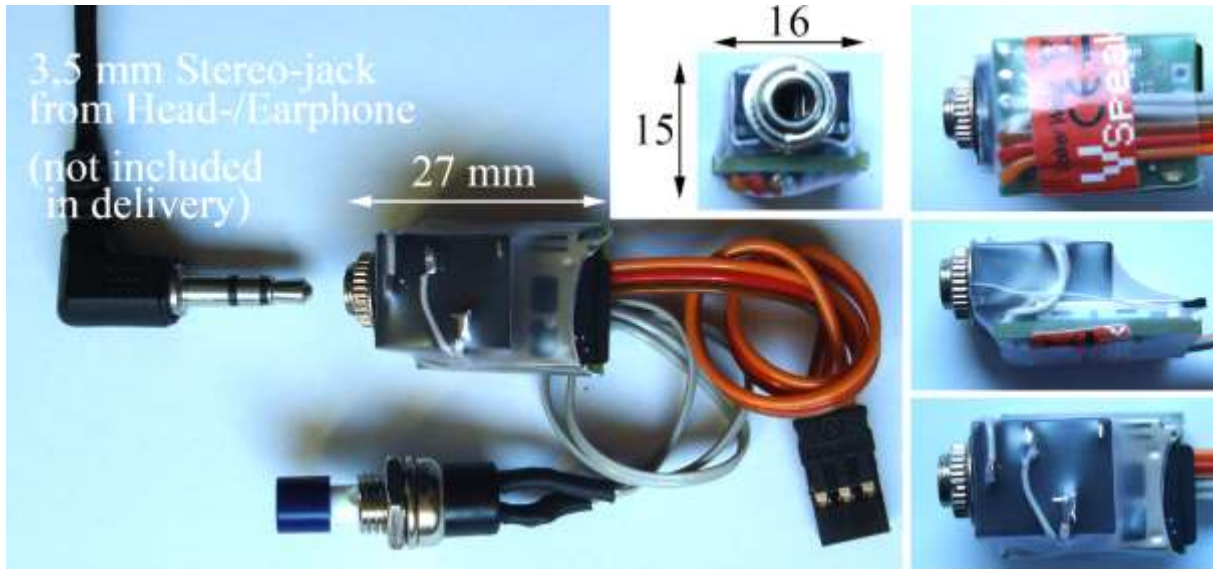




for Jeti Duplex

Manual Version 1.10



Introduction

This module allows data that is visually displayed via Jeti Duplex telemetry on the radio side connected JetiBox to be put out as speech.

During the realisation of the module the focus is on:

- **NO** influence on the Jeti system
- minimum dimensions, so that the module can fit into the smallest radio place

The operation of the speech module happens via the button and the 4 buttons of the JetiBox. **Without connected JetiBox no speech output is possible.**

For controlling the speech module only the keys (.. and key combinations) displayed in the respective menu of the JetiBox remain that are here just for the Jeti receiver connected sensor without function. As a result, the keys for the same functions of the speech module and for each sensor within each menu are not always the same. The changes made in the respective menu settings are saved.

For each sensor there is a separate section in which each supported display is described in detail. **Only those shown in these instructions are supported by the speech module in the manner described.**

The choice of the announcement of the measured values, the setting of the interval time, volume, etc should be done before the start, in order to focus exclusively on the flight model. If someone still wants to navigate "blind" through the menus, the menus "Tx", "Rx" and "Mx" are announced for orientation. If one should have gone lost in the menu "pairing" of the receiver, the warning "Attention pairing" is announced.

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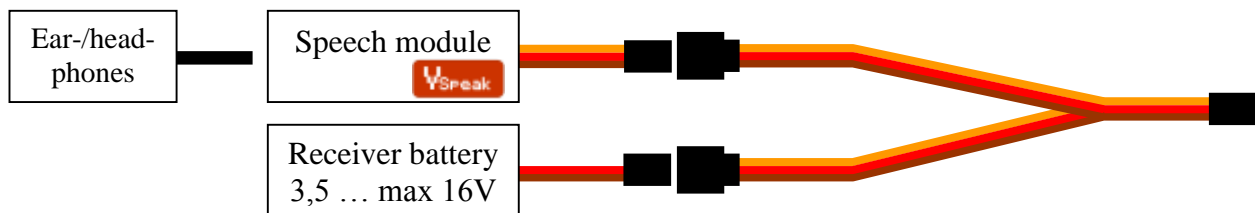
1 Installation

The speech module can analogously to a teacher/student socket be screwed into the radio housing over the male threads of the 3.5 mm stereo jack.
The switch is to be positioned in a good accessible place.

2 Connection

2.1 Testing the functionality

With a V-cable (Graupner/JR), a receiver battery and ear- or headphones, the speech module can be connected and tested for function according to the following diagram. The speech module reports with the announcement of their version as soon as the battery is connected.



2.2 Connection to Jeti-HF part and JetiBox

Jeti has different HF sections in the program, which differ from each other within the hardware. Thus, some HF parts can, except the JetiBox, easily supply the speech module with the necessary power - others not. The following table provides information on how the speech module can be connected to the corresponding Jeti transmitter module.

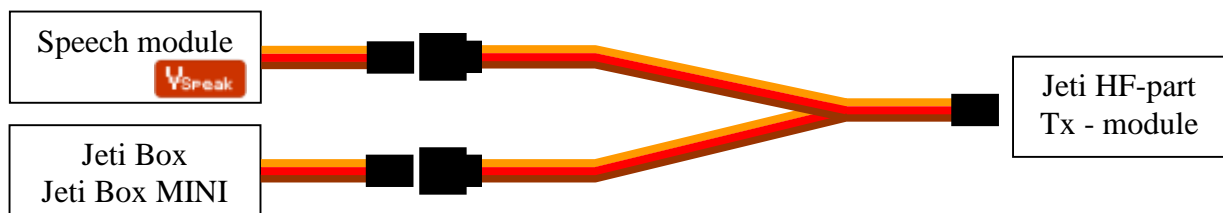
HF tranmitt module		Power supply DIRECTLY from HF-part (s. section. 2.2.1)	Power supply from Radio battery (s. section. 2.2.2)
Duplex TA			
Duplex TF			
Duplex TG2			
Duplex TGinternal			
Duplex TGinternal2			

HF tranmitt module		Power supply DIRECTLY from HF-part (s. section. 2.2.1)	Power supply from Radio battery (s. section. 2.2.2)
Duplex TGs			
Duplex TMe			
Duplex TMp			
Duplex TU			
Duplex TU2EX			

red box – not functioning , green box - functioning , yellow box – not tested yet

2.2.1 Power supply from the Jeti-HF part

To determine if the present Jeti-HF part is able to provide, in addition to the JetiBox, also the speech module with power, the speech module is connected to a V-cable as shown in the graphic.



If the JetiBox and speech module are functioning properly, then the speech module can be supplied with electricity from the Jeti-HF part.

