

INITIAL SETUP SPR-200



Version: 1.0

26/09/2020



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1. Introduction

Thank you very much for choosing SLOC.

In this documentation you will learn how to put your product into operation and evaluate the data.

We at SLOC are always trying to make our products as simple and intuitive as possible. However, should you encounter any problems, we are at your disposal.

E-Mail address: support@sloc.one

1.1. Commissioning steps

The following steps must be completed to successfully configure the SLOC device:

1. Visit support.sloc.one
2. Download the commissioning documentation
3. Login/registration in the SDM portal ([Chapter 2.1](#))
4. SDM app installation on the Android device ([Chapter 2.2](#))
5. Wake up the SLOCs with the magnet ([Chapter 3](#))
6. Configuration of the SLOC with the SDM app ([Chapter 4](#))
7. Check data transmission ([Chapter 5](#))
8. Mounting the SLOCs on the vehicle ([Chapter 6](#))
9. Data evaluation via CSV, REST-API or Power BI ([Chapter 7](#))

1.2. Helpful documents

[Download SLOC Software-Manual](#)



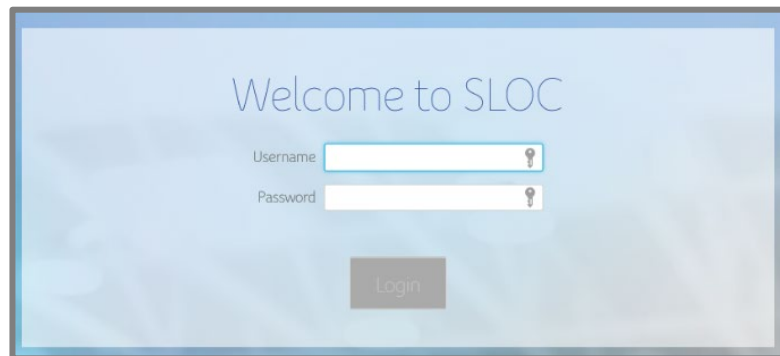
2. SLOC Device Management (SDM)

SLOC Device Management consists of a web portal (<https://sdm.sloc.one/>) and an Android app, which is needed for the configuration.

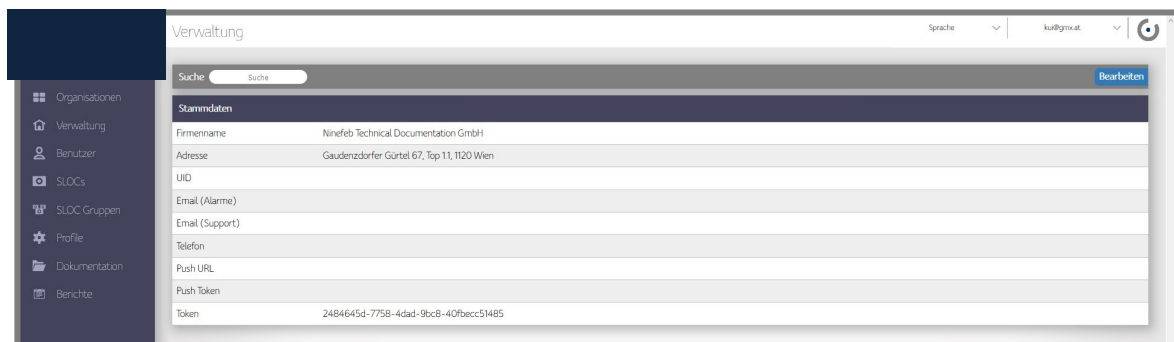
2.1. First login to the SDM portal

If you purchase your products through SLOC, you have been sent a registration email to register in the SDM portal and assign a password.

If you purchase the product via an external platform, please use the e-mail address with which the order was placed. You will find the password in the product packaging on the enclosed info sheet. You will then receive a registration link and can assign your password.



(Login Screen)



(SDM-Portal Homepage)

2.2. App Download & Installation

The app can be downloaded to a smartphone/tablet via the SLOC Support Center (<https://support.sloc.one>) by clicking on your product (SPR-200) and then downloading the APK file. This can be done directly from the smartphone/tablet or via a PC and USB cable. Afterwards the app can be installed.

For more information on APK installation, please refer to chapter 3 of the [SLOC Software Manual](#) at support.sloc.one.

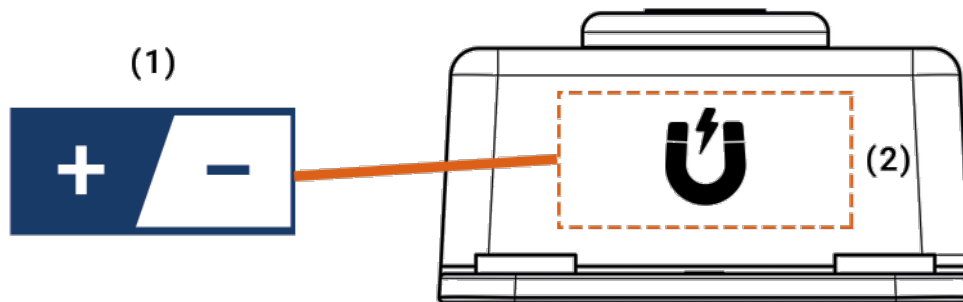


3. SLOC activating/deactivating

3.1. Activating

To configure a SLOC, the transport mode of the SLOC must first be deactivated and/or the BLE visibility must be activated.

To do this, the magnet (included in the scope of delivery) must be placed on that side of the SLOC for at least 2s and, if necessary, moved back and forth on which the magnet symbol is shown (see illustration).



3.2. Deactivating BLE Visibility

BLE communication is automatically disabled after 60 seconds. After that it can be reactivated with the magnet (see chapter 3.1).

3.3. Transport mode

The transport mode is the mode in which the SLOC is sent (i.e. the SLOC measures and sends no data and consumes no power).

To put an activated SLOC back into transport mode, select the SLOC in the SDM app and click the button "Transportmode on" under "ADVANCE".

