

AP

**STIHL**



2 - 9 Safety Precautions



## Contents

1	Information on Safety Notices.....	2
2	Explanatory Note.....	2
3	Overview.....	2
4	Safety Precautions.....	3
5	Charging the Battery, LEDs.....	5
6	Bluetooth® Radio Interface.....	5
7	Removing and Fitting the Battery.....	6
8	Testing the Battery.....	6
9	After Finishing Work.....	6
10	Transporting.....	7
11	Storing.....	7
12	Cleaning.....	7
13	Maintenance and Repairs.....	7
14	Troubleshooting.....	7
15	Specifications.....	8
16	Disposal.....	9

## 1 Information on Safety Notices


### 1.1 Applicable documents

The local safety regulations apply.

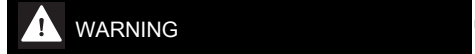
- ▶ Read, understand and save the following documents in addition to these safety instructions:
  - User Manual for the STIHL battery product
  - User Manual for battery products of other manufacturers approved for STIHL AP batteries
  - User Manual for STIHL charger
  - Safety information for STIHL batteries and products with built-in battery:  
www.stihl.com/safety-data-sheets

For further information on STIHL connected, compatible products and FAQs, please visit [www.connect.stihl.com](http://www.connect.stihl.com) or available from a STIHL authorized dealer.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. These word marks and logos are used by STIHL under license.

Batteries with  are equipped with a Bluetooth® radio interface. Local operating restrictions (in aircraft or hospitals, for example) must be complied with.

## 1.2 Symbols used with warnings in the text



### WARNING

- This symbol indicates dangers that can cause serious injuries or death.
  - ▶ The measures indicated can avoid serious injuries or death.



- This symbol indicates dangers that can cause damage to property.
  - ▶ The measures indicated can avoid damage to property.

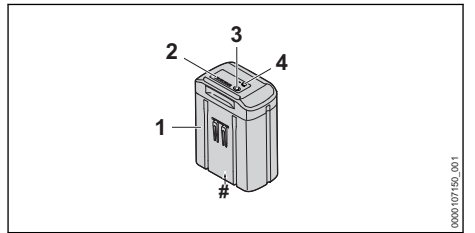
## 2 Explanatory Note

### 2.1 Manufacturer

ANDREAS STIHL AG & Co. KG  
 Badstrasse 115  
 D-71336 Waiblingen  
 Phone: +49 7151 26-0  
 Fax: +49 7151 26-11 40  
 email: [info@stihl.de](mailto:info@stihl.de)  
[www.stihl.com](http://www.stihl.com)

## 3 Overview

### 3.1 Battery



#### 1 Battery

The battery supplies power to the battery product.

#### 2 LEDs

The LEDs indicate the state of charge of the battery and any errors.

#### 3 Button

The pushbutton activates the LEDs on the battery. It activates and deactivates the Bluetooth® interface (if available).

#### 4 "BLUETOOTH®" LED (only for batteries with



The LED indicates whether the Bluetooth® radio interface is activated or deactivated.

#### # Rating plate with serial number

### 3.2 Symbols

Meanings of symbols that may be on the battery:



1 LED lights up red. The battery is too warm or too cold.



4 LEDs flash red. There is an error in the battery.



Recharge this battery with a STIHL charger. The permissible chargers are listed in these safety instructions.



The battery is equipped with a Bluetooth® radio interface and can be paired with the STIHL connected app.



The information next to the symbol indicates the energy content of the battery according to the cell manufacturer's specification. The energy content available in operation is lower.



Do not dispose of the product with domestic waste.

## 4 Safety Precautions

### 4.1 Warning symbols

Meaning of warning symbols on the battery:



Observe safety warnings and take the necessary precautions.



Read and understand the User Manual and keep it in a safe place.



Protect the battery against heat and fire.



Do not immerse the battery in liquids.

### 4.2 General notes




Remove the battery during work interruptions, transport, storage, maintenance or repair.

### 4.3 Intended Use

A STIHL AP battery supplies power to STIHL battery products or to battery products of other manufacturers approved for STIHL AP batteries.

The battery may be used in the rain.

The battery must be recharged with a STIHL AL 101, AL 301, AL 301-4 or AL 501 charger.

The battery with  in combination with the STIHL connected app enables customization and the transfer of information to the battery based on Bluetooth® technology.