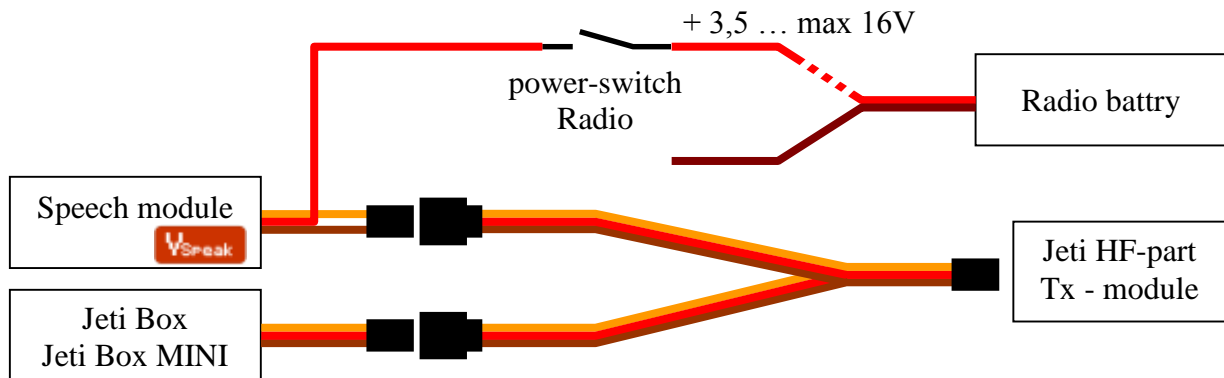
2.2.2 Power supply from the radio battery

If the speech module doesn't announce the version correctly when the sender is turned on and/or if the JetiBox is not working properly, is the Jeti-HF is with the additional power supply of speech module is over stressed.

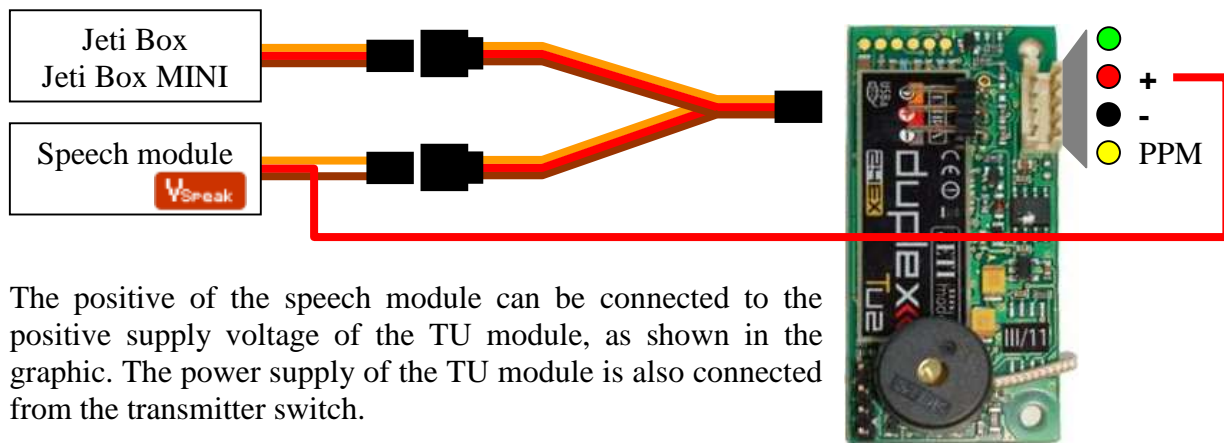
Now the speech module has to be supplied separately with power. For this - analog to brushless controllers with BEC, whose BEC should not be used - the plus crimp contact is removed out of the plug of speech module. The red plus cable is now connected with the plus of the radio. If necessary, the red plus cable has to be extended (isolate extension point using shrink tubing!). The soldering should be completed carefully - if necessary an expert should be consulted.

In the following two connection types are described as examples:

Option 1: directly on the power-switch of the Radio



Option 2: on the power supply to the TU2-module



The positive of the speech module can be connected to the positive supply voltage of the TU module, as shown in the graphic. The power supply of the TU module is also connected from the transmitter switch.

2.2.3 Jetti - Communication

If properly installed the speech module does not affect the functionality of the Jetti system. The speech module does NOT interfere with the Jetti-data exchange, i.e. no signals are transmitted from the speech module to the Jetti system. In a way, the speech module is "listening" to the communication between Jetti-HF section and JettiBox, interprets the data and provides this, as described in the following sections, as speech.

2.2.4 Operation display

Error-free operation of the speech module is indicated by the "flashing" blue LED light.

3 Tx-Menu



Announcement "Tx".



Announcement of the current radio voltage (10.2 V) when voltage change

Button function: ► Right-button starts the announcement immediately
► Right-button (long pushed > 2s) changes announcement trigger

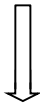
.... or newer T-modules



Trigger 1: only when voltage value < last announced voltage value

Trigger 2: every voltage change is announced

The setting made with the Right-button for the triggering (start) of the announcement applies to the voltage display in the Tx and Rx menu alike. The setting is saved



Announcement of the antenna signals of the return channel (8 9) with 2 second pause.

3.1 Tx-Menu - Settings with Up-button



Button function: ▲ Up-button (s. section 8)

In the Tx-menu the Up-button has the same functionality as the VSpeak button, i.e. here, the same settings can be made, as described in section 8.

4 Rx-Menu

Announcement "Rx".

Announcement of the current receiver voltage (5.3V) when voltage change.

.... or newer T-modules

Button function: ▶ Right-button starts the announcement immediately
▶ Right-button (long pushed > 2s) changes announcement trigger

Trigger 1: only when voltage value < last announced voltage value

Trigger 2: every voltage change is announced

The setting made with the Right-button for the triggering (start) of the announcement applies to the voltage display in the Tx and Rx menu alike. The setting is saved.

Announcement "Attention Pairing" with 1s pause.

5 Mx-Menu

Announcement "Mx".

If connected, the menus of the modules described below can be accessed by pressing the Down-button ▼.

5.1 ALTIS V4 (AerobTec)

The altitude announcement takes place either at **altitude change** (parameter "altitude" section 8.3) - **or timed** ("altitude" = "OFF").

A vario sound proportional to the rising/falling speed is issued according to the settings in section 8.3.

Button function: ▶ Right starts the announcement immediately

5.2 MAXBEC2D-Voltage regulator (Jeti)

Time-controlled announcement of the voltage of the active (*) batteries (A 7.4 V) and the temperature.

Button function: ▶ Right starts the announcement immediately

Timed announcement of the battery voltage A AND B - Or - announcement of the battery with the smallest voltage when voltage change < previous (B 7.2 V)

Button function: ▶ Right starts the announcement immediately
▶ Right (long pushed > 2s) change announcement mode

Announcement of the temperature time-controlled - or - when the temperature changes.

Button function: ▶ Right starts the announcement immediately
▶ Right (long pushed > 2s) change announcement mode

The settings made with the Right-button are saved.

5.3 MGPS-Sensor (Jeti)

(tested on MGPS-EX-Sensor4MB Software status: MGPS1 Version 2.00)

The start of the announcements in the display of the MGPS sensor is timed according to the setting No. 6 " stop timed announcements" (see section 8.3).