4. SLOC Configuration

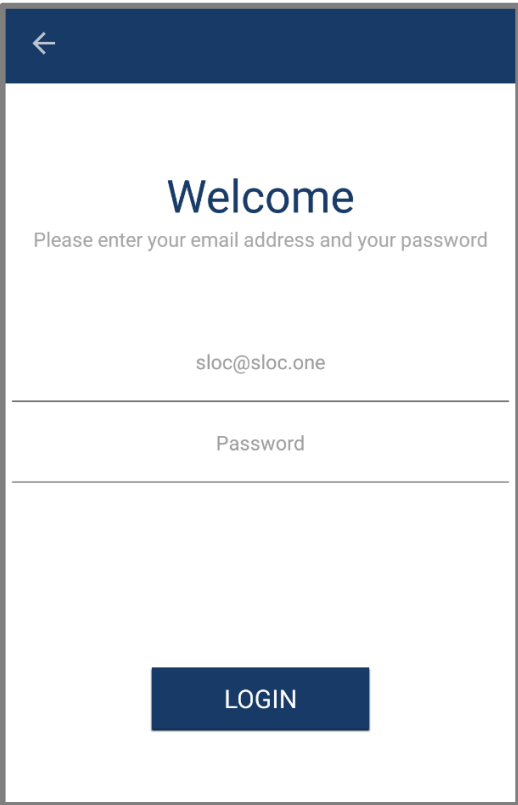
On the following pages the configuration is explained step by step with pictures.

IMPORTANT:

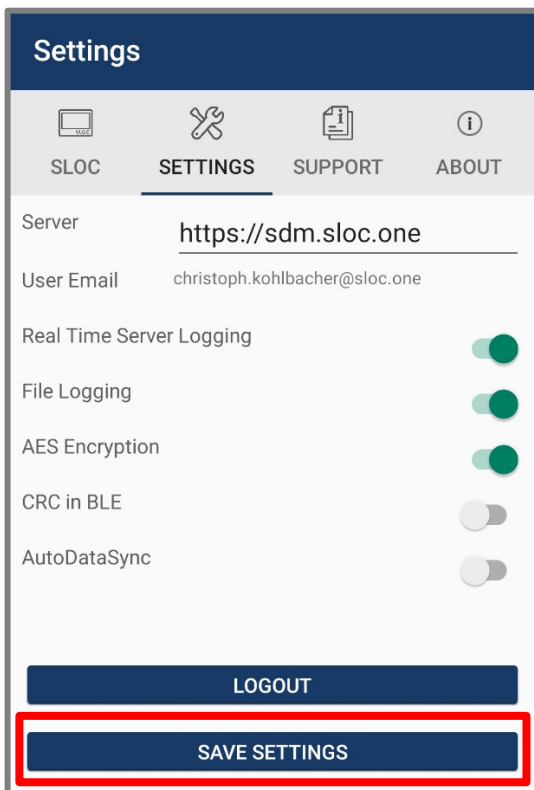
Be sure to configure the SLOC before assembly (see Chapter 5) and check the data transmission (see Chapter 4).

NOTE:

The BLE of the SLOC is deactivated after 60 seconds. If a SLOC is no longer accessible while using the app, wake it up again with the magnet (see chapter 2.1.).

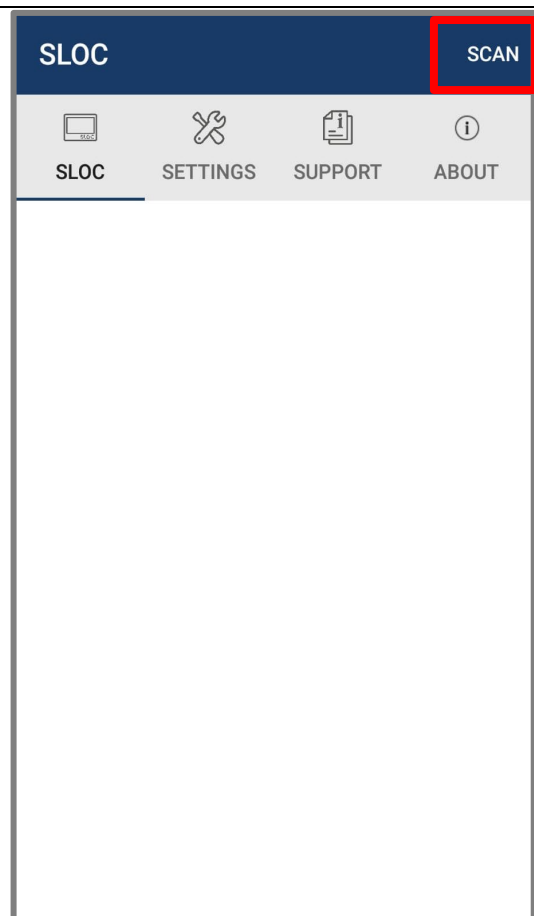
	Registration in the SDM App: Use SLOC Device Management login data (see Chapter 1).
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1. SETTINGS:

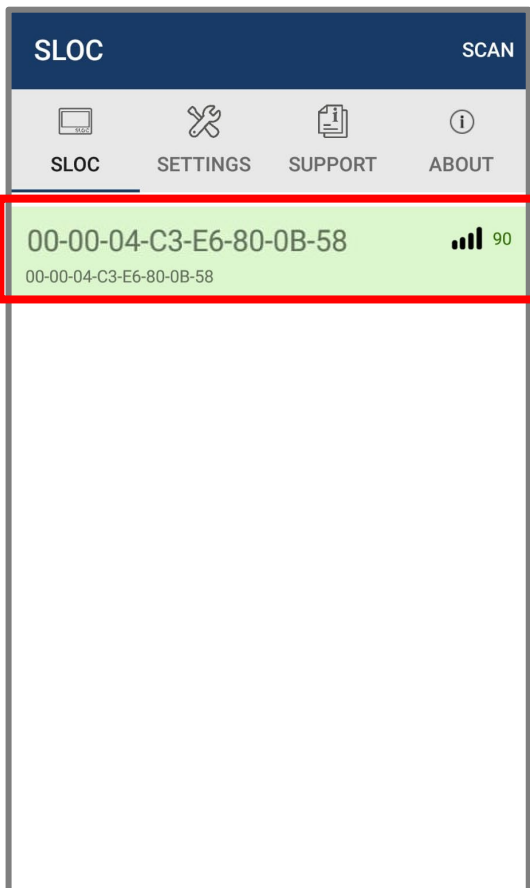
- Server must be <https://sdm.sloc.one>
- Other settings as in the picture on the left
- API Key, Organization UUID, Organization and Privileges vary depending on the app token used



