



BATmode S / S+

QUICKSTART GUIDE

Set Up and First Start Up

SAFETY INSTRUCTIONS

Please read these safety instructions carefully before startup your BATmode system!

Only use power supplies authorized by bat bioacoustictechnology.

Avoid excessive mechanic strain on the BATmode-System, especially on plugs and connectors if cables are connected to the BATmode or the antenna and microphone disc. Strong vibrations, shaking or dropping may damage system parts.

Ensure a safe and stable mounting of the BATmode and the corresponding discs.
Dropping can harm persons, property or the BATmode-system.

Ensure that nobody can stumble on installed and connected wires.
Stumbling can harm persons and damage system parts.

Only use accessories supplied or authorized by bat bioacoustictechnology.
The use of unauthorized accessories may damage the device.

Please contact our support if the BATmode-System shows any damage or does not work properly. Do not open system parts and try to repair damage by yourself or through unauthorized personnel. This will cause the loss of warranty.



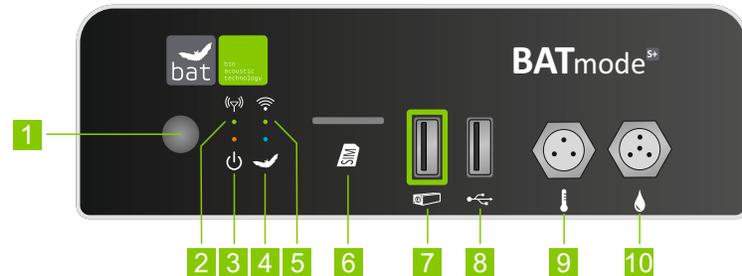
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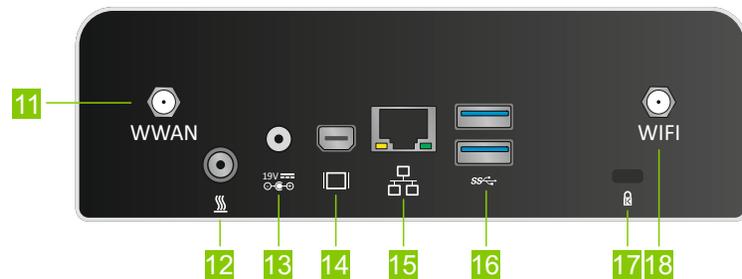
Learn about your device

- 1 On-/Off-Switch
- 2 Mobile Service LED
- 3 Power LED
- 4 Status LED
- 5 WIFI-Hotspot LED (only BATmode S+)
- 6 SIM-Card Slot (Mini-SIM)
- 7 USB-Port for UltraSoundGate (monitored)
- 8 USB 2.0-Port e.g. for keyboard and mouse
- 9 Temperature Sensor Input (only BATmode S+)
- 10 Precipitation Sensor Input (only BATmode S+)
- 11 Cellular Antenna Connector
- 12 Heating Output
- 13 Power Supply
- 14 Minidisplay Port
- 15 LAN Connector
- 16 USB 3.0-Ports e.g. for Backup-Stick
- 17 Kensington-Lock
- 18 WIFI Antenna Connector (only BATmode S+)

- Front View BATmode S/S+ -



- Back View BATmode S/S+ -



LED Status Indicators

How to interpret the LED status indicators of your BATmode correctly:

Power LED (orange)



On	Device on
Off	Device off

WIFI Hotspot LED (green)



On	WIFI-Hotspot on
Off	WIFI-Hotspot off

Status LED (blue)



Off	BATcontrol not started
On	Monitoring stopped, BATcontrol on
Blinking	Monitoring started

Mobile Service LED (green)



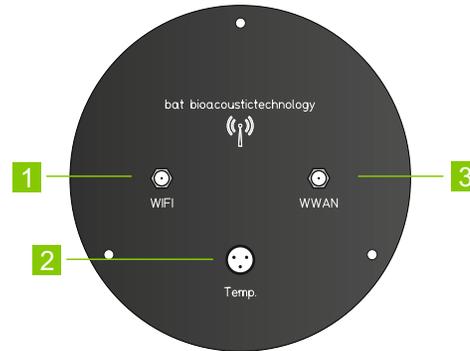
On	Mobile connection connected
Single blinking	Registered to mobile network
Double blinking	SIM locked, SIM not recognized, no mobile service connection