MGPS v= 48k
s= 124 h= 72



Announcement of the speed (48km/h)

Button function: ► Right-button starts the announcement immediately

MGPS h= 72
T= 892 v= 48k



Announcement of the altitude (72m)

Button function: ► Right-button starts the announcement immediately

MGPS v= 48k
T= 892 h= 72



Announcement of the speed (48km/h), the distance travelled (892m) and altitude (72m)

Button function: ► Right-button starts the announcement immediately

MGPS s= 124
h= 72 v= 48k



Announcement of the distance (124m), the altitude (72m) and the speed (48km/h)

Button function: ► Right-button starts the announcement immediately

MGPS h= 72
s= 124 v= 48k



Announcement of the altitude (72m) and the speed (48km/h)

Button function: ► Right-button starts the announcement immediately



Distance/Speed
124m/ 48km/h



Announcement of the distance (124m) and speed (48km/h)

Button function: ► Right-button starts the announcement immediately

Trip/Speed
892m/ 48km/h



Announcement of the distance travelled (892m) and speed (48km/h)

Button function: ► Right-button starts the announcement immediately

Course/Dist/Alt
253°/ 124/ 72



Announcement of the course (253°), distance (124m) and altitude (72m)

Button function: ► Right-button starts the announcement immediately

Azimuth/Dist/Alt
117°/ 124/ 72

Announcement of the azimuth (117°), distance (124m) and altitude (72m)

Button function: ► Right-button starts the announcement immediately

5.4 MRPM and MRPM-AC-Sensor (Jeti)

(tested on MRPM-AC -"so far" and MRPM2-AC -"EX" Software status: Version 2.00)

The start of the announcements in the display of the MRPM sensors is timed according to the setting No. 6 " stop timed announcements" (see section 8.3).

SENSOR MRPM-AC
6000RPM 100W



Revolution
6000 RPM



Power Propeller
100 W

Announcement of propeller revolutions (6000U/min) and the propeller power (100W)

Button function: ► Right-button starts the announcement immediately

Announcement of propeller revolutions (6000U/min)

Button function: ► Right-button starts the announcement immediately

Announcement of propeller power (100W)

Button function: ► Right-button starts the announcement immediately

5.5 MSPEED-Sensor (Jeti)

The start of the announcements in the display of MSPEED sensor is timed with the exception of the display "Temperature" (see below), according to the setting No. 6 " stop timed announcements" (see section 8.3).

*MSPEED km/h
>>----- 75



Actual speed
75 km/h



Temperature
T= 25°C

Announcement of the speed

Button function: ► Right-button starts the announcement immediately

Announcement of the speed

Button function: ► Right-button starts the announcement immediately

Announcement of the temperature time-controlled - or - when the temperature changes.

Button function: ► Right-button starts the announcement immediately

► Right-button (long pushed > 2s)
change announcement mode

The setting is saved.

5.6 MT-Sensor (Jeti)

The announcement of the temperature values can be started in different ways:

1. timed (according to the settings no. 6 see section 8.3)
2. when changing the temperature in the "tens digit"

Selection is made by long pushed ► Right-button (> 2s) and is saved.

SENSOR MT 300
A= 23° B= 27°C



Announcement of the temperature(s) according to above described selection.

Button function: ► Right-button starts the announcement immediately (temp. A AND B)

► Right-button (long pushed > 2s)
change announcement mode

Actual Temp. A
A= 22.9°C



Actual Temp. B
B= 27.4°C

Announcement of the temperature according to above described selection.

- Button function:
- ▶ Right-button starts the announcement immediately
 - ▶ Right-button (long pushed > 2s) change announcement mode

Announcement of the temperature according to above described selection.

- Button function:
- ▶ Right-button starts the announcement immediately
 - ▶ Right-button (long pushed > 2s) change announcement mode

5.7 MUI-Sensor (Jeti)

(tested on MUI50-"so far" and MUI50-"EX" Software status: Version 2.00)

The announcements in the display of the MUI sensor is timed with the exception of the display "capacity" (see below), according to the setting No. 6 see section 8.3).

SENSOR MUI 50
650mAh 10.5A



Volt/Current
12.3V/ 10.5A



Capacity
650mAh

Announcement of consumed capacity (650mAh) and the actual current (10.5A)

- Button function:
- ▶ Right-button starts the announcement immediately

According to the description on the MUI the SENSOR MENU / Settings / First-and Second Parameters can be set in a way that the parameters are displayed in the default display. These will then be output as speech.

Announcement of the actual voltage (12.3V) and the actual current (10.5A)

- Button function:
- ▶ Right-button starts the announcement immediately

Announcement of the used capacity (650mAh). The announcement is not timed, but according to the "power consumption" (see section 8.3) **only when it changes** to the set value.

- Button function:
- ▶ Right-button starts the announcement immediately

5.7.1 Capacity alarm

If the 'SENSOR MENU: ALARMS' set at capacity alarm value (in the example: 2200mAh) is exceeded, then appears simultaneously to the "alarm beep" the alarm display:

SENSOR MUI 50
Cap. > 2200mAh

Upon publication of the above mentioned display, the speech module indicates the message "alarm fuel level" interpreted as "Lipo-tank reserve", or at a connected to a MUI electric fuel pump (see [MUI-sensor-used-as-a-fuel-gauge](#)) indirectly as a "reserve fuel tank" ("Capacity alarm" - repeat: about every 12s)

5.8 Muli 6s-Sensor (Jeti)

(tested on Muli6s-"so far" and Muli6s -"EX" Software status: Version 2.00)



MULi 3 cells
Ulow= 4.05V #2

Announcement of the smallest cell voltage (4.05V) and the cell number (2) when voltage change.

Button function: ▲ Up-button starts the announcement immediately



MULi 3 cells
< Ub=12.35V

Announcement of the total voltage (12.35V) when voltage change.

Button function: ▲ Up-button starts the announcement immediately

▶ Right-button (long pushed > 2s)
change announcement trigger

Trigger 1: only for voltage value < last announced voltage value

Trigger 2: every voltage change is announced

The settings made with the Right-button for the triggering (start) of the announcement applies to both announcements of Muli6s alike. The setting is saved.

5.9 MVario-Sensor (Jeti)

(tested on MVario-"so far", MVario-"EX" and "MVario2EX")

The start of the announcements in the display of the MVario sensor happens timed with the exception of the display "Temperature" (see below), according to the settings in section 8.3. In the displays ".. + Vario sound" a vario sound proportional to the rising/falling speed is issued according to the settings in section 8.3.



Announcement of the altitude (187m) + **Vario sound**
The altitude announcement takes place either at **altitude change** (parameter "altitude" section 8.3) – **or timed** ("altitude" = "OFF").

Button function: ► Right-button starts the announcement immediately



▲ ▼ Up-Down-button together
Change Vario sound-"source"

The setting is saved.

1. Vario sound-"source" (>>>>_----)

The Vario sound is generated from the number of the ">" or "<" characters. Thus there are 16 different tones available.

The zero lift (_ _ _ _ _) is soundless.

The sensitivity can be set over the sensor-menu item: SETTING / sensor sens. (see description MVario) and is therefore also effective for the generated Vario sound

2. Vario sound-"source" (2.0 m / s)

The Vario sound is generated from displayed the rising/falling speed (in the example, 2.0m/s) and the according to section 8.3 set Vario sound sensitivity.

By pressing the Up-Down buttons (▲ ▼) simultaneously it can be switched between the two Vario sound sources. Which of the two sources is selected, can be seen from the fact that the 2nd Vario sound source with the higher Vario sound sensitivity already generates a Vario sound - while at the 1st Vario sound source still (_ _ _ _ _) is displayed, and thus is without sound.



Announcement of the relative and absolute altitude

Button function: ► Right-button starts the announcement immediately



Announcement of the rising/falling speed + **Vario sound**

Button function: ► Right-button starts the announcement immediately

Analogous to the second Vario sound-"source" (see above) a vario sound is generated in the intervals between the announcements of rising/falling speed, according to the settings in section 8.3.



Announcement of the temperature time-controlled - or - when the temperature changes.

Button function: ► Right-button starts the announcement immediately

► Right-button (long pushed > 2s)
change announcement mode

The setting is saved.