2. Scan environment for SLOCs:

Wake up SLOC (see Chapter 2)
Then → **click on SCAN**



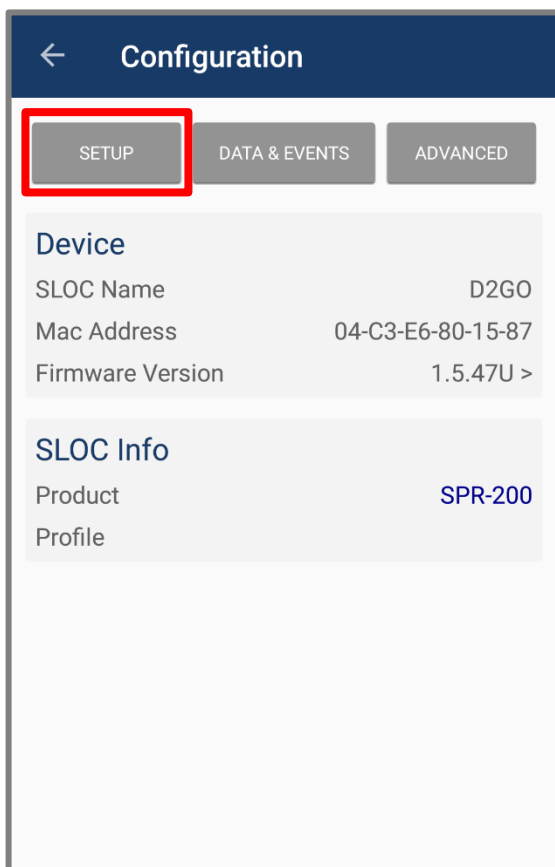


3. SLOC Selection:

→ **Selection of the SLOC**
→ using the MAC address
(see sticker on SLOC)

Note:

The BLE of the SLOC is deactivated after 60 seconds. If the app cannot establish a connection, the SLOC must be reactivated with the magnet.



4. HOMEPAGE - SLOC

→ **Click on SETUP**

Note:

If the SLOC has never been configured before, step 5 (setup page 1/2) is displayed directly.



← Configuration

SLOC Setup

MAC: 00-00-04-C3-E6-80-15-87

Common

Product SPR-200

Profile Tap to select Profile

Name New SLOC

Location B67c 1a, 8010 Graz, Österreich

SAVE

5. SETUP 1/2:

Product:

SPR-200 (cannot be changed)

Profile:

Select profile

(currently only "Universal Forklift" available)

Name:

Can be changed as desired

Location:

Optionally a location can be entered

→ Click next to **LOCATION**

← SLOC Setup - Location

CURRENT LOCATION VIA GPS

Location

Street Waltendorfer Gürtel 2

Zip Code 8010

City Graz

Country Österreich

GPS FROM LOCATION INFORMATION

Latitude 47.06277

Longitude 15.45710

SAVE CANCEL

Note: Steps 6-7 are only displayed when clicking next to LOCATION and can be skipped if no location is desired.

6. LOCATION 1/2:

Variant 1 (directly at the location):

→ Switch on GPS

→ Click on **CURRENT LOCATION VIA GPS**

→ Wait - GPS needs some seconds

Variant 2 (in preparation):

→ Enter address

→ exactly according to the following scheme:

Address: house number, postal code, city, country

→ Click on **FROM LOCATION INFORMATION**

→ wait until GPS coordinates are loaded



← SLOC Setup - Location

CURRENT LOCATION VIA GPS

Location

Street Waltendorfer Gürtel 2

Zip Code 8010

City Graz

Country Österreich

GPS FROM LOCATION INFORMATION

Latitude 47.06277

Longitude 15.45710

SAVE CANCEL

7. LOCATION 2/2:

→ Check the address for
„Current Location via GPS“

→ if the address is not correct, change it
manually

→ Click on **SAVE**

← Configuration

SLOC Setup

MAC: 00-00-04-C3-E6-80-15-87

Common

Product SPR-200

Profile Tap to select Profile

Name New SLOC

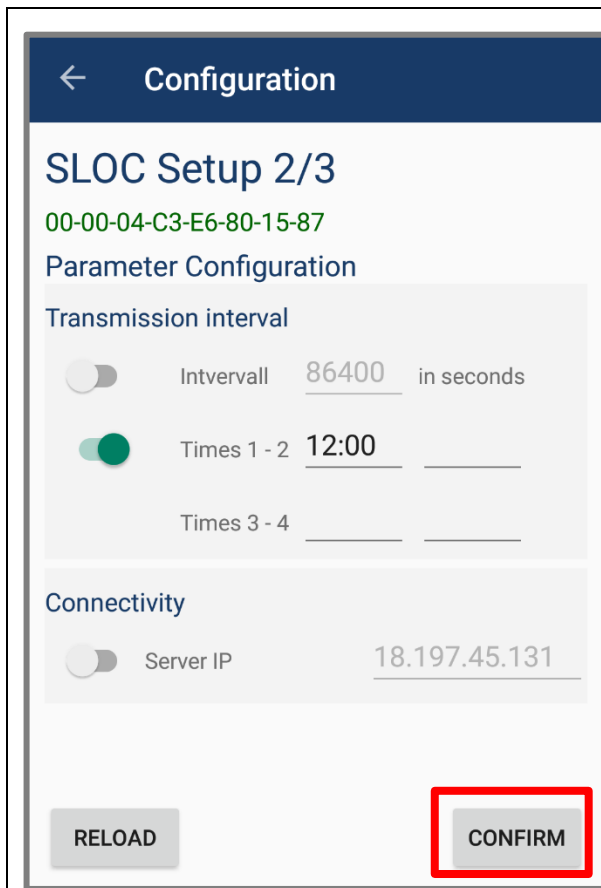
Location B67c 1a, 8010 Graz, Österreich

SAVE

8. SETUP 1/2

→ Click on **SAVE**





← Configuration

SLOC Setup 2/3

00-00-04-C3-E6-80-15-87

Parameter Configuration

Transmission interval

☐ Intervall 86400 in seconds

☒ Times 1 - 2 12:00

Times 3 - 4 _____

Connectivity

☐ Server IP 18.197.45.131

RELOAD CONFIRM

9. SETUP 2/3:

Interval:

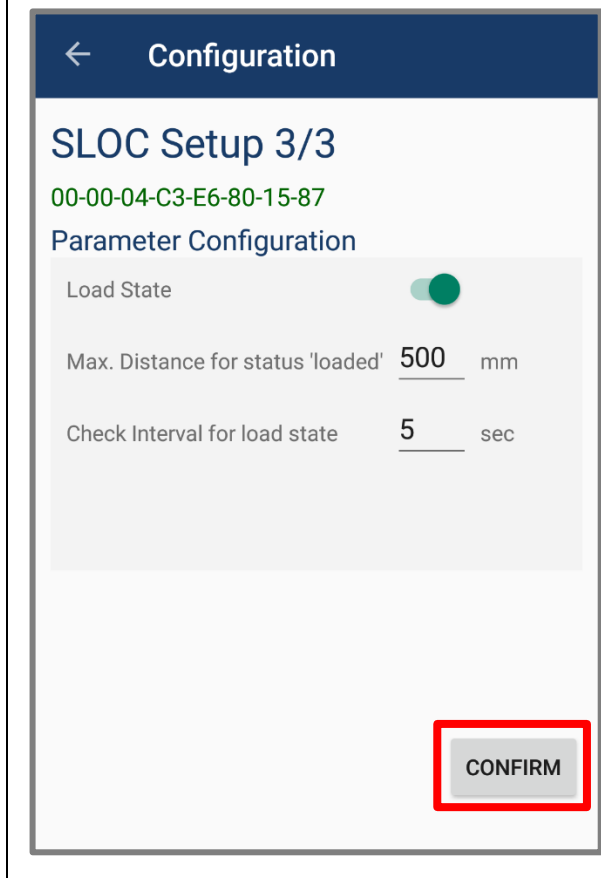
If "Interval" is activated the SLOC always sends after the interval has expired (in seconds).

Times:

If "Times" is activated, up to 4 times (hh:mm) can be entered at which the SLOC should send.

Note:

Not both variants can be selected



← Configuration

SLOC Setup 3/3

00-00-04-C3-E6-80-15-87

Parameter Configuration

Load State ☒

Max. Distance for status 'loaded' 500 mm

Check Interval for load state 5 sec

CONFIRM

10. SETUP 3/3

Loading status (activated/deactivated):

Only when "Load State" is activated can further settings be made.

Max. Distance for load change:

Enter the distance (in mm) from which the load state is considered "loaded".

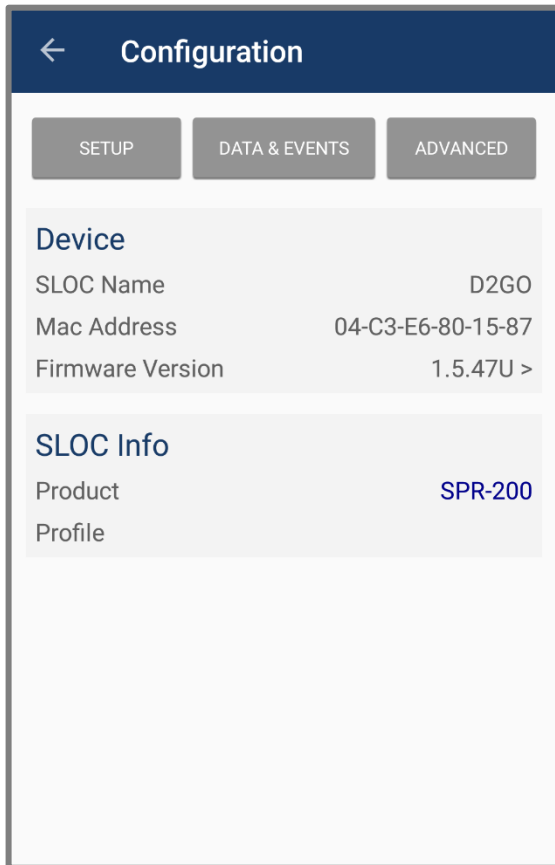
Control interval for the load measurement:

Input at which interval (in sec) the loading condition should be measured.

Note: Measurement only takes place during movement.

→ Click on CONFIRM





The screenshot shows a mobile application interface for SLOC configuration. At the top is a dark blue header with a back arrow and the title 'Configuration'. Below the header are three tabs: 'SETUP' (selected), 'DATA & EVENTS', and 'ADVANCED'. The main content area is divided into two sections. The first section, titled 'Device', contains three rows of information: 'SLOC Name' with the value 'D2GO', 'Mac Address' with the value '04-C3-E6-80-15-87', and 'Firmware Version' with the value '1.5.47U' and a right-pointing chevron. The second section, titled 'SLOC Info', contains two rows: 'Product' with the value 'SPR-200' and 'Profile' which is currently empty.