Antenna Disc and UltraSoundGate

- 1 WiFi Antenna Connector
- 2 Temperature Sensor Connector
- 3 Cellular Antenna Connector

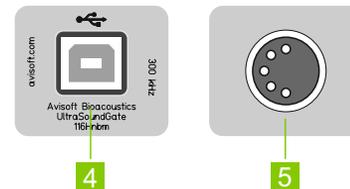
BATmode S Systems do not use an Antenna Disc. Instead, please connect the enclosed magnetic base antenna for mobile connection to the cellular antenna connector of the BATmode S.

- Antenna Disc (only BATmode S+) -



- 4 USB-2.0 Interface
- 5 Microphone XLR Connector

- UltraSoundGate 116Hnbm -



Microphones

Microphone Disc GM50

- 1 Microphone XLR Connector (UltraSoundGate)
- 2 Screws for removing the mounting plate
- 3 Reference Signal Speaker Connector (UltraSoundGate)
- 4 Microphone Capsule
- 5 Reference Signal Speaker

The Microphone Disc GM50 can either be used with the enclosed mounting plate or with an optional tripod.

To connect the microphone and the reference signal of the GM50 speaker please use the Y-XLR microphone cable.

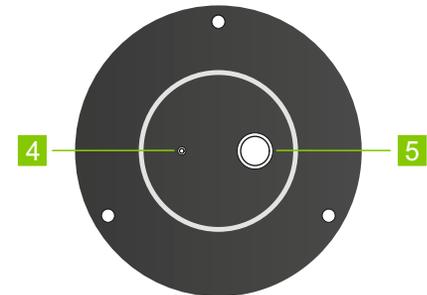
Be careful not to touch the microphone capsule and to protect it from moisture!



- Front View -



- Back View -



Microphones

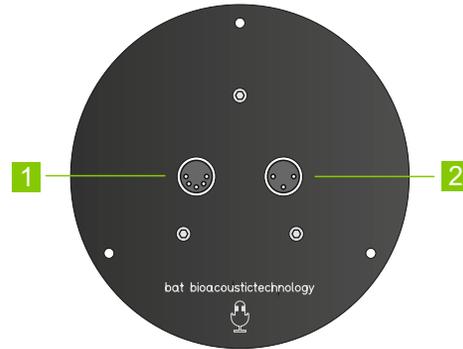
Microphone Disc GM90

- 1 Microphone XLR Connector (UltraSoundGate)
- 2 Heating Connector
- 3 Windscreen made of foam
- 4 Microphone Capsule
- 5 Reference Signal Speaker

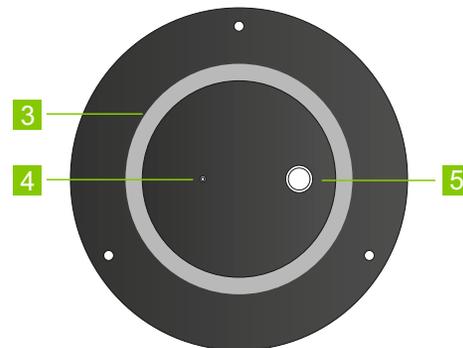
Do not remove the windscreen foam, as this has an essential influence on the calibration of your microphone disc!

Be careful not to touch the microphone capsule and to protect it from moisture!