### ▲ WARNING

- Products and chargers not explicitly approved for the battery by STIHL may cause accidents, fires and explosions. Persons may be seriously or fatally injured, and property may be damaged.
  - ▶ A STIHL AP battery supplies power to a STIHL battery product or to a battery product of other manufacturers approved for STIHL AP batteries.
  - ▶ Recharge the battery with a STIHL AL 101, AL 301, AL 301-4 or AL 501 charger.
- Using the battery for purposes for which it is not designed may result in serious or fatal injuries or damage to property.
  - ▶ Use the battery as described in these safety instructions, the User Manual of the battery product, the STIHL connected app and at [www.connect.stihl.com](http://www.connect.stihl.com).

### 4.4 The Operator

### ▲ WARNING

- Users without adequate training or instruction cannot recognize or assess the risks involved in using the battery. The user or other persons may sustain serious or fatal injuries.



- ▶ Read, understand and save the instruction manual.

- ▶ If the battery is passed on to another person: Give them the user information supplied with the battery.
- ▶ If you have any queries: Contact a STIHL servicing dealer for assistance.
- ▶ Make sure the user meets the following requirements:
  - The user must be rested.

- The user must be in good physical condition and mental health to operate and work with the battery. If the user's physical, sensory or mental ability is restricted, he or she may work only under the supervision of or as instructed by a responsible person.
- The user is able to recognize and assess the risks involved in using the battery.
- The user must be of legal age or is being trained in a trade under supervision in accordance with national rules and regulations.
- The user has received instruction from a STIHL servicing dealer or other experienced user before using the battery for the first time.
- The user must not be under the influence of alcohol, medication or drugs.


#### 4.5 Working area and surroundings

### ▲ WARNING

- Bystanders, children and animals cannot recognize or assess the dangers of the battery. Bystanders, children and animals may be seriously injured.
  - ▶ Keep bystanders, children and animals away from the work area.
  - ▶ Do not leave the battery unattended.
  - ▶ Make sure that children cannot play with the battery.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, the battery may catch fire, explode or be irreparably damaged. This may result in serious injury to people and damage to property.



- ▶ Protect battery from heat and fire.
- ▶ Do not throw the battery into a fire.

- ▶ Do not charge, use and store the battery outside of the specified temperature limits,  15.2.



- ▶ Do not immerse the battery in liquids.


- ▶ Keep battery away from small metal parts.
- ▶ Do not expose the battery to high pressure.
- ▶ Do not expose the battery to microwaves.
- ▶ Protect the battery against chemicals and salts.

#### 4.6 Safe Condition

The battery is in a safe condition if the following points are observed:

- Battery is undamaged.
- The battery is clean and dry.
- Battery functions properly and has not been modified.

### ▲ WARNING

- A battery that is not in a safe condition cannot operate safely. People may be seriously injured.
  - ▶ Never work with a damaged battery.
  - ▶ Never attempt to charge a damaged or defective battery.
  - ▶ If the battery is dirty: Clean the battery.
  - ▶ If the battery is moist or wet: Allow the battery to dry,  15.3.
  - ▶ Never attempt to modify the battery.
  - ▶ Never insert objects in the battery's openings.
  - ▶ Never bridge the battery's contacts with metallic objects (short circuit).
  - ▶ Do not open the battery.
  - ▶ Replace worn or damaged labels.
- Fluid may leak from a damaged battery. If that liquid comes into contact with the skin or eyes, the skin or eyes may be irritated.
  - ▶ Avoid contact with the liquid.
  - ▶ If skin contact occurs: Wash affected areas of skin with plenty of water and soap.
  - ▶ In the event of contact with eyes: Rinse eyes with plenty of water for at least 15 minutes and consult a doctor.
- A damaged or defective battery may smell unusual, emit smoke or burn. Persons may be seriously or fatally injured, and property may be damaged.
  - ▶ If the battery smells unusual or emits smoke: do not use the battery and keep it away from combustible substances.
  - ▶ If the battery catches fire: Attempt to extinguish the battery with a fire extinguisher or water.

#### 4.7 Transport

### ▲ WARNING

- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions, and damage to property may occur.
  - ▶ Never transport a damaged battery.

- The battery may turn over or shift during transport. This may result in injury to people and damage to property.
  - ▶ Pack the battery in packaging in such a way that it cannot move.
  - ▶ Secure the packaging so that it cannot move.

