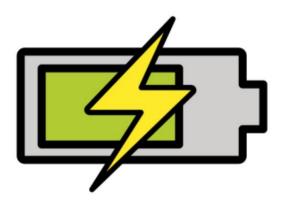
# BATTERYDISCHARGER

## DOCUMENTATION



VERSION 2022.05.14.0841

BATTERYDISCHARGER.DE

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## introduction

The program offers an easy way to discharge the battery of a device with the Windows, Linux (Ubuntu) or macOS operating system in a controlled manner to a predetermined battery level and then, for example, to shut it down.

Such a discharge may be necessary if one or more devices with lithium-ion batteries are to be transported as safely as possible for a short time, such as on an airplane. When transporting lithium-ion batteries, a battery charge of less than 50% is usually used for safety and to maintain the maximum possible capacity.[2]

Even for the mere storage of devices with lithium-ion batteries, a certain discharge is conducive to maintaining the maximum possible capacity, compared to a 100% battery level at storage.

When preparing for transport or storage, the program can be quickly distributed to all devices and ensure that no less than the desired battery discharge is achieved.

#### **functions**

- Adjustable target battery discharge (in percent)
- Various possible actions when the desired battery discharge is reached (shut down the device, switch the device to energy-saving mode

[Sleep], hibernate device)

- Optional battery discharge acceleration
- Optional prevention of unwanted system hibernation during battery discharge
- Display of the current battery charge in percent
- Displays the minutes remaining until the selected battery level is reached ot will (Only works on Windows)
- Command line parameters (including autostart)
- Support of different languages (German and English as well as machine-translated Bulgarian, Chinese, Danish, Estonian, Finnish, French,

Greek, Italian, Japanese, Latvian, Lithuanian, Dutch, Polish, Portuguese, Romanian,

Russian, Swedish, Slovak, Slovenian,

Spanish, Czech and Hungarian)

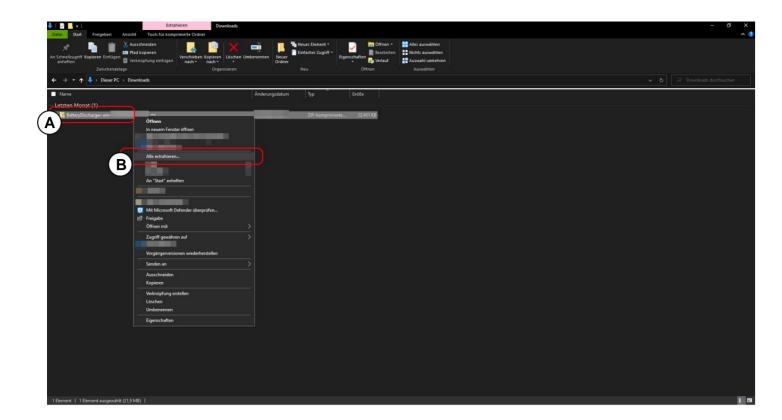


## installation

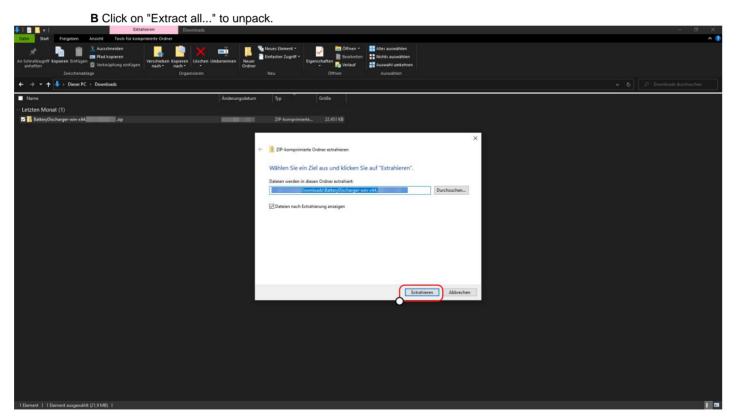
The installation or the first start of the application is described below and shown.