- Front View -

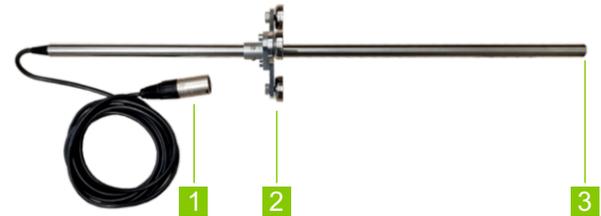


- Back View -



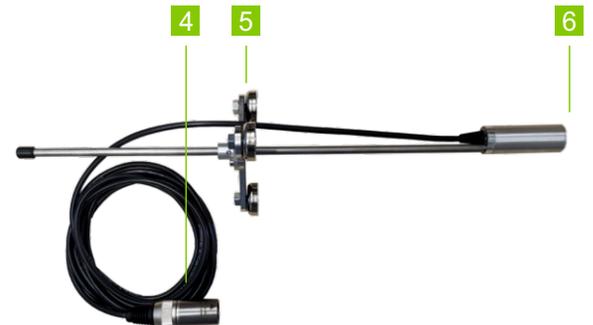
Tower Microphone TM10

- 1 Microphone XLR Connector (UltraSoundGate)
- 2 Optionally available movable tripod for tower wall mounting
- 3 Microphone Capsule



Tower Microphone TM20

- 4 Microphone XLR Connector (UltraSoundGate)
- 5 Optionally available movable tripod for tower wall mounting
- 6 Microphone Capsule and Reference Signal Speaker