## 4.8 Storage

### ▲ WARNING

- Children are not aware of and cannot assess the dangers of the battery. Children may be seriously injured.
  - ▶ Store the battery out of the reach of children.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, the battery may be irreparably damaged.
  - ▶ Store the battery in a clean and dry condition.
  - ▶ Store the battery in an enclosed space.
  - ▶ Store the battery separately from the product.
  - ▶ If the battery is stored in the charger, disconnect the mains plug and store the rechargeable battery at a battery charge status between 40 % and 60 % (2 green lit LEDs).
  - ▶ Do not store the battery outside of the specified temperature limits, 15.2.

## 4.9 Cleaning, maintenance and repair

### ▲ WARNING

- Harsh detergents, cleaning with a water jet or sharp objects can damage the battery. If the battery is not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. Persons may be seriously injured.
  - ▶ Clean the battery as described in the user manual supplied with the cordless product.
- If the battery is not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
  - ▶ Do not attempt to service or repair the battery.
  - ▶ If the battery needs to be serviced or repaired: contact your STIHL servicing dealer for assistance.

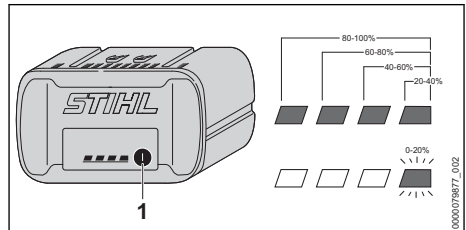
## 5 Charging the Battery, LEDs

### 5.1 Charging the battery

The charging time depends on various factors, e.g. the battery temperature or the ambient temperature. For optimal performance, note the recommended temperature ranges, 15.3. The actual charging time may vary from the charging time indicated. The charging time is indicated at [www.stihl.com/charging-times](http://www.stihl.com/charging-times).

- ▶ Recharge the battery as described in the User Manual for STIHL AL 101, 301, 301-4, 501 chargers.

### 5.2 Displaying the charge level



- ▶ Press the button (1).
  - The LEDs light up green for about 5 seconds and indicate the state of charge.
- ▶ If the LED on the right flashes green: Charge the battery.

### 5.3 LEDs on the battery


The LEDs can indicate the state of charge of the battery or any faults. The LEDs can may light up steady or flash in green or red.

If the LEDs light up or flash green, the state of charge of the battery is indicated.

- ▶ If the LEDs light up red or flash red: Troubleshooting, 14.
  - There is a malfunction in the battery product or battery.

## 6 Bluetooth® Radio Interface


### 6.1 Activating the Bluetooth® Radio Interface

- ▶ If the battery has a Bluetooth® radio interface: Press and hold the pushbutton until the "BLUETOOTH®" LED next to the  symbol lights up blue for approximately 3 seconds. The Bluetooth® radio interface on the battery is activated.

## 6.2 Deactivating the Bluetooth® Radio Interface

- ▶ If the battery has a Bluetooth® radio interface: Press and hold the pushbutton until the "BLUETOOTH®" LED next to the **C** symbol lights up blue six times. The Bluetooth® radio interface on the battery is deactivated.

## 6.3 Connecting a battery with Bluetooth® radio interface with the STIHL connected app

- ▶ Activate the Bluetooth® radio interface on the mobile device.
- ▶ Activating the Bluetooth® radio interface on the battery,  6.1.
- ▶ Download the STIHL connected app to the mobile device from the App Store and create an account.
- ▶ Open and sign in to the STIHL connected app.
- ▶ Add the battery in the STIHL connected app and follow the instructions on the screen.

For contacts and other information, please visit <https://support.stihl.com> or see the STIHL connected app.

The STIHL connected app is available internationally.

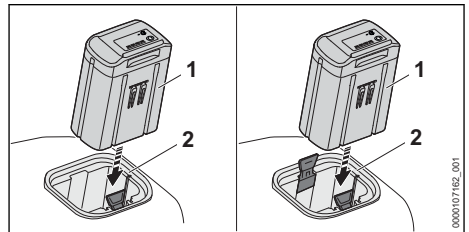
## 6.4 Reset battery to the factory setting via a Bluetooth® radio interface (AP 200.0 S, 300 S, 300.0 S, 500.0 S only)

Resetting the battery to the factory setting means that all user-specific data will be deleted.