#### 2.1 Windows

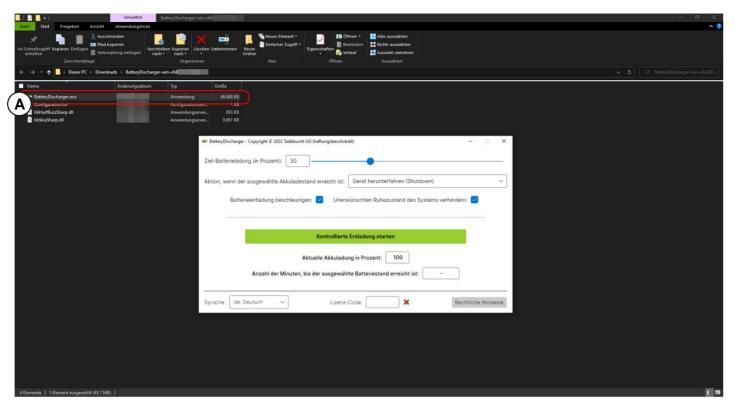
The downloaded ZIP file needs to be unzipped and double-clicked
The program can then be started on the unpacked "BatteryDischarger.exe".
the. The .DLL files that are also in the folder are essential and
must be present for the program to start.



A Right click on the ZIP file.



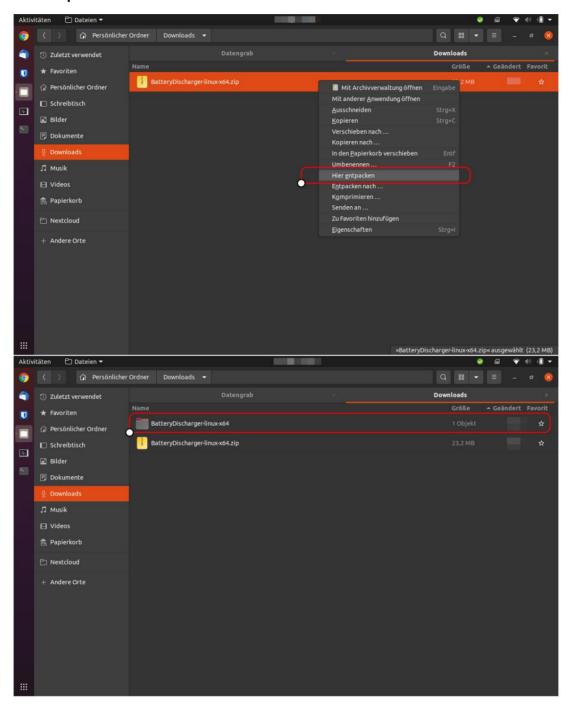
Click on "Extract".

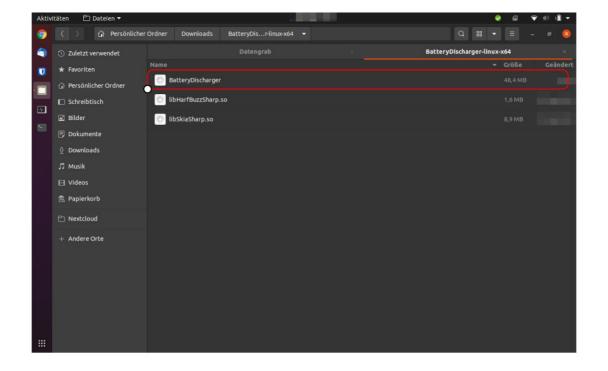


The program can then be started by double-clicking on "BatteryDischarger.exe".