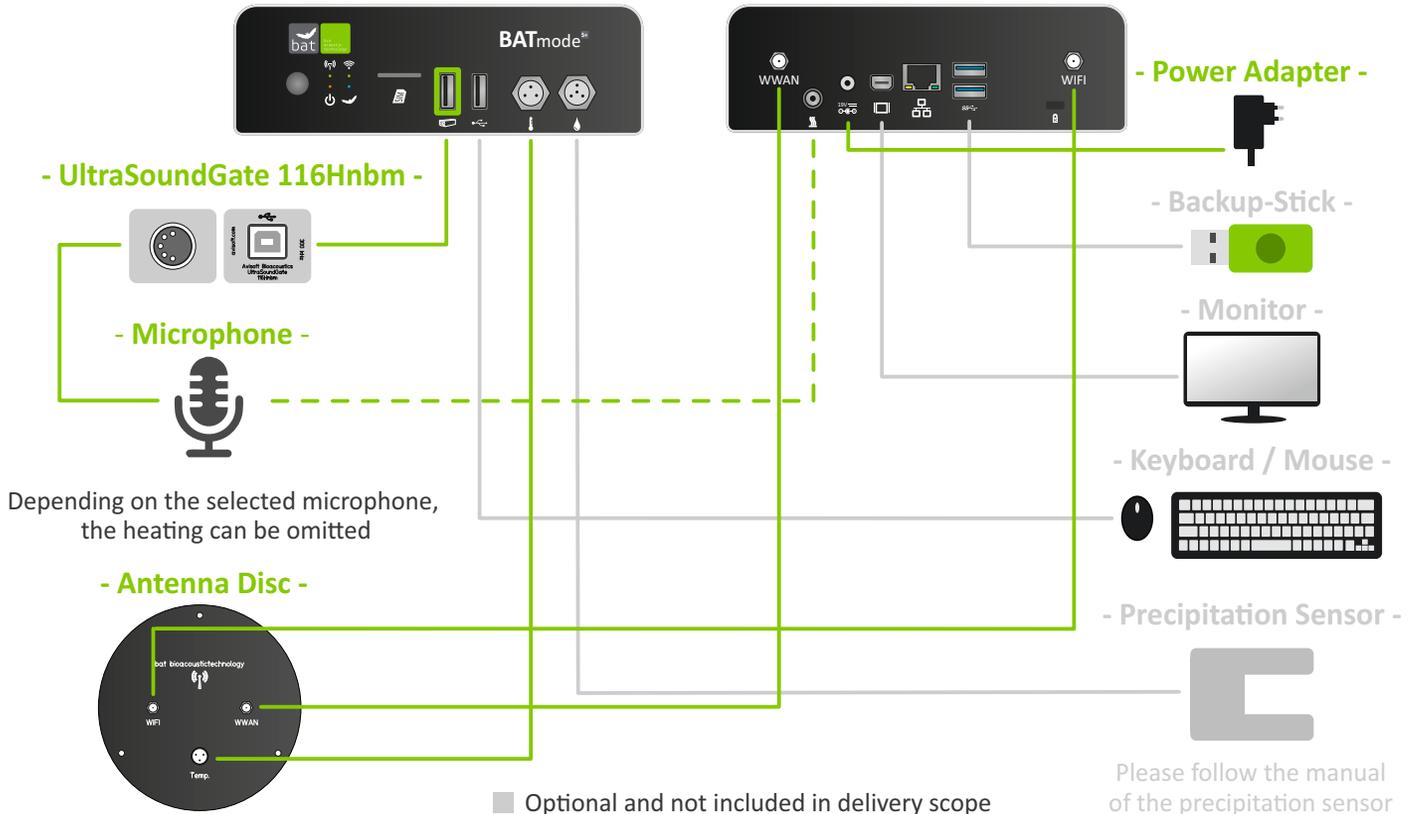


Be careful not to touch the microphone capsule and to protect it from moisture!

Connect

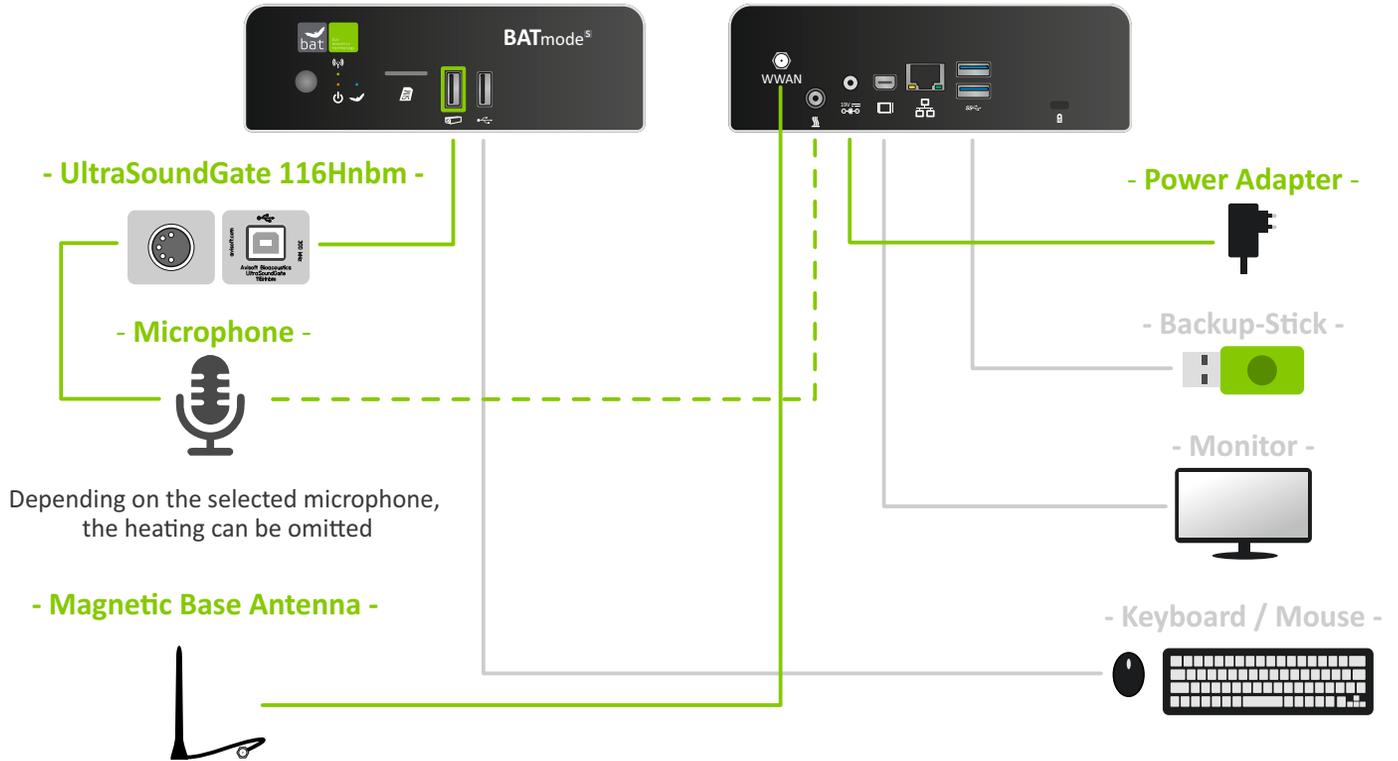
How to connect all components of your BATmode S+ System correctly:

- BATmode S+ -



How to connect all components of your BATmode S System correctly:

- BATmode S -



Depending on the selected microphone, the heating can be omitted

■ Optional and not included in delivery scope

Remote Access via WIFI

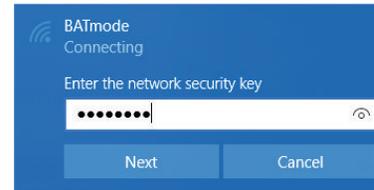
How to access your BATmode with your Windows running laptop via WIFI:

Step 1

Connect the WIFI of your Windows running laptop with the WIFI-Hotspot of the BATmode.

Default SSID: „BATmode“

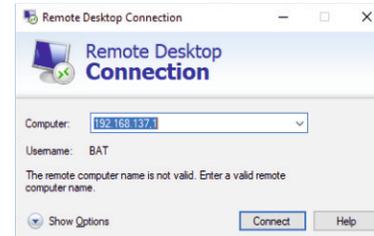
Default Password: „12345678“



Step 2

Open the Windows program **Remote Desktop Connection**, insert the WIFI IP of your BATmode in Computer and press **Connect**.

Default WIFI IP: „192.168.137.1“



Step 3

Insert the Username „BAT“ and the Windows Password and press **OK**.

Default Windows Password: „12345“



WIFI connection is only available for BATmode S+.

Remote Access via LAN

How to access your BATmode with your Windows running laptop via LAN:

Step 1

Use an Ethernet cable to connect the LAN port of your Windows running laptop (RJ45) with the one of the BATmode (RJ45).



Step 2

Open the Windows program **Remote Desktop Connection**, insert „batmode“ in Computer and press **Connect**.



Step 3

Insert the Username „BAT“ and the Windows Password and press **OK**.

Default Windows Password: „12345“



First Start Up

Starting of the BATmode System and the BATcontrol control software:

Step 1

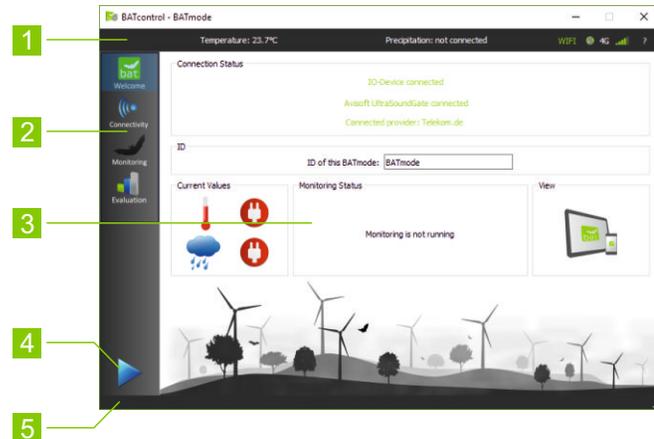
Start the BATmode System.

Step 2

Use mouse, keyboard and monitor or connect your laptop via WIFI or LAN as described on page 12 and 13.

The control software BATcontrol starts automatically.

- 1 Status Bar
- 2 Task Bar for page choosing
- 3 Selected Page
- 4 Monitoring Start-/Stop-Button
- 5 Message Bar



Starting of the Avisoft-RECORDER USGH recording software and the start of the acoustic monitoring and data acquisition of the external sensors:

Step 1

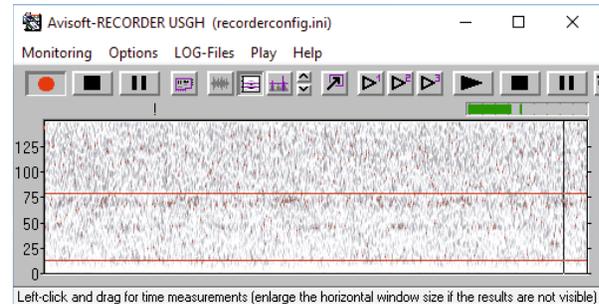
After selecting your settings on the different pages of BATcontrol, start the monitoring with a click on the Start-/Stop-Button.