- ▶ Press the pushbutton four (4) times in quick succession and keep it pressed on the fourth time until the "BLUETOOTH®" LED next to the **C** symbol flashes blue.
- ▶ Then release the pushbutton immediately.
- ▶ Connect the battery to the STIHL connected app and check whether all user-specific data has been deleted.

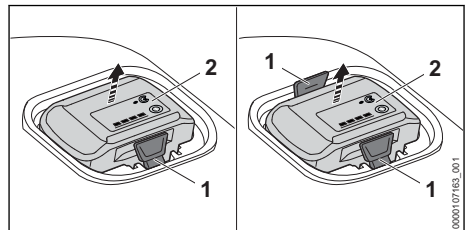
## 7 Removing and Fitting the Battery

### 7.1 Inserting the battery



- ▶ Insert the battery (1) into the battery compartment (2) as far as it will go. The battery (1) engages with a click and is now locked.

### 7.2 Removing the battery



- ▶ Press the locking lever (1). The battery (2) is now unlocked and can be removed.


## 8 Testing the Battery

### 8.1 Testing the Battery

- ▶ Press button on battery. The LEDs glow or flash.
- ▶ If the LEDs do not glow or flash: Do not use the battery and contact your STIHL servicing dealer. There is a malfunction in the battery.

## 9 After Finishing Work

### 9.1 After finishing work

- ▶ Switch off the battery product and remove the battery.
- ▶ If the battery is moist or wet: Allow the battery to dry,  15.3.
- ▶ Clean the battery.

## 10 Transporting

### 10.1 Transporting the battery

- ▶ Switch off the battery product and remove the battery.
- ▶ Check that the battery is in a safe condition.
- ▶ Pack the battery in packaging in such a way that it cannot move inside the packaging.
- ▶ Secure the packaging so that it cannot move.

The battery is subject to the Carriage of Dangerous Goods regulations. The battery is classified as UN 3480 (lithium ion batteries) and has been tested pursuant to UN Manual Tests and Criteria Part III, Subsection 38.3.

The transport regulations can be found at [www.stihl.com/safety-data-sheets](http://www.stihl.com/safety-data-sheets).

## 11 Storing

### 11.1 Storing the battery

STIHL recommends keeping the battery in a charging state between 40% and 60 % (2 lit green LEDs).


- ▶ The battery should be stored in such a way that the following conditions are fulfilled:
  - The battery is out of the reach of children.
  - The battery is clean and dry.
  - The battery is in an enclosed space.
  - The battery is stored separately from the battery product.
  - If the battery is stored in the charger, disconnect the mains plug and store the bat-

## 14 Troubleshooting

### 14.1 Troubleshooting the Battery

Error	LEDs on the battery	Cause	Remedy
The battery product does not run after it is switched on or cuts out during operation.	1 LED flashes green.	State of charge of the battery is too low.	▶ Charge battery as described in the User Manual for chargers STIHL AL 101, 301, 301-4, 501.
	1 LED lights up steady red.	The battery is too warm or too cold.	▶ Remove the battery. ▶ Allow the battery to cool down or warm up.
	3 LEDs flash red.	There is a malfunction in the battery.	▶ Remove the battery. ▶ Clean the electrical contacts in the battery compartment. ▶ Insert the battery. ▶ Switch on the battery product. ▶ If 3 LEDs continue to flash red: Do not use the battery product and instead contact a STIHL authorized dealer.

tery at a state of charge between 40% and 60% (2 lit green LEDs).

- The battery is not stored outside of the specified temperature limits,  15.2.

### NOTICE

- If the battery is not stored as described in this user manual, the battery may become deeply discharged and irreparably damaged.
  - ▶ Charge a discharged battery before storing it. STIHL recommends storing the battery in a charging state between 40% and 60% (2 lit green LEDs).
  - ▶ Store the battery separately from the battery product.

## 12 Cleaning

### 12.1 Cleaning the Battery




- ▶ Clean the battery with a damp cloth.

## 13 Maintenance and Repairs

### 13.1 Servicing and repairing the battery

The battery requires no servicing and cannot be repaired by the user.

- ▶ If the battery is defective or damaged: Replace the battery.