Device	
SLOC Name	D2GO
Mac Address	04-C3-E6-80-15-87
Firmware Version	1.5.47U >

SLOC Info	
Product	SPR-200
Profile	

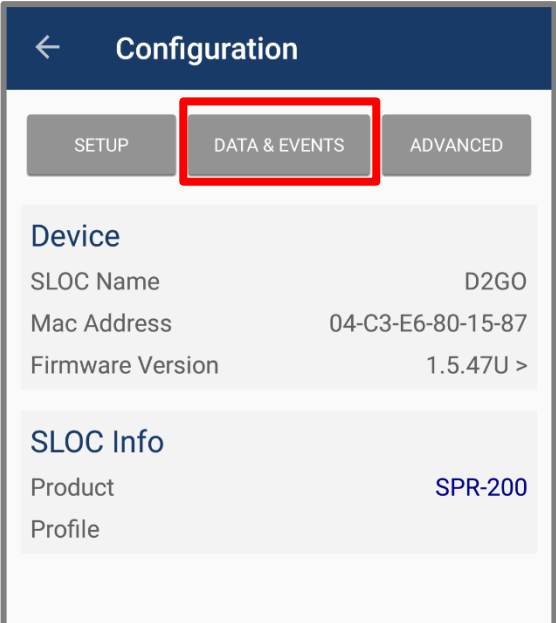
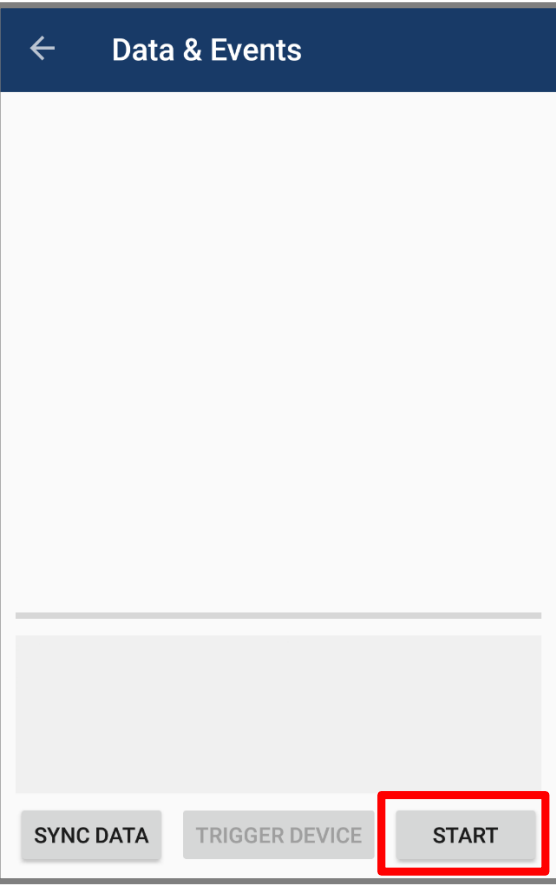
16. CONFIGURATION COMPLETED

Before assembly (see Chapter 5), the data transmission should be checked (see Chapter 4).

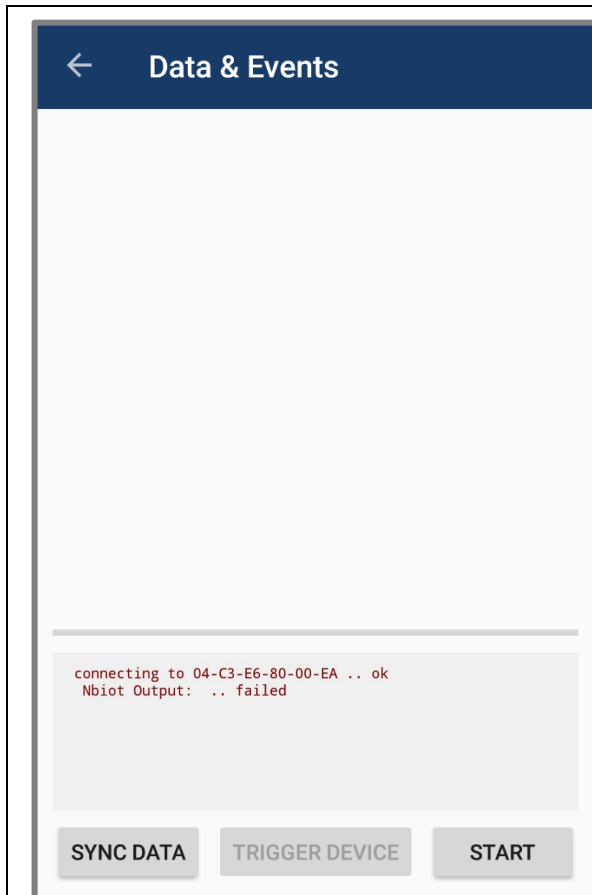


5. Check data transmission

5.1. Start data transfer with NB-IoT

	<u>11. DATA & EVENTS 1/4</u> → Click on DATA & EVENTS
	<u>12. DATA & EVENTS 2/4</u> → Click on START (triggers a NB-IoT data transfer)

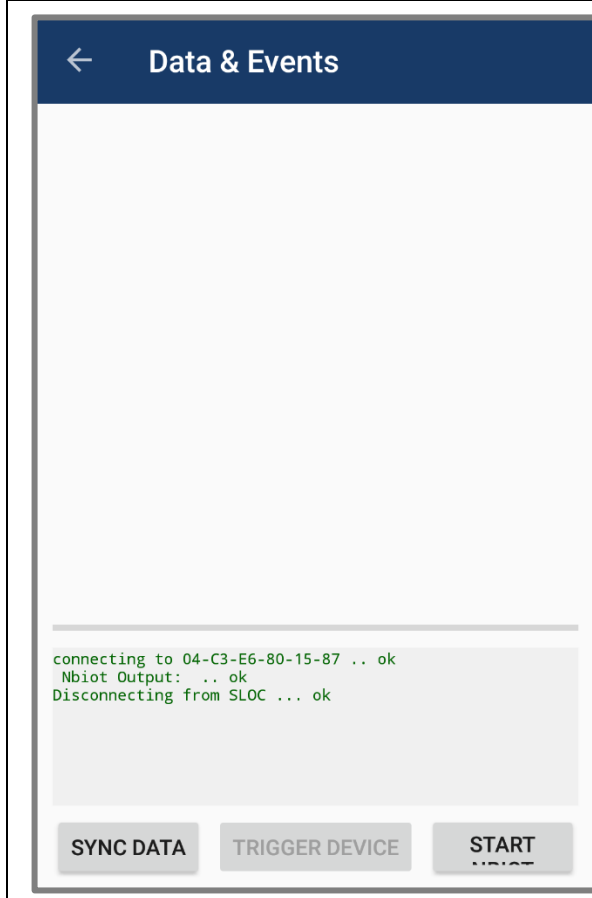




13. DATA & EVENTS 3/4

If "NB-IoT Output ... failed" click on "START" again.

If "failed" is still displayed after several repetitions, please use "Sync Data" (see step 15).



14. DATA & EVENTS 4/4

When "NB-IoT Output ... ok" is displayed, the NB-IoT transfer has started.

A check after a few minutes in the SDM portal is recommended (see Chapter 4).