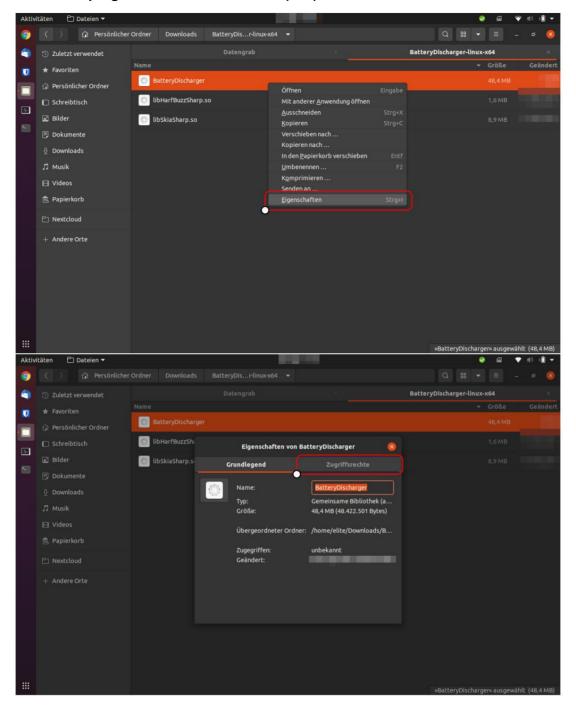
### 2.2 Linux (Ubuntu)