5.10 Microcopter

(tested on Microcopter Software status: Version 0.86d)

The start of the announcements in the display of the Mikrokopter is timed according to the setting no. 6 "stop timed announcements" (see section 8.3).

Within the displays of the Mikrokopter various combinations of measurements can be taken to the announcement. The selection is done while holding the ▲ Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. all measured values, i.e. voltage + angle + distance + consumed capacity + flight time + altitude
- ↓
2. altitude
- ↓
3. distance + altitude
- ↓
4. used capacity + altitude
- ↓
5. distance + altitude + altitude
- ↓
6. altitude + voltage + flight time

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. all measured values, i.e. voltage + current + power + capacity
- ↓
2. consumed capacity
- ↓
- The announcement takes place according to the "current consumption" (section 8.3) if the **value changes** around the set value.
- ↓
3. consumed capacity + current
- ↓
4. consumed capacity + voltage

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. speed in m/s + distance + angle
- ↓
2. speed in m/s
- ↓
3. speed in km/h

5.11 GPS-Logger (SM-Modellbau)

(tested on GPS-Logger Software status: Version 1.08)

Announcement accuracy of the measured values:

Value	Unit	number of decimal places
speed	km/h	0
barometric altitude	m	0
rising / sinking (variometer)	m/s	1
distance (flight path)	km	1
GPS-Pos distance in relation to start point	m	0
GPS-Pos angle in relation to start point	°	0

The start of the announcements in the display of the GPS logger is timed, as set in section 8.3. In the display ".. + Vario sound" a vario sound proportional to the rising/falling speed is given in the pauses according to the settings in section 8.3.

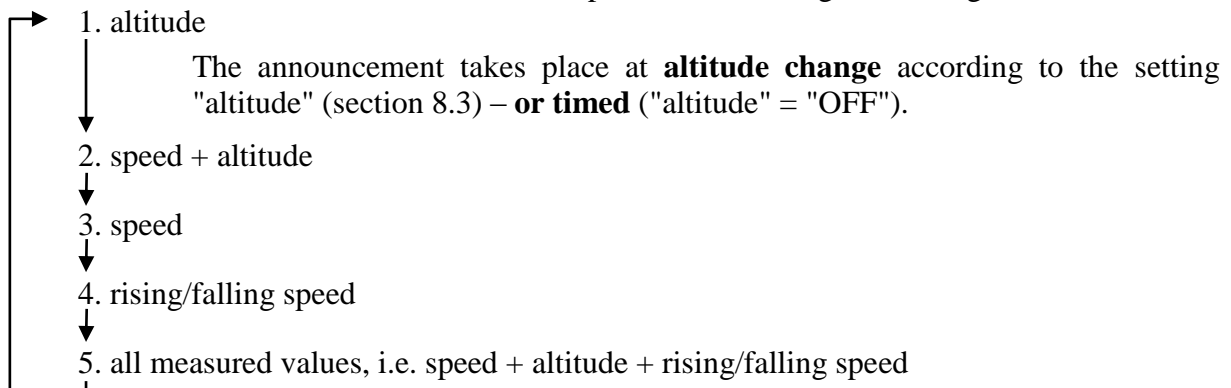
Within the displays of the GPS logger, various combinations of the measured values can be brought to the announcement. The selection is done while holding the ▲ Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.

A 123.4km/h
221.8m +12.8m/s

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

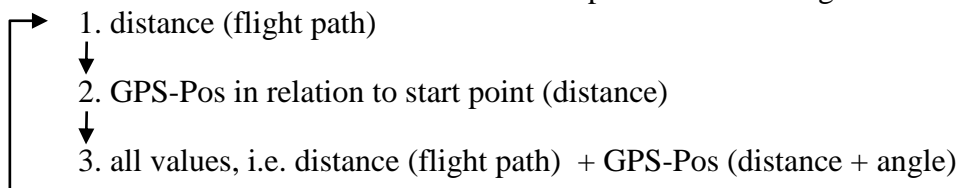


B 12.35km
Pos 1043m 34.5°

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode



5.11.1 Alarms

The following alarm displays are issued in speech when they appear. In the parameter menu the announcement will be made when the alarm is activated, i.e. to "(EIN)" is.

```
!Hoehe Alarm !  
!mit>>>loeschen!
```

"alarm altitude"

```
!Speed Alarm !  
!mit>>>loeschen!
```

"alarm speed"

```
!Strecke Alarm !  
!mit>>>loeschen!
```

"alarm track"

```
!Entfernung Al. !  
!mit>>>loeschen!
```

"alarm distance"

```
!Rx Spg. Alarm !  
!mit>>>loeschen!
```

"alarm receiver voltage"

```
!UL Strom Alarm!  
!mit>>>loeschen!
```

"alarm current"

```
!UL Startspg Al!  
!mit>>>loeschen!
```

"alarm starting voltage"

```
!UL Spannung Al!  
!mit>>>loeschen!
```

"alarm voltage"

```
!UL Kapaz. Al !  
!mit>>>loeschen!
```

"alarm capacity"

5.12 UniLog (SM-Modellbau)

(tested on UniLog Software status: Version 1.19)

Measured values are announced with max. one decimal place, the altitude announcement without decimal place.

The start of the announcements in the display of the UniLog is timed, as set in section 8.3. In the display ".. + Vario sound" a vario tone proportional to the rising/falling speed is given in the pauses according to the settings in section 8.3.

Within the displays of the UniLog, various combinations of the measured values can be brought to the announcement. The selection is done while holding the ▲ Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.