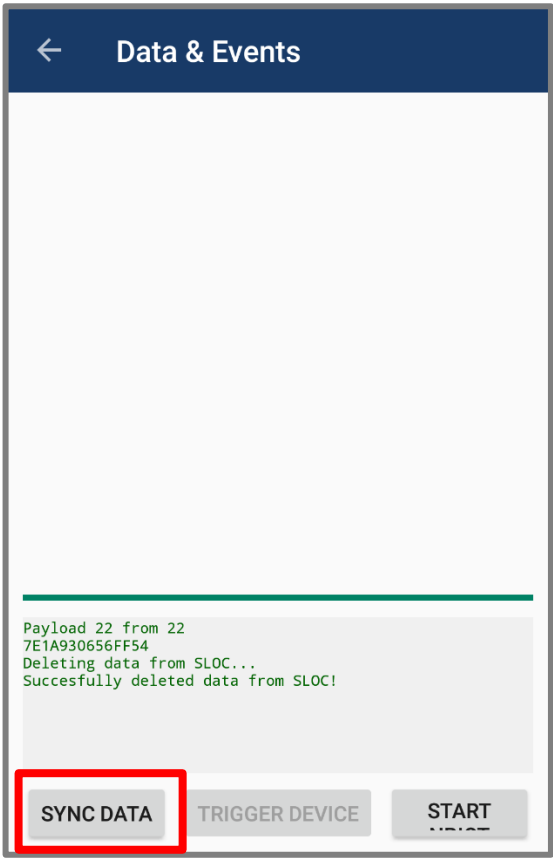
If no data arrive at the SDM portal, please continue with "Sync Data" (see step 15).

Note:

NB-IoT transfers can take up to 20 minutes.



5.2. Data transmission with BLE and Smartphone/Tablet

	<u>15. BLE SYNC DATA</u> If no data arrives at the SDM portal via Start (i.e. with NB-IoT) → Click on SYNC DATA (= Transmission via BLE & Internet of the smartphone/tablet) During the transfer, the number of payloads already transferred and the total number of payloads is displayed. After successful transfer the data is removed from SLOC and the transfer is terminated.
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5.3. Checking data transmission in the SDM portal

To check if the SLOC has transferred its data with NB-IoT, the following steps must be applied:

- Click on SLOCs (1)
- Search SLOC (2)
- Select SLOC (3)

The screenshot shows the 'SLOCs' management interface. The sidebar on the left contains navigation options: Organisationen, Verwaltung, Benutzer, SLOCs (highlighted with a red box and labeled (1)), SLOC Gruppen, Profile, Dokumentation, and Berichte. The main area displays a table of SLOCs with columns: MAC, Produkt, Profil, Standort / PLZ, SLOC Name, Firmware Version, and Sortierung. A search bar at the top is highlighted with a red box and labeled (2), containing the MAC address '04C3E6800000', 'Alle SLOCs', '240L...', '8010 Graz', 'TEST-SLOC', '0.9.8.3', and a dropdown menu set to 'Name'. The table lists various SLOCs, with the entry for MAC '04C3E6801587' (SPR-200, Universal Forklift, MUSTERNAME, 1.5.7) highlighted with a red box and labeled (3).

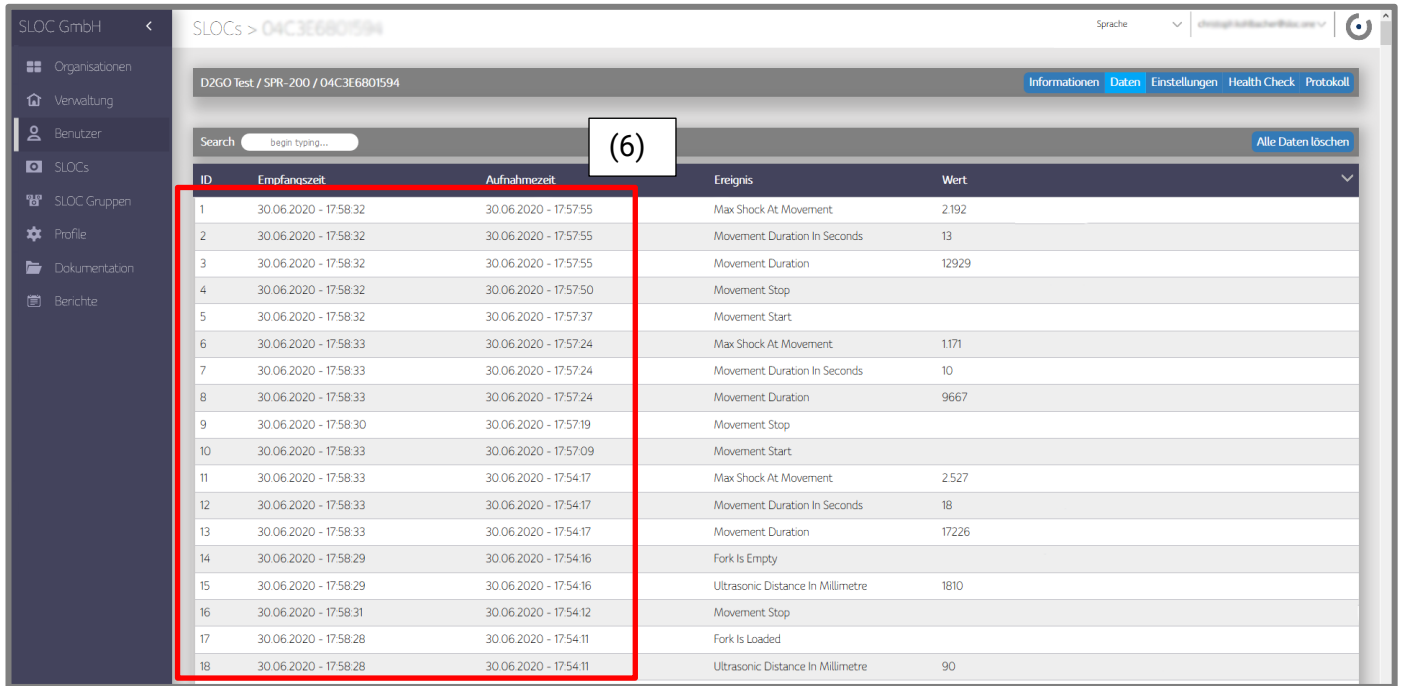
- Click on data (5)