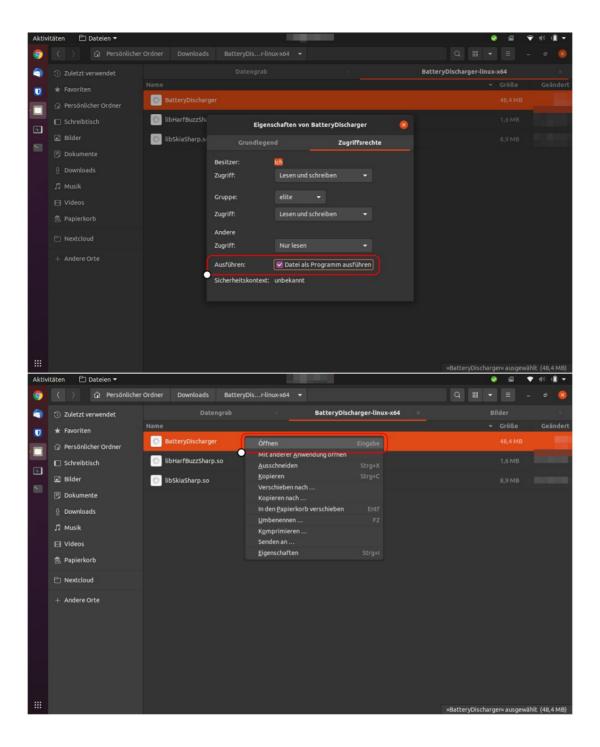
#### 2.2.1 Unpack

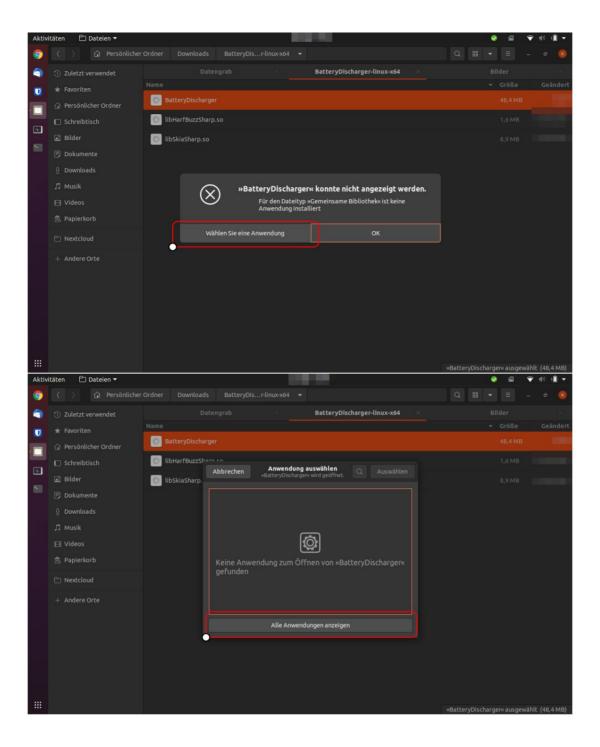


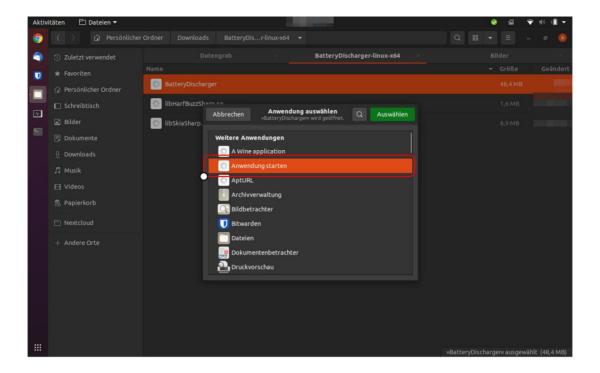


#### 2.2.2 Make program executable and start (GUI)

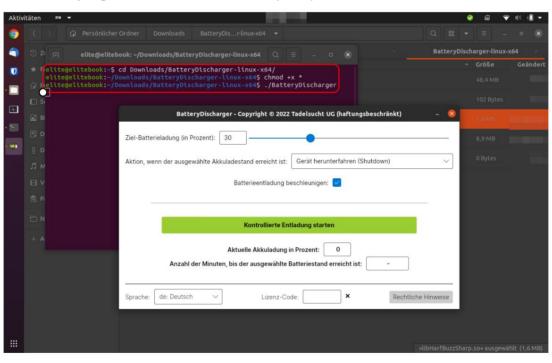








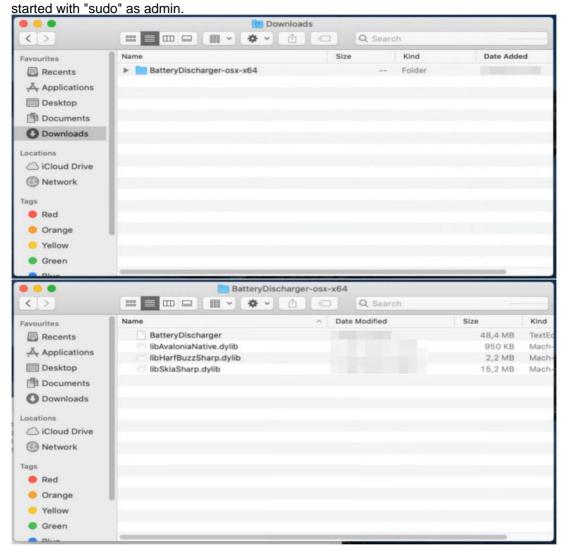
#### 2.2.3 Make program executable and start (CMD)