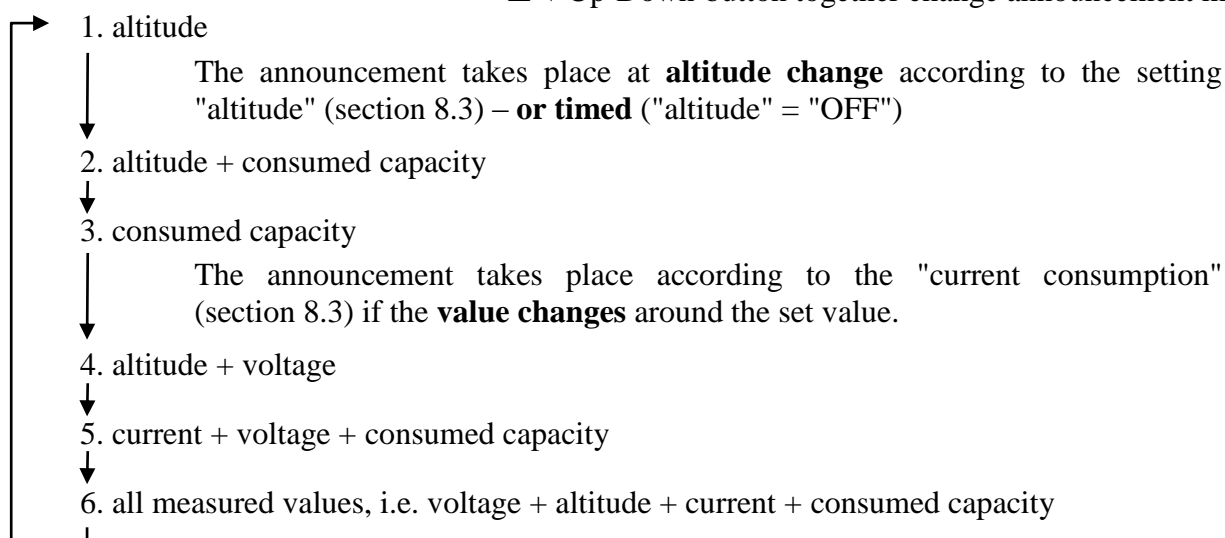


*23.28V 87.5m
36.04A 1377mAh

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

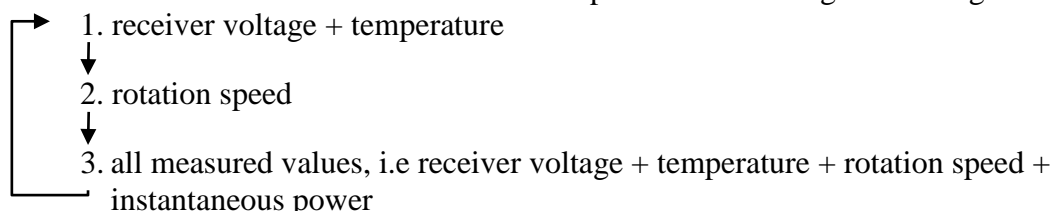


5.01VRx 22.9°C
2481rpm 839W

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode



The receiver voltage is only announced when using the connection cable WITHOUT popular optocoupler (see description to UniLog from SM-Modellbau).

5.13 UniLog2 (SM-Modellbau)

(tested on UniLog2 Software status: Version 1.06)

Announcement accuracy of the measured values:

Value	Unit	number of decimal places
Menu A: drive voltage	V	1
barometric altitude	m	0
drive current	A	1
capacity used	mAh	0
Menu B: rotation speed	rpm	0
drive power	W	0
energy used	Wmin	1
Menu C: Rx voltage	V	1
barometric altitude	m	0
rising / sinking (variometer)	m/s	1
Menu D: single cells voltage	V	2
Menu E: values on A1 and A2		
speed	km/h	0
temperature	°C	0
voltage	mV	0
Menu F: value on A3		
speed	km/h	0
temperature	°C	0
voltage	mV	0

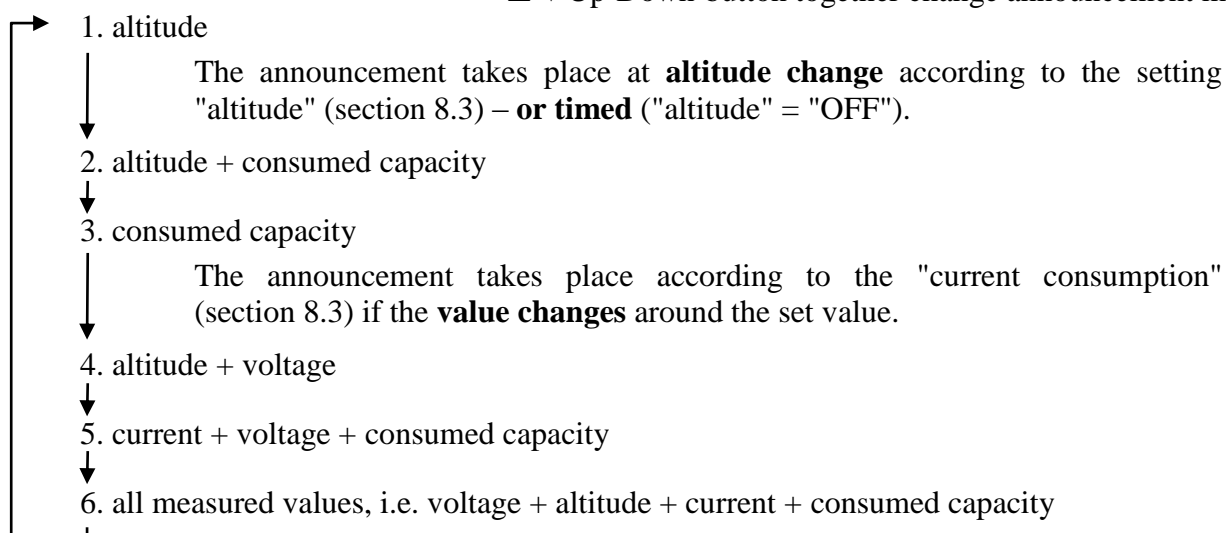
The start of the announcements in the display of the UniLog2 is timed, as set in section 8.3. In the display ". + Vario sound" a vario tone proportional to the rising/falling speed is given in the pauses according to the settings in section 8.3.

Within the displays of the UniLog2, various combinations of the measured values can be brought to the announcement. The selection is done while holding the ▲Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.



Announcement of the measured values + **Vario sound**
Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode



```
B 1750.1Wmin
2481rpm 839W
```

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. consumed energy
- ↓
2. rotation speed
- ↓
3. all measured values, i.e. consumed energy + rotation speed + instantaneous power

```
C 5.01VRx 221.8m
>>_ _ _ +12.1m/s
```

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. altitude
- ↓
- The announcement takes place at **altitude change** according to the setting "altitude" (section 8.3) – **or timed** ("altitude" = "OFF").
- ↓
2. receiver battery voltage + altitude
- ↓
3. all measured values, i.e. receiver battery voltage + altitude + rising/falling speed

```
D 4.08 4.05 4.08
4.09 4.08 0.00
```

Announcement of the smallest cell voltage (4.05 V) and its cell number (2) in case of voltage change, i.e. only if: new voltage value < trendy value.

Button function: ▲ Up-button starts the announcement immediately

```
E A1 87.6km/h
A2 36.4°C
```

Announcement of the measured values on entries A1 und A2

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. Announcement measured value A1
- ↓
2. Announcement measured values A1 **AND** A2

```
F A3 782.5mV
0us -> 0us
```

Announcement of the measured values on entry A3

Button function: ▲ Up-button starts the announcement immediately

5.13.1 Alarms

The following alarm displays are issued in speech when they appear. In the parameter menu the announcement will be made when the alarm is activated, i.e. to "(EIN)" is.

```
!Strom Alarm!  
!mit>>>loeschen!
```

"alarm current"

```
!Startspg Alarm!  
!mit>>>loeschen!
```

"alarm starting voltage"

```
!Spannung Alarm!  
!mit>>>loeschen!
```

"alarm voltage"

```
!Kapaz. Alarm!  
!mit>>>loeschen!
```

"alarm capacity"

```
!Hoehe Alarm!  
!mit>>>loeschen!
```

"alarm altitude"

```
!Rx Spg. Alarm!  
!mit>>>loeschen!
```

"alarm receiver voltage"

```
!Zellen Alarm!  
!mit>>>loeschen!
```

"alarm cell voltage"

5.14 UniSens-E (SM-Modellbau)

(tested on UniSens-E Software status: Version 1.00)

Announcement accuracy of the measured values:

Value	Unit	number of decimal places
Menu A: drive voltage	V	1
barometric altitude	m	0
drive current	A	1
capacity used	mAh	0
Menu B: rotation speed	rpm	0
drive power	W	0
energy used	Wmin	1
Menu C: Rx voltage	V	1
barometric altitude	m	0
rising / sinking (variometer)	m/s	1

The start of the announcements in the display of the UniSens-E is timed, as set in section 8.3. In the display ".. + Vario sound" a vario tone proportional to the rising/falling speed is given in the pauses according to the settings in section 8.3.

Within the displays of the UniSens-E, various combinations of the measured values can be brought to the announcement. The selection is done while holding the ▲ Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.