Step 2

The recording software will open and the acoustic monitoring as well as the simultaneous data acquisition of temperature and precipitation begin.

Step 3

To stop data acquisition click on the Start-/Stop-Button or close the recording software.



The recording software Avisoft-RECORDER USGH offers lots of settings. However, the BATmode system is configured especially for the bat detection on wind turbines according to the requirements specified in the research project RENEBAT. Consequently, settings in the recording software should only be changed by experts following the instructions in the detailed manual. Otherwise validity of collected data may expire.

The external sensors for temperature and precipitation acquisition are only available for BATmode S+.

Mobile Set Up

How to set up your BATmode for SMS and mobile Internet connection:

Step 1

Insert the Mini-SIM card in the SIM card slot
(For this, the BATmode must be turned off).



Step 2

Use the Mobile settings in Windows to remove
a possibly activated PIN from your SIM card.

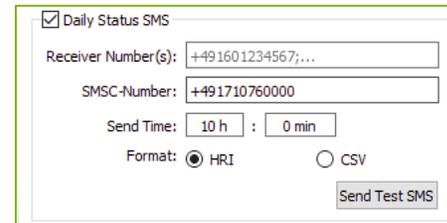
*An activated PIN will prevent the BATmode
system to restore a mobile connection
after a possible power failures, automatically.*

Step 3

Insert the APN of your provider in the mobile
settings of Windows.

Step 4

Enter the number of the SMS center of your
provider in **SMSC-Number** in BATcontrol.

A screenshot of the 'Daily Status SMS' settings window in Windows. The window has a title bar and a checkbox labeled 'Daily Status SMS' which is checked. Below the checkbox are several input fields: 'Receiver Number(s):' with the value '+491601234567;...', 'SMSC-Number:' with the value '+491710760000', and 'Send Time:' with '10 h' and '0 min' selected. There are also radio buttons for 'Format:' with 'HRI' selected and 'CSV' unselected. A 'Send Test SMS' button is located at the bottom right of the window.

Daily Status SMS

Settings in BATcontrol

Enable **Daily Status SMS** and insert the phone number of the receiver of the Daily Status SMS in **Receiver Number(s)**.

Use the international format: e.g. +4915221918574.

Use ; to separate multiple receiver numbers.

Select the daily transmission time and the desired format.

HRI: Values preceded by acronym.

CSV: Values separated by commas.

Settings for Daily Status SMS:

- Daily Status SMS
- Receiver Number(s): +4915221918574; +491601234567
- SMSC-Number: +491710760000
- Send Time: 10 h : 30 min
- Format: HRI CSV
- Send Test SMS

Meaning of the sent values and acronyms

Acron.	Meaning
ID	ID of the BATmode Systems
MON	Current monitoring status
LRL	Last reference value
LRD	Time of the last reference value
LFD	Time of last recording
FL24	Recordings in the last 24 hours

Acron.	Meaning
FT	Total number of recordings
FC	Free space on C: in GB
FD	Free Space on D: in GB
SL	Current mobile signal level in %
WWW	Status of the Internet connection
WIFI	Status of the WIFI-Hotspot

Remote SMS

Settings in BATcontrol

Enable the **SMS Remote** checkbox.

Add the mobile number of the command sending device to the **Security Number(s)**.

Security Number(s):	<input type="text" value="+4915221918574; +491601234567"/>
<input checked="" type="checkbox"/> SMS Remote	<input checked="" type="checkbox"/> SMS Remote Feedback

Android-App

Download from the Google Play Store our free Android App **BATconnect SMS** for SMS remote control of your BATmode systems.