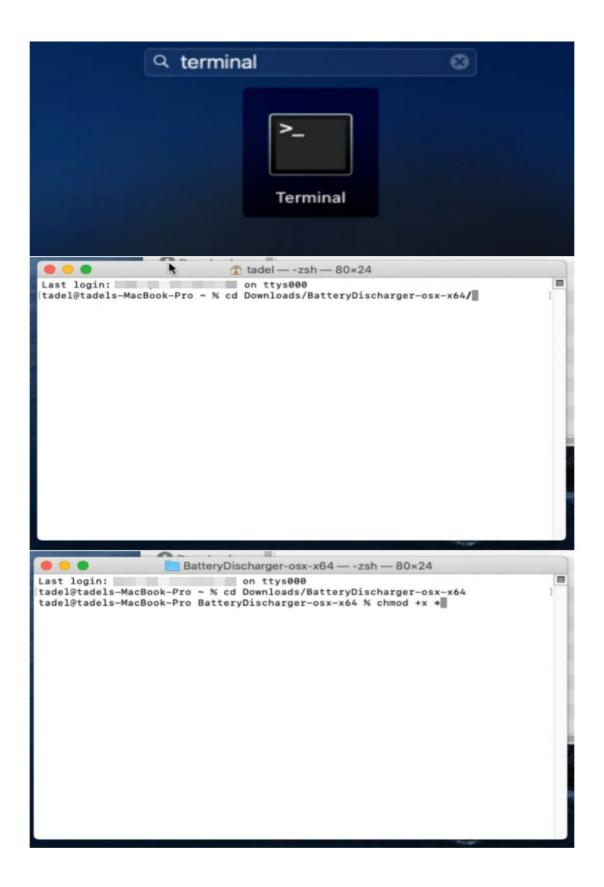


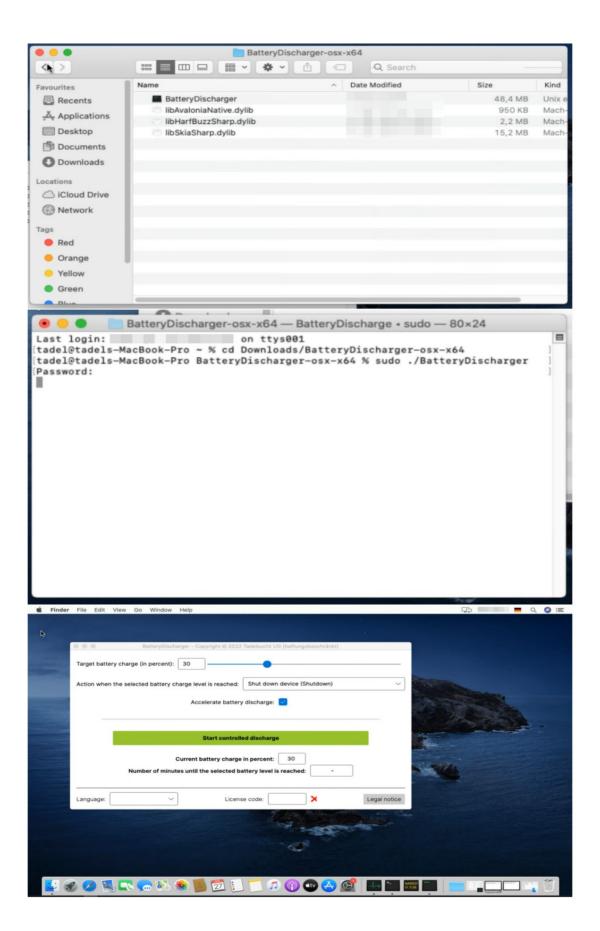
- d Downloads/BatteryDischarger-Linux-x64/
- 2 chmod +x \*
- 3 ./Battery Discharger

#### 2.3 macOS

Please note: The Mac will only be shut down by the program if the application was previously

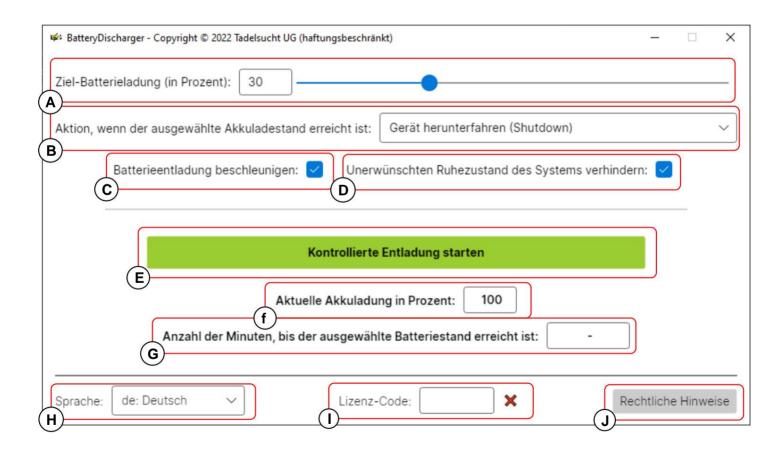








# user interface in Details (GUI)



A Target battery charge (in percent) At this point, the text box can be used Numerical value for the desired target battery charge can be entered as a percentage or the value can be set using the slider.

**B** Action when the selected battery charge level is reached: Here you can shut down the device (shutdown), switch the device to energy-saving mode (Sleep) and Hibernate the device.

**C** Accelerate battery discharge: Causes the controlled discharge to perform additional useless calculations so that the processor uses more energy. However, the utilization of the processor will still be the same kept low that the device continues to respond to user input.