A 23.28V 87.5m
36.04A 1377mAh

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. altitude
 ↓
 The announcement takes place at **altitude change** according to the setting "altitude" (section 8.3) – **or timed** ("altitude" = "OFF").
2. altitude + consumed capacity
 ↓
3. consumed capacity
 ↓
 The announcement takes place according to the "current consumption" (section 8.3) if the **value changes** around the set value.
4. altitude + voltage
 ↓
5. current + voltage + consumed capacity
 ↓
6. all measured values, i.e. voltage + altitude + current + consumed capacity

```
B      1750.1Wmin
      2481rpm    839W
```

Announcement of the measured values

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. consumed energy
- ↓
2. rotation speed
- ↓
3. all measured values, i.e. consumed energy + rotation speed + instantaneous power

```
C 5.01VRx 221.8m
>>>___ +12.1m/s
```

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

1. altitude
- ↓
- The announcement takes place at **altitude change** according to the setting "altitude" (section 8.3) – **or timed** ("altitude" = "OFF").
- ↓
2. receiver battery voltage + altitude
- ↓
3. all measured values, i.e. receiver battery voltage + altitude + rising/falling speed

5.14.1 Alarms

The following alarm displays are issued in speech when they appear. In the parameter menu the announcement will be made when the alarm is activated, i.e. to "(EIN)" is.

```
!Strom Alarm !
!mit>>>loeschen!
```

"alarm current"

```
!Startspg Alarm!
!mit>>>loeschen!
```

"alarm starting voltage"

```
!Spannung Alarm!
!mit>>>loeschen!
```

"alarm voltage"

```
!Kapaz. Alarm !
!mit>>>loeschen!
```

"alarm capacity"

```
!Hoehe Alarm !
!mit>>>loeschen!
```

"alarm altitude"

```
!Rx Spg. Alarm !
!mit>>>loeschen!
```

"alarm receiver voltage"

5.15 VSpeak-Vario (VSpeak-modell)

(tested on VSpeak-Vario Software status: Version 1.0)

The start of the announcements in the display of the UniLog2 is timed, as set in section 8.3. In the display ".. + Vario sound" a vario tone proportional to the rising/falling speed is given in the pauses according to the settings in section 8.3.

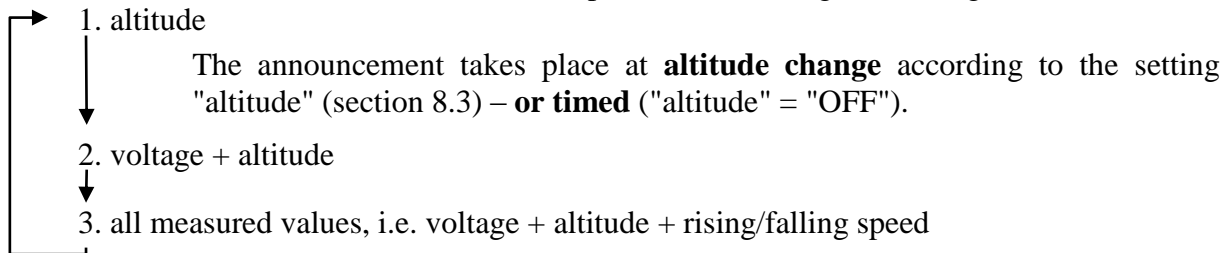
Within the displays of the UniLog2, various combinations of the measured values can be brought to the announcement. The selection is done while holding the ▲ Up-button and simultaneous "tip" operating of the ▼ Down-button. The selection will be saved.

A VS-Vario 5.2V
312m 2.1m/s

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode

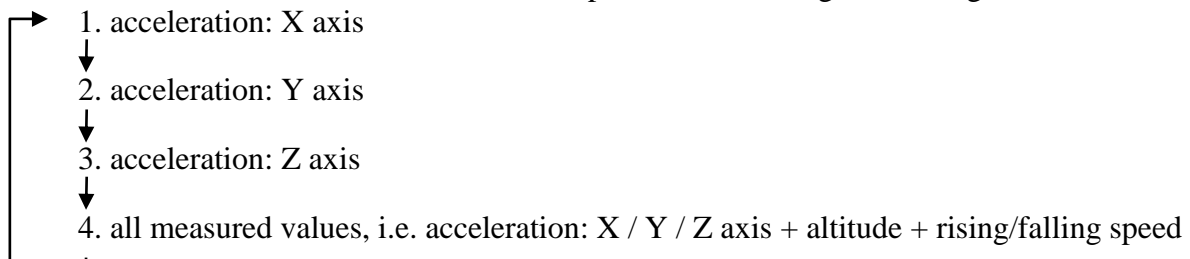


BX 0.1Y-0.2Z 0.9
312m 2.1m/s

Announcement of the measured values + **Vario sound**

Button function: ▲ Up-button starts the announcement immediately

▲ ▼ Up-Down-button together change announcement mode



C 4.08 4.05 4.08
4.09 16.3 5.20

Announcement of the smallest cell voltage (4.05 V) and the cell number (2) in case of voltage change, i.e. only if: new voltage value < last announced value

The total voltage (16.30 V) and receiver voltage (5.20 V) are not announced.

Button function: ▲ Up-button starts the announcement immediately

D Temperature
25.3°C

Announcement of the temperature time-controlled - or - when the temperature changes.

Button function: ▲ Up-button starts the announcement immediately

▲ Up-button (long pushed > 2s)
change announcement mode

The setting is saved.

5.15.1 Alarms

The following alarm displays are issued in speech when they appear. In the parameter menu the announcement will be made when the alarm is activated, i.e. to "(EIN)" is.

```
!Rx Spa. Alarm!  
!mit>>>loeschen!
```

"alarm receiver voltage"

```
!Spannung Alarm!  
!mit>>>loeschen!
```

"alarm voltage"

```
!Zellen Alarm!  
!mit>>>loeschen!
```

"alarm cell voltage"

```
!Hoehe Alarm!  
!mit>>>loeschen!
```

"alarm altitude"

```
!X-Beschl. Alarm!  
!mit>>>loeschen!
```

"alarm X-axis"

```
!Y-Beschl. Alarm!  
!mit>>>loeschen!
```

"alarm Y-axis"

```
!Z-Beschl. Alarm!  
!mit>>>loeschen!
```

"alarm Z-axis"

6 DUPLEX EX-Menu

The start of the announcements for the display of the EX-menus is timed - or using "single-click" of the button.



Rx Ant:9/8 5.2V

Announcement of the voltage and of the antenna signals, whereas the antenna signals are only issued every 5 announcements or with a "single-click".

Unless sensors are connected - with ads that do not meet the following, then the 2-nd line of the display is ignored, so that speech is processed only for the antenna signals and voltage.

6.1 MUI-Sensor (Jeti)



Rx Ant:9/8 5.2V
650mAh 10.5A

Announcement of voltage, capacity and antenna signals, whereas the antenna signals are only issued every 5 announcements or with "single-click".



Rx Ant:9/8 5.2V
650mAh

Announcement of voltage, capacity and antenna signals, whereas the antenna signals are only issued every 5 announcements or with "single-click".

6.2 MVario-Sensor (Jeti)



Rx Ant:9/8 5.2V
2.0m/s

Announcement of voltage and antenna signals, whereas the antenna signals are only issued every 5 announcements or with "single-click" + **Vario sound**.

6.3 VSpeak-Vario (VSpeak-modell)



Rx Ant:9/8 5.2V
312m 2.1m/s

Announcement of voltage, altitude and antenna signals, whereas the antenna signals are only issued every 5 announcements or with "single-click" + **Vario sound**.