Error	LEDs on the battery	Cause	Remedy
	3 LEDs light up red.	The battery product is too hot.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Allow the battery product to cool down.</li> </ul>
	4 LEDs flash red.	There is an error in the battery.	<ul style="list-style-type: none"> <li>▶ Remove the battery and reinsert it.</li> <li>▶ Switch on the battery product.</li> <li>▶ If 4 LEDs continue to flash red: Do not use the battery and instead contact a STIHL authorized dealer.</li> </ul>
	-	No electrical contact between the battery product and the battery.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Clean the electrical contacts in the battery compartment.</li> <li>▶ Insert the battery.</li> </ul>
	-	The battery product or the battery is damp.	▶ Allow the battery product or battery to dry,  15.3.
The runtime of the battery product is too short.	-	The battery is not fully charged.	▶ Recharge the battery fully as described in the User Manual for the STIHL AL 101, 301, 301-4, 501 chargers.
	-	The battery life has been exceeded.	▶ Replace battery.
The STIHL connected app is unable to find the battery with  .	-	The Bluetooth® radio interface on the battery or mobile device is deactivated.	▶ Activate the Bluetooth® radio interface on the battery or mobile device.
	-	Excessive distance between the battery and the mobile device.	<ul style="list-style-type: none"> <li>▶ Reduce the distance,  15.1.</li> <li>▶ If the STIHL connected app is still unable to find the battery: Contact a STIHL authorized dealer.</li> </ul>

## 14.2 Product Support and Assistance on Use

Product support and assistance on use are available from STIHL servicing dealers.


For contacts and other information, please visit <https://support.stihl.com> or [www.stihl.com](http://www.stihl.com).

vary greatly depending on local conditions and the receiver used. The range may be perceptibly reduced inside enclosed rooms and through metal barriers (such as walls, shelves or cases).

- Mobile device operating system requirements: Android or iOS (current version or higher)

## 15 Specifications

### 15.1 STIHL AP Battery

- Battery technology: Lithium-ion
- Voltage: 36 V
- Capacity in Ah: see rating label
- Energy content in Wh: see rating label
- Weight in kg: See rating label
- Bluetooth® radio interface (only for batteries with ):
  - Data connection: Bluetooth® 5.1. The mobile device must be compatible with Bluetooth® Low Energy 5.0 and support Generic Access Profile (GAP).
  - Frequency band: ISM band 2.4 GHz
  - Maximum RF power transmitted: 100 mW
  - Signal range: approx. 10 m. The signal strength depends on the ambient conditions and the mobile device. The signal range can

The power output of the battery may vary depending on the battery product used.

If the STIHL AP 500 S battery is operated with the STIHL JSA 66 or HSA 86 hedge trimmer, use the "Belt bag AP with connecting cable" and ADA 100 adapter (accessories). For runtime, see [www.stihl.com/battery-life](http://www.stihl.com/battery-life).

## 15.2 Temperature limits



### WARNING

- The battery is not protected against all ambient conditions. If the battery is exposed to certain environmental conditions, it may catch fire or explode. This may result in serious injury to people and damage to property.
  - ▶ Do not charge the battery below  $-20^{\circ}\text{C}$  or above  $50^{\circ}\text{C}$ .
  - ▶ Do not use the battery below  $-20^{\circ}\text{C}$  or above  $+50^{\circ}\text{C}$ .
  - ▶ Do not store the battery below  $-20^{\circ}\text{C}$  or above  $+70^{\circ}\text{C}$ .

## 15.3 Recommended temperature ranges

For optimum performance of the battery observe the following temperature ranges:

- Charging:  $5^{\circ}\text{C}$  to  $40^{\circ}\text{C}$
- Use:  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$
- Storage:  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$

If the battery is charged, used or stored outside the recommended temperature ranges, performance may be restricted.

If the battery is wet or moist, allow the battery to dry for at least 48 h between  $15^{\circ}\text{C}$  and  $50^{\circ}\text{C}$  and with less than 70% humidity. Higher humidity may extend the drying time.

## 15.4 REACH

REACH is an EC regulation and stands for the Registration, Evaluation, Authorisation and Restriction of Chemical substances.

For information on compliance with the REACH regulation see [www.stihl.com/reach](http://www.stihl.com/reach).

# 16 Disposal

## 16.1 Disposing of Battery

Contact the local authorities or your STIHL servicing dealer for information on disposal.

Improper disposal can be harmful to health and pollute the environment.

- ▶ Take STIHL products including packaging to a suitable collection point for recycling in accordance with local regulations.
- ▶ Do not dispose with domestic waste.





[www.stihl.com](http://www.stihl.com)

SI\_001\_2017\_01\_01

SI\_001\_2017\_01\_01