**D Prevent unwanted system sleep:** Attempts to prevent unwanted sleep or sleep mode of the system. Under Linux (Ubuntu) may request superuser rights from the program the.

**E Start controlled delating:** Starts the delating process taking into account the settings made.

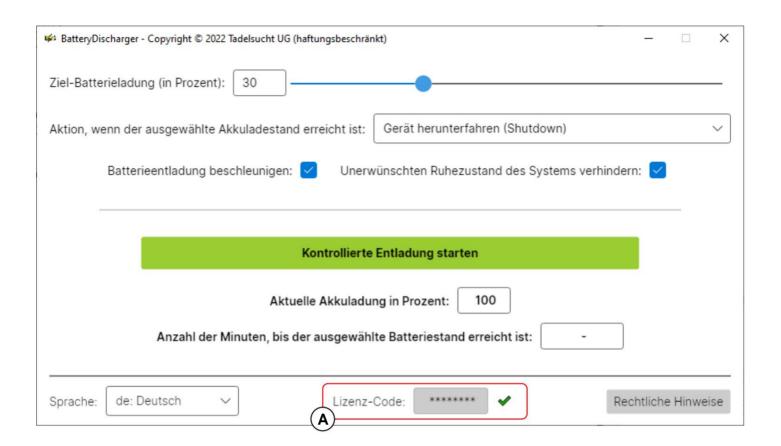
#### F Current battery charge in percent

G Number of minutes until the selected battery level is reached: The value can with the utilization and the resulting energy consumption during the discharge vary greatly. If the value is absurdly high (more than a day or the like) this may be an indication that the device is currently not being discharged because the charging plug may still be in the device. (Display works only on Windows)

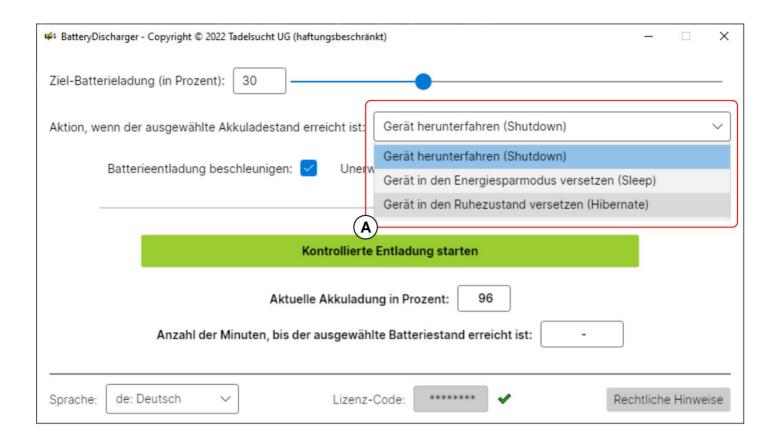
**H Language:** The language of the program can be specified here. If there is a change, the program restarts with the language that has now been set.

I License code: The license key can be entered here.

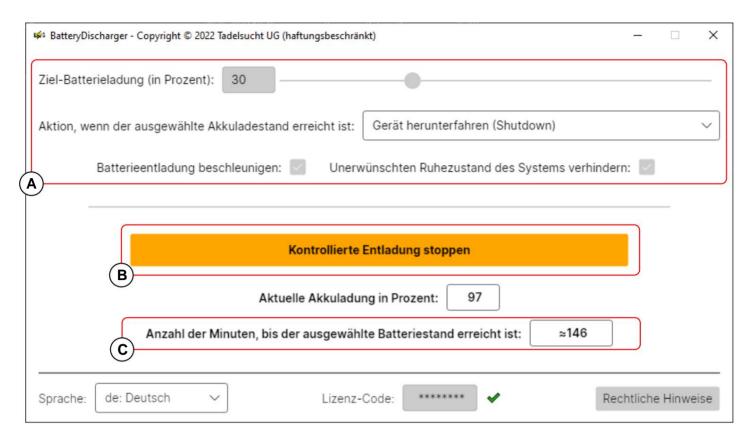
J Legal information: Here you will find program license texts and general terms and conditions.