7 Vario sound

Besides the MVario from Jeti, also the UniLog from sm-modellbau, UniLog2 and GPS Logger and the VSpeak-Vario from Vspeak model can serve as sensors for the vario sound. The speech module Vspeak generates in each display in the speech pauses a, in the frequency proportional, vario sound to the rising/falling. In order to better distinguish between rising and falling, the tone for the rising is also interrupted. The interruption duration decreases with increasing climbing. The zero slide, neither rising nor falling, is soundless.

For the vario sound a number of settings can be made in the settings (see section 8.3):

Vario sound rising:	ON/OFF
Vario sound falling:	ON/OFF
Vario sensitivity	0.1 ... 0.2 ... 0.3 m/s (not for the MVario-Signal ">>>>_ _ _")
Vario sound volume:	1, 2, 3, 15, 16, 15, 14, 3, 2

For a long climb passages, e.g. E-gliders, F-trail, or just during "gymnastics" can the Vario-sound be switched OFF and the ON again by double-clicking (2x short activation).

8 VSpeak switch: Operation of the speech module

In addition to the 4-button JetiBox the speech module is operated through its button. The advantage of the control over the VSpeak button lies not only in the fact that the button function is always the same, the buttons on the box will be less used, separate adjustments can be made - but also in the possibility to position the button in a well-to-reach position of the radio and therefore without "to Watch" trigger the actions "single-click", "double-click" and "long key stroke".

To check the function of the button for the duration of the operation, a blue LED on the VSpeak board is lid.

The button can be used in four different ways:

8.1 "single click"

Using "single-click" (Button 1 x pushed briefly) begins the immediate start of the announcement in the above explained displays.

Is the speech module in mode "settings" (see section 8.3), then, by pressing the key, the reading-switching or changing takes place. In addition, the setting menu can also be stopped.

8.2 "double click"

By "double-clicking" (key 2 x pushed in quick succession) the vario tone is turned OFF or ON. The setting is announced, either:

"Vario sound is OFF" - or - "Vario sound is ON"

The setting you make is NOT saved.

8.3 "triple click"

Using "triple-click" (key 3 x pushed in quick succession) you get into the mode "settings" of the speech module. Here, the speech module can be set individually. During the announcement is the key on 'confirmed' always asked in the times that are stored in the table below "yellow", i.e. in the "value" AND "waiting time".

All settings are saved - except for the setting parameter No. 5, "wav test".

During the announcement of the "setting parameters" ("gray" background) the setup can be cancelled by pressing the key. The changes made until the abortion will be saved.

Table settings			
No	Setting parameter	Value	waiting time
1	"Vspeak: settings"		
2	"language"	< selection language >	
3	"voice of"	< selection voice >	
4	"volume"	< value >	
5	"wav test"	"ON" / "OFF"	
6	"stop timed announcements"	< value > "seconds"	
7	"vario sound rising is"	"ON" / "OFF"	
8	"vario sound falling is"	"ON" / "OFF"	
9	"vario sensitivity"	"0.1" / "0.2" / "0.3" "m/s"	
10	"vario sound volume"	< value >	
11	"announcement current consumption"	"100"/"200"/"500"/"1000" "mAh"	
12	"announcement altitude"	"OFF"/"5"/"10"/"20"/"25"/"50" "m"	
13	"end of settings"		
14	"changes have been saved"		

To 2: < *slection language* >

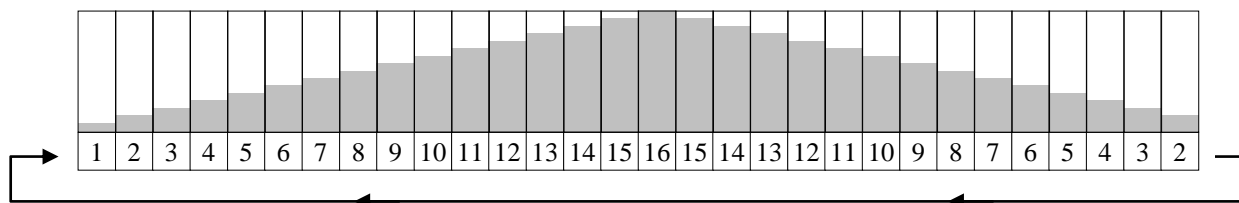
german, english, french, spanish, czech, Russian, portuguese, italian, dutch and hungarian

To 3: < *selection voice* >

(see section 9 "wav files") The voices are in each "Voice directory" in the directory "voice" saved. The directory "XYZ" (available in each "language directory") can be used for self-recorded wav files.

To 4: "*volume*"

The volume of the announcements can be adjusted in 16 steps.



To 5: "wav test"

Is "wav Test ON" selected it is immediately jumped to no. 13. Following this all wav files are played to the selected voice. This is an endless loop which can be stopped by pressing a key.

The wav-test serves "creative" users to test their self-recorded wav files. The setting is not saved.

To 6: "stop timed announcements" < value > "seconds"

The following values can be set for the interval time (in seconds):



To 9: "vario sensitivity"

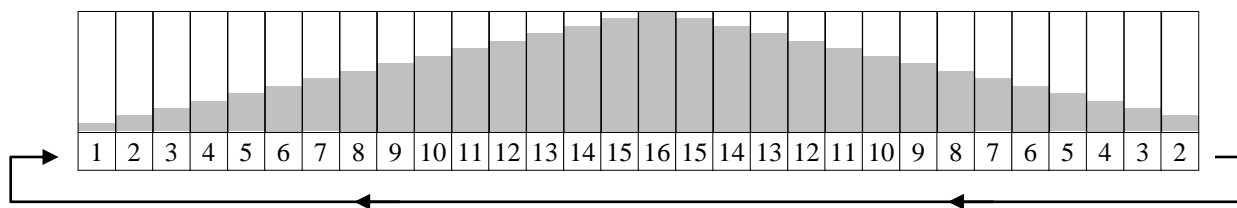
The sensors for the vario value "rising or falling" can have a different quality, so it may be that despite model at rest (e.g. on the ground - or in the home workshop), / the decimal point of the measured value "shakes" to 0.1 / 0.2 / 0.3 m/s or more. Because this generates the Vario sound, it would cause unnecessary vario sounds. To prevent this, the sensitivity for the vario sound generating in steps of 0.1 .. 0.3 m/s can be adjusted.

Context "Vario sound sensitivity" zero lift / max values (in m/s)			
sensitivity	zero lift (soundless)	max. falling	max. rising
0.1	0.0	- 2.0	+ 2.0
0.2	- 0.1... + 0.1	- 4.0	+ 4.0
0.3	- 0.2... + 0.2	- 6.0	+ 6.0

Rise and fall - values beyond the maximum values in the above mentioned table, they are no longer distinguished by the Vario sound, i.e. these are signalled by the respective Max Vario sound.

To 10: "vario sound volume"

The vario sound can be adjusted in 16 steps in its volume. While setting a tone is generated, which corresponds to the "least falling".



To 11: "announcement current consumption"

In the respective displays of MUI, UniLog, Unisens and Mikrokoopers the announcement of the power consumption sounds after a change to the set value.

To 12: "announcement altitude"

The announcement of the altitude takes place only at altitude change to the set value, ie as a "height-controlled announcement". The timed announcement is then ineffective.

To 14: "changes have been saved"

If settings were made under the previous points they are only saved **now at this point** - if no changes were made - this announcement is not applicable.