The screenshot shows the 'SLOCs > 04C3E6801594' data details page. The sidebar on the left contains navigation options: Organisationen, Verwaltung, Benutzer, SLOCs (highlighted with a red box and labeled (5)), SLOC Konfiguration, SLOC Transfer, SLOC Gruppen, Geozonen, Profile, and Dokumentation. The main area displays a table of data for the SLOC '04C3E6801594'. The table has two tabs: 'Information' and 'Daten' (highlighted with a red box and labeled (5)). The 'Daten' tab shows the following data:

D2GO Test / SPR-200 / 04C3E6801594	
Kunde	SLOC GmbH
Name	D2GO Test
Setupdatum	29.06.2020 - 15:05:29
Produktionsdatum	19.12.2019 - 13:42:16
MAC	04C3E6801594
Standort	Petersgasse 51, 8010 Graz, Österreich
Batteriestand	78.49%
Charge	SWB-200 Initial Batch
SIM ID	Unbekannt
Produkt	SPR-200
Profil	Universal Forklift
Letzter Regalstatus	Keine Daten verfügbar
GPS	47.06278 / 15.45722

Below the table is a map showing the location of the SLOC in Graz, Austria, with a red pin indicating the location. The map is labeled 'Karte' and 'Satellit'.

Check data transmission (6)



The screenshot shows the SLOC web interface with a table of data transmission records. A red frame highlights the 'Empfangszeit' (receive time) column, and a box with the number (6) points to it. The table has the following columns: ID, Empfangszeit, Aufnahmezeit, Ereignis, and Wert.

ID	Empfangszeit	Aufnahmezeit	Ereignis	Wert
1	30.06.2020 - 17:58:32	30.06.2020 - 17:57:55	Max Shock At Movement	2.192
2	30.06.2020 - 17:58:32	30.06.2020 - 17:57:55	Movement Duration In Seconds	13
3	30.06.2020 - 17:58:32	30.06.2020 - 17:57:55	Movement Duration	12929
4	30.06.2020 - 17:58:32	30.06.2020 - 17:57:50	Movement Stop	
5	30.06.2020 - 17:58:32	30.06.2020 - 17:57:37	Movement Start	
6	30.06.2020 - 17:58:33	30.06.2020 - 17:57:24	Max Shock At Movement	1.171
7	30.06.2020 - 17:58:33	30.06.2020 - 17:57:24	Movement Duration In Seconds	10
8	30.06.2020 - 17:58:33	30.06.2020 - 17:57:24	Movement Duration	9667
9	30.06.2020 - 17:58:30	30.06.2020 - 17:57:19	Movement Stop	
10	30.06.2020 - 17:58:33	30.06.2020 - 17:57:09	Movement Start	
11	30.06.2020 - 17:58:33	30.06.2020 - 17:54:17	Max Shock At Movement	2.527
12	30.06.2020 - 17:58:33	30.06.2020 - 17:54:17	Movement Duration In Seconds	18
13	30.06.2020 - 17:58:33	30.06.2020 - 17:54:17	Movement Duration	17226
14	30.06.2020 - 17:58:29	30.06.2020 - 17:54:16	Fork Is Empty	
15	30.06.2020 - 17:58:29	30.06.2020 - 17:54:16	Ultrasonic Distance In Millimetre	1810
16	30.06.2020 - 17:58:31	30.06.2020 - 17:54:12	Movement Stop	
17	30.06.2020 - 17:58:28	30.06.2020 - 17:54:11	Fork Is Loaded	
18	30.06.2020 - 17:58:28	30.06.2020 - 17:54:11	Ultrasonic Distance In Millimetre	90

The receive time (red frame) can be used to check whether the SLOC has transferred data to the SDM portal after clicking "START" (see step 12). If no data has arrived in the SDM portal after a waiting time of 20 minutes, there might be no NB-IoT reception.

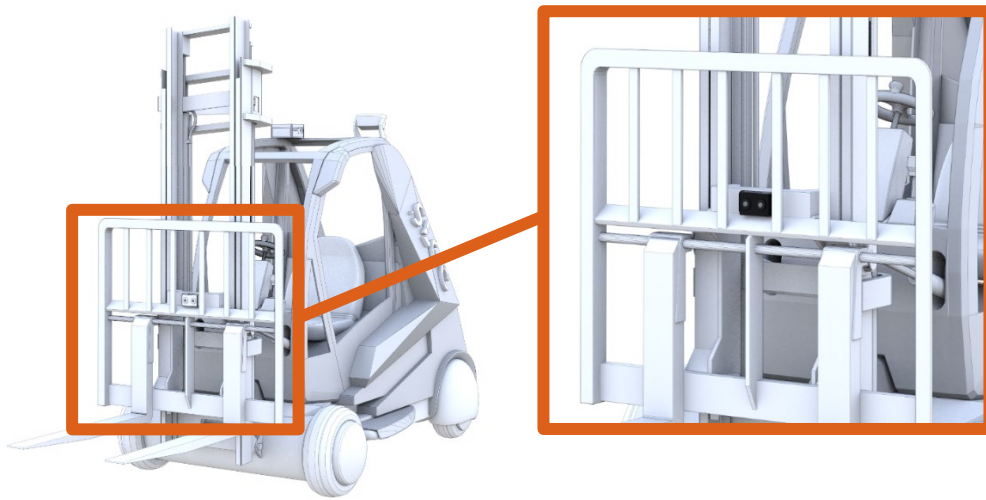
If no NB-IoT reception is available, the data must be transferred to the portal via the SDM app and a smartphone/tablet with Internet connection "DATA SYNC" (see step 15).

6. Mounting

The SLOC is mounted in the center of the fork using SLOC Easy Mount brackets (see chapter 6.2) or cable ties (see illustrations).

Mounting instructions:

- The SLOC must be mounted with the logo visible at the top
- Distance between sensor and pallet / container should be at least 5cm
- The measuring range of the ultrasound must not be blocked by an object



SLOC Easy Mount:

- 2 SLOC Easy Mount brackets are included in delivery.
- With these brackets an easy installation is guaranteed.
- The SLOC can be quickly removed thanks to the clip holder and e.g. batteries can be changed.