**A** After a valid license key has been entered, the display changes from a red X to a green tick. The entered key is also obfuscated and a change of the key is prevented.



**A** Here you can choose between shutting down the device (shutdown), putting the device into energy-saving mode (sleep) and putting the device into hibernation (hibernate).



After clicking on "Start controlled discharge", the button changes to "Stop controlled discharge", as can be seen in **B**, and the setting options (see A) are blocked and the controlled discharge process begins. Likewise you can now see a decreasing value for the "Number of minutes until the selected battery level is reached" (see C).

# Command line (CMD)

The program can be started with command line parameters that allow the configuration and the start of the unloading process via script. The graphical user interface is always started regardless of the specified parameters.

#### 4.1 Parameter List

Below is a listing of all available parameters, in any order Can be used individually or in combination:

parameter	Description
autostart	The specification of the parameter is sufficient
	for the unloading process to start immediately
	when the program starts. The license key can
License code XXXXXXXX	be set via this parameter
	be determined.
Language XX	This parameter defines the program language.
	Supports the following languages:
	bg, cs, da, de, el, en, es, et, fi, fr, hu, it,
	ja, lt, lv, nl, pl, pt, ro, ru, sk, sl, sv, zh
AccelerateBatteryDischarge True	Specifies whether to accelerate battery discharge.
	[ True / False ]
PreventUnwantedSystemSleepMode True	Determines whether the system should be kept from
	sleeping until the desired battery level is reached.
	[ True / False ]
TargetBatteryChargeInPercent 30	Sets the target battery charge percentage.

## 4.2 Call examples

The following examples show the maximum values of the parameters.

#### 4.2.1 Windows

- BatteryDischarger.exe Autostart LicenseCode XXXXXXXX Language en
  - AccelerateBatteryDischarge True PreventUnwantedSystemSleepMode
  - False TargetBatteryChargeInPercent 30
- 2 Break

#### 4.2.2 Linux (Ubuntu)

- ./BatteryDischarger.exe Autostart LicenseCode XXXXXXXX Language de
  - AccelerateBatteryDischarge True PreventUnwantedSystemSleepMode False
  - TargetBatteryChargeInPercent 30
- 2 read -p "Press any key to resume ..."



# configuration files

When it starts, the application creates the "Configuration.ini", which is shown as an example below and is there to save the settings made in the user interface. This file is normally in the folder in which the

.EXE file is created. However, if the executing user does not have write permissions on the folder, the file will be saved under the path %appdata%\BatteryDischarger\ Configuration.ini created.

The individual settings themselves are explained in Section 4.1, where the "Autostart" parameter is not supported in the configuration file.

The following are the maximum values:

[UI]

Language = en

TargetBatteryChargeInPercent = 30

AccelerateBatteryDischarge = True

PreventUnwantedSystemSleepMode = True

[Software]

LicenseCode = XXXXXXXXX



# frequently asked Questions (FAQ)

### 6.1 What are the program system requirements?

Compatible with Windows (tested on Windows 7, Windows 8, Windows 10 and Windows 11) and Linux (tested on Ubuntu 20.04). Approx. 100 MB memory space is required. The program never requires an internet connection and doesn't try to build one.

## 6.2 The program cannot be started. [Windows Smart Screen]

If you double-click the downloaded program file, a

Messages such as "The computer is protected by Windows" or "Windows Smartscreen prevented an unknown app from starting"

Start the application on the text "More information" within the window must be clicked and then click on "Run anyway".

Such a message is displayed by Microsoft when an executable program has been created relatively recently and is not yet known to Microsoft. Microsoft

will automatically upload and analyze the exe file in the background

Do not show this message to others if the version of the program has already been used on many computers for some time. Therefore it can

Unfortunately, the problem reoccurs with each new version of the program.



References References

[1] BatteryDischarger website https://BatteryDischarger.de/

[2] Lithium-Ion Batteries Hazard and Use Assessmen - Mikolajczak, C. and Kahn, M. and White, K. and Long, RT - page

110 https://books.google.co.uk/books?id=V4IVCvgv558C