Use these SMS commands to control your BATmode systems via text SMS

Command	System response
Start monitoring!	Monitoring will start ungated
Start monitoring: 11:00-14:00!	Monitoring will start from 11 am to 2 pm
Start monitoring: 11:00-14:00 and 20:00-02:00!	Monitoring will start from 11 am to 2 pm and 8 pm to 2 am
Start monitoring: -20/10!	Monitoring will start from 20min before sunset to 10min after sunrise
Stop monitoring!	Monitoring will stop
Kill Recorder!	Recording software RECORDER will be killed

Reboot!	System will reboot
Shutdown!	System will shut down
Send status!	System will send Status SMS
Send Mail!	System will send Status Mail
Send Mail to max(at)moritz.de	System will send Status Mail to max@moritz.de
Start WIFI-Hotspot!	WIFI-Hotspot will start
Stop WIFI-Hotspot!	WIFI-Hotspot will stop
Connect WWAN!	Mobile Connection will be connected
Disconnect WWAN!	Mobile Connection will be disconnected
Kill Recorder!	Recording software RECORDER will be killed
Reset USG!	System will reset UltraSoundGate
Send MAC!	System will send its MAC address
Send WIFI-IP!	System will send its WIFI IP
Send LAN-IP!	System will send its LAN IP
Enable Status-Mail!	Daily Status Mail will be enabled
Disable Status-Mail!	Daily Status Mail will be disabled
Enable Status-SMS!	Daily Status SMS will be enabled
Disable Status-SMS!	Daily Status SMS will be disabled

myBAT

Use the mybat cloud service to monitor your BATmode systems from anywhere in the world.

Step 1



Activate myBAT in BATcontrol on your BATmode.



Step 2



Sign Up by using your Purchase-Code on:
<https://www.mybat.bioacousticstechnology.de>

Purchase-Code:

Step 3



Assign your BATmodes to your account by using the MAC addresses of your BATmode systems.

MAC address of this BATmode:

myBAT requires an active Internet connection via LAN or mobile connection.

Set Up

This checklist will help you to forget nothing, when setting up your BATmode system:

- Insert SIM Card
- Change Windows password in Windows
- Change Windows password in ChangeAutoLogonPassword
- Insert APN
- Insert SMSC-Number
- Change WIFI-Hotspot SSID and password
- Change ID
- Configure daily Status SMS
- Configure daily Status Mail
- Configure SMS remote access
- Configure myBAT
- Enter Recording Periods
- Configure daily reference signal
- Set Monitoring settings
- Enter microphone calibration values
- Connect Backup-Stick and configure Backup
- Install Teamviewer and set up a permanent password
- Configure GSM Switch Socket

This checklist refers to a standard configuration of the BATmode system with GSM Switch Socket, which uses SMS, mobile Internet and WIFI as remote access options.

For more detailed explanations of the individual settings, please refer to the manual.

WIFI is only available for BATmode S+ systems.

Test all planned remote access paths before installation in the wind turbine.

Installation

The following points should be clarified in advance of the installation:

- Power supply
- Mobile coverage at the installation site
- Internet via turbine network possible
- Installation location of the disc(s)
- Installation location of the BATmode/BATbox
- Cabling/cable length

With this checklist you only have to climb once in the nacelle of the turbine and have everything necessary with you.

- BATmode system (preferably in BATbox S)
- Microphone disc
- Antenna disc/magnetic base antenna
- All cables
- Extension cable for power supply
- Drill with a drill bit of 102 mm
- 2.2 mm metall drill bit for pre-drilling the fastenings of the discs
- at least six 3.5 mm SPAX screws with screwdriver to fix the discs
- Magnetic feet or screws, pre-drill bit and screwdriver to fix the BATmode or BATbox
- Cabinet key
- Cable ties
- Laptop with Ethernet cable
- Smartphone
- GSM Switch Socket
- Ethernet cable

This checklist refers to a standard configuration of the BATmode system.

Notes



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The detailed manual is always available on
the Internet as up to date PDF download

www.bioacoustictechnology.de/downloads

Version: 11/18

Product illustrations similar. Misprints, errors, innovations
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