Mounting with cable ties:



7. Data evaluation

To evaluate the SLOC data, a CSV export, a REST-API interface and a Power BI evaluation are available.

7.1. CSV Export:

See Software Manual chapter 2.10.2.

[Download SLOC Software-Manual](#)

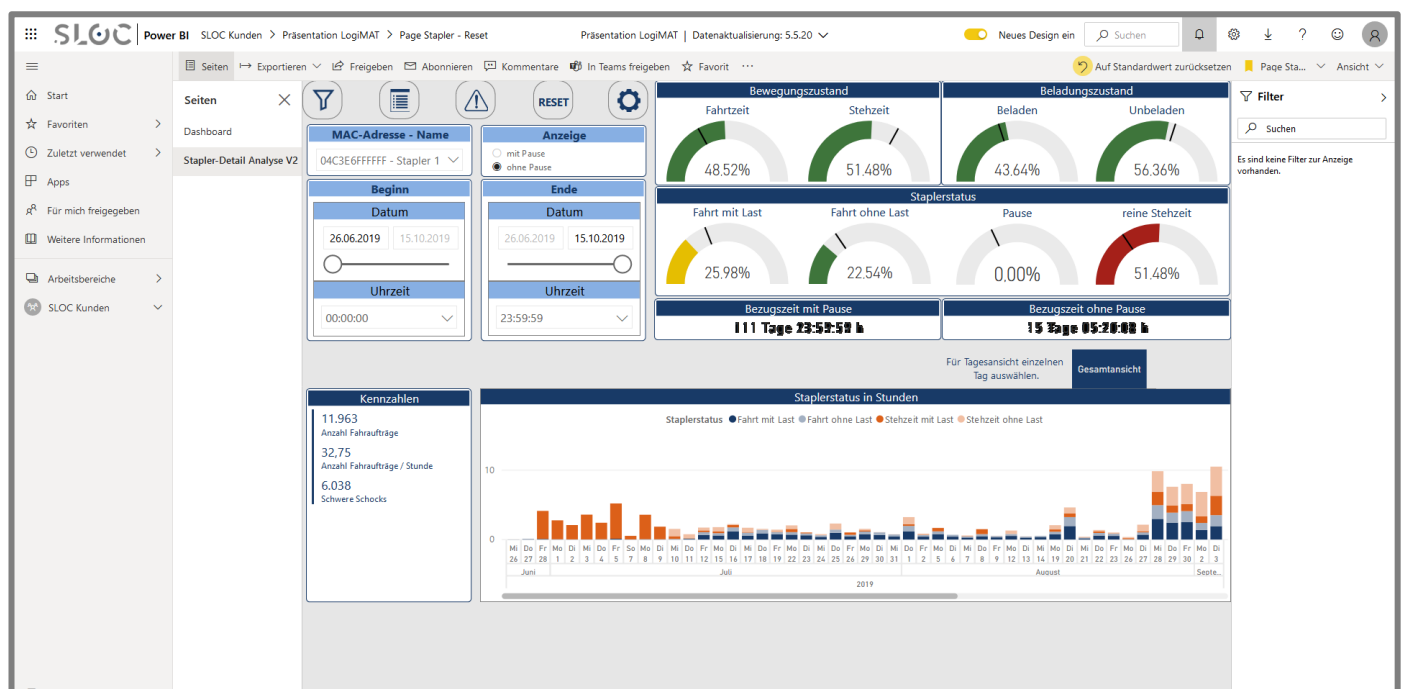
7.2. REST-API Interface:

[Download SLOC interface documentation](#)

7.3. Power BI:

[Link to Power BI](#)

Log in to Power BI (your access data has been sent to you by SLOC) and click on the button "Stacker Analysis". On the following report page you can evaluate the data of your SLOC.



8. Legal regulations

8.1. Declaration of conformity

Any changes or modifications not expressly approved by SLOC could void the user's authority to operate this equipment. There are no serviceable parts included.

EC – Konformitätserklärung / EC – Declaration of Conformity

SLOC GmbH Waltendorfer Gürtel 2, 8010 Graz, Austria, +43 316 395 396, office@sloc.one

SLOC GmbH hereby declares that the product

Basic Model:	SLOC-200-1
Hardware Type:	SLOC-200 ALL Components
Series:	200
Side Models:	SWB-200, SSC-200, SPR-200, STR-200, SLC-200, SCT-200, SMO-200

to which this declaration relates is in accordance with the provision of the following directives:

2014/53/EU Radio Equipment Directive-RED

2011/65/EU ROHS Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment and is in conformity with the following standards or other normative documents:

EN 62368-1:2014/AC:2015	Audio/video, information and communication technology equipment — Part 1: Safety requirements Electromagnetic compatibility and radio spectrum Matters (ERM); Part 1: Common technical requirements
EN 62311:2008	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz-300 GHz))
EN 301 489-1 V1.9.2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
EN 301 489-3 V1.6.1	Electromagnetic compatibility and Radio spectrum Matters (ERM), Electromagnetic Compatibility (EMC) standard for radio equipment and services, -- Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz
EN 301 489-52 V1.1.0	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment
EN 300 440 V2.1.1	Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range
EN 301 511 V12.5.1	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances



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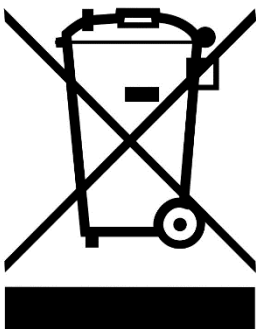
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This symbol on the product, the batteries or the packaging means that this product and the batteries it contains must not be disposed of with household waste. Instead, you must dispose of the products and batteries at an appropriate collection point for the recycling of batteries, waste electrical and electronic equipment..

Separate collection and recycling contributes to the preservation of natural resources and prevents harm to human health and the environment from hazardous substances that can be released during the improper disposal of batteries and electrical and electronic equipment.

For more information about collection points for batteries, electrical and electronic equipment, contact your city/municipality administration, waste disposal company, or the dealer from whom you purchased this product.

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