Accidental - or - incorrect entries can thus be discarded by switching off the radio before reaching this announcement.

8.4 "long key stroke "

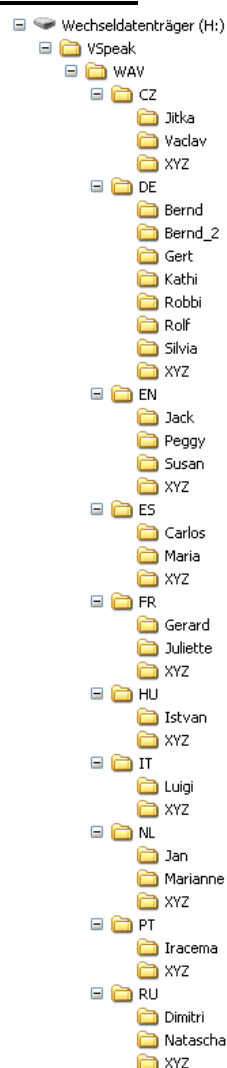
If the key is pushed and held (> 2sec) the timed announcement is switched OFF or ON. The setting is announced, either:

"Timed announcement is OFF" - or - "timed announcement is ON"

Thus, only the cyclically recurring announcements of the reading is switched OFF / ON. Using "single-click" the announcement can be started anytime.

The setting is saved.

9 wav files



The wav files (audio files of the announcements) are arranged in accordance with the adjacent picture in directories according to the country code (e.g. DE for German) and voices: (e.g., Robbi, Rolf, Silvia ...).

The directory "XYZ" is available in any language. The available wav files can be replaced by "diligent" users of the VSpeak module by own recordings, i.e. can be overwritten.

To create your own wav files there's useful information on the website: www.VSpeak-modell.de under downloads.

The self-generated wav files can be easily tested in VSpeak (see section 8.3):

1. Settings choose <language> and <voice>
2. Settings "wav test ON"
(the wav files are played in an infinite loop)

"Creative self-generated voices" can be mailed for review and inclusion in the selection of voices by VSpeak at the address mentioned in section 16.

10 Update

The processor on the speech module contains a SD bootloader with a version counter.

If firmware updates are available they will be sent via mail. The information in the mail files are copied on the Micro SD card (formatted FAT or FAT16), this is inserted into the speech module and power turned on. The boot loader will recognize the new software version, boots (blue LED "flickers") and is now up to date.

Every time with the first turning on the current version number is announced.

11 Accessories

V-cable and earphones are not included as these are often already present.

Suggestions for receiver / speaker / BT devices:

1. **Wired earphones** www.conrad.com article no.: 386308.
(in our opinion the best price-performance ratio)
2. Hama mini-speaker www.conrad.com article no.: 343151.
3. Wireless via Bluetooth transmitter "B-SPEECH TX2" from www.reichelt.de
The BT transmitter functions with just about every BT headsets except those devices specified in the manual (mobile phone accessories).
Note: In order to enable the B-SPEECH TX2 in pairing mode, hold down the On button until the red **AND** the blue LED flashes (about 7s). At this point, the manual is a bit "thin".

Position BSpeech module and active speaker at a sufficient distance to 2.4 GHz radio antenna!

12 Technical data

Power supply	from Jeti-HF module (analog connected JetiBox, s. 2.2.1), or radio battery 3.5 ... max. 16V (s. 2.2.2)
Power usage	ca. 18 .. 30 mA
Dimensions	27 x 16 x 15 mm
Weight	7 g
Connections	3.5 mm stereo jack, short-circuit-proof output for earphone Graupner / JR servo plug input

13 EG Declaration of Conformity

Manufacturer

VSpeak-Modellbau (Volker Weigt)
Priestewitz



We hereby declare that the product

Speech module VSpeak

complies with the following European directives:

2004/108/EC	EMC Directive
2006/95/EC	Low Voltage Directive (LVD)
2011/65/EC	Restriction of Hazardous Substances (RoHS)

The presumption of conformity is taken by applying the following harmonized standards:

EN60065	Audio-, video- and similar electronic apparatus - Safety requirements
EN60332	Tests on electric and optical fibre cables under fire conditions
EN60950	Information technology equipment - Safety
EN61000-6-1	Electromagnetic compatibility (EMC)
EN61000-6-3	
EN55022	Information technology equipment - Radio disturbance characteristics

Priestewitz, 2011/04/01

A handwritten signature in black ink, appearing to read 'Weigt', is written above a horizontal dotted line.

Signature
Volker Weigt
Managing Director

14 Instructions for disposal



Equipment marked with the symbol should not be disposed of within household waste.

15 Version history

Vers.-No	Date	Comment
1.01	04.2011	first retail version
1.02	05.2011	announcement of the version when switching on saving of the settings Errors in the output of numbers greater than 1000 solved Extension of the speech output for the Muli6s sensor of Jeti Extension of the speech output for Mikrokopter
1.03	07.2011	MVario completely revised Speech output for Jeti's revised voltage display both for Tx and Rx Adjustment of the triggering of the announcement of the Muli6s as well as the voltage announcements in the Tx and Rx menu Adjustment of different pause times during the announcements from MVario, MUI, MGPS Change of the announcement within the MUI menu "Xcapacity" from Time-triggered to "change to the hundreds place" Extension of the speech output for the MGPS sensor of Jeti
1.04	08.2011	Extension of the announcement starts for the temperature announcements of the MVario Mikrokopter now with adjustable interval time, instant-message-start button, capacity announcement with "change to the hundreds place" Extension of the speech output for the MRPM and MRPM-AC sensor of Jeti Extension of the speech output for the voltage regulator MAXBEC2D of Jeti Extension of the speech output for the UniLog of SM
1.05	10.2011	Altitude announcement without decimals Announcements of the menus "Tx", "Rx", "Mx" and RX-"Pairing" MUI-Capacity-alarm-announcements as an "alarm fuel level" Extension of the speech output for the MSPEED sensor of Jeti Expansion of the speech output for the temperature sensors MT of Jeti Extension of the speech output for the UniLog2 of SM Extension of the speech output for the GPS Logger by SM Extension of the voice choice of "standard" for the voices of "Rolf" and "Silvia"

Vers.-No	Date	Comment
1.06	02.2012	new: VSpeak button with extensive, central functions and settings speech selection Extension of the voice choice (including the first user-created voices: Kathi and Bernd!) Expansion of the announcements of UniLog2 (single cell monitoring, sensors on A1 ... A3) Announcement of ALL UniLog2 alarms and GPS Logger by SM VSpeak adapted to Mikrokopter Vers 0.86d
1.07	06.2012	Extension of the voice choice (by users: Gert!) Extension of speech output for VSpeak Vario Extension of speech output for DUPLEX-EX-HF-modules Setup: - NEW: volume control also for announcements - NEW: Setup cancelling by keystroke
1.08	11.2012	new voices in Czech and Russian Extension of speech output for UniSens-E from SM No announcement on "Karte fehlt" from GPS-Logger/UniLog2 Selection announcement "ONLY speed" with GPS-Logger (SM) Selection announcement "altitude + voltage" with UniLog2
1.09	09.2013	new voices in portuguese, italian, dutch and hungarian
1.10	11.2014	Extension of speech output for ALTIS V4 from AerobTec Extension of speech output for MVARIO2EX from Jeti Altitude-controlled announcement and altitude change is adjustable Adjustable capacity value for current consumption-driven announcement

16 Contact

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