Instructions for Use — Traumschreiber TS2607 · PSG (6 snap + 3 gold cup)

Institute of Sleep and Dream Technologies

1. Intended Use

The **Traumschreiber TS2607** is a head-worn Bluetooth device that records and displays your own biosignals (EEG, EOG, EMG, ECG) — for **education, research and self-observation**.

> **Not a medical device.** The Traumschreiber TS2607 is **not** intended for the diagnosis, treatment, monitoring or management of any disease.

Intended users: adults and adolescents, generally under adult supervision. **Not suitable for young children.**

Use: on the forehead, held by snap adhesive electrodes, also overnight during sleep. The device can emit light and sound.

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2. What's in the box

- Traumschreiber TS2607 (device) with permanently soldered electrode connectors and three gold-cup electrodes (see Section 3.3)
- Single-use adhesive electrodes (snap) as a starter supply
- microSD card, **already inserted**
- These instructions for use

Not included: USB-C cable and USB power adapter (see Section 3.1), conductive electrode paste for the gold-cup electrodes (see Section 3.3).

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3. Getting started

3.0 microSD card

The microSD card is inserted on delivery. Without a card the device does not store measurement data; data can then only be recorded via the app connected by Bluetooth.

> ⚠️ **Only remove or insert the card while the device is switched off! With the device switched on, the card can be damaged and recordings can be lost.**

Changing the card (the housing does not need to be opened):

1. Place the **switched-off** Traumschreiber in front of you, printed top side facing up, so that the **on/off switch** (top left of the housing) points away from you. The **card slot** is then at the **bottom left**, facing you.
2. **Removing:** briefly push the card about 1 mm further into the slot and let go — it unlocks and sticks out a little. Then pull it out. Do not pull it by force while it is locked in.
3. **Inserting:** push the card into the slot with the **printed side facing up** until it noticeably **clicks into place**.

3.1 Charging

1. Connect the Traumschreiber via a **USB-C cable** to a **CE-marked USB power adapter** or a USB port on your computer.
2. Charge the device **lying free** (not under a blanket/pillow) and **not while worn on the head**.
3. **The Traumschreiber is off while charging.** Set the switch to OFF before charging; it still charges. If it is left on, it switches itself off when the cable is plugged in: the LED flashes **red 5 times** and a **loud, low beep** sounds (see 3.4).
4. A short button press (see 3.4) or the app shows the battery level.

3.2 Connect

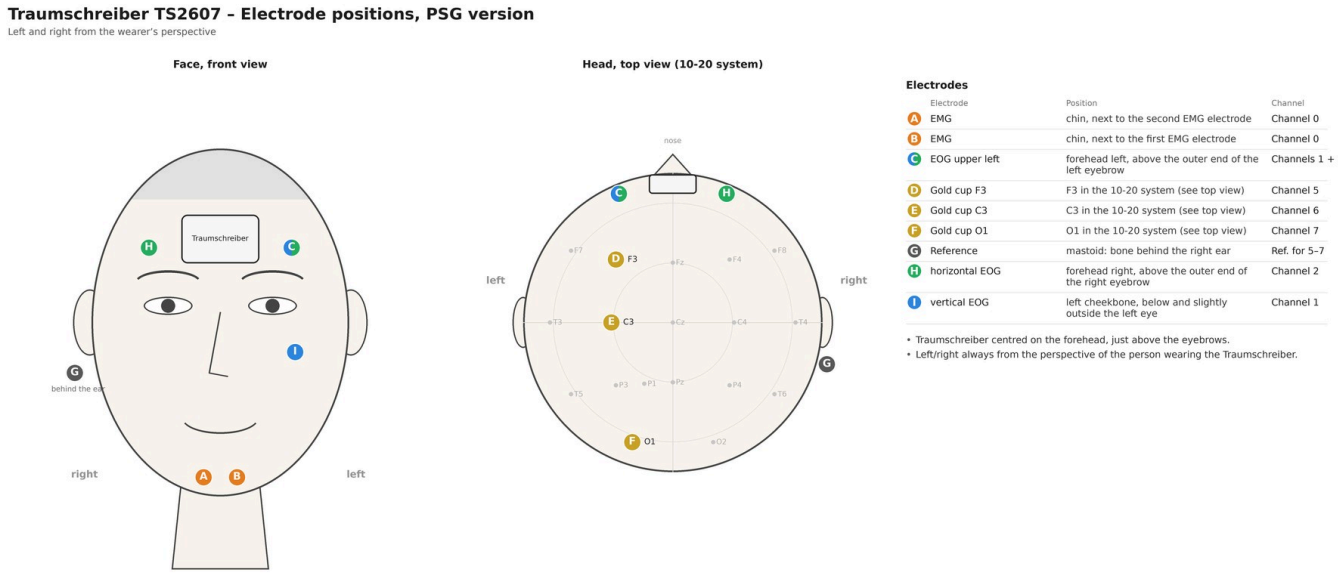
1. Turn on the Traumschreiber.
2. Connect a **PC or smartphone** via Bluetooth to the device (device name **"Traumschreiber"**).
3. Software and instructions: see Section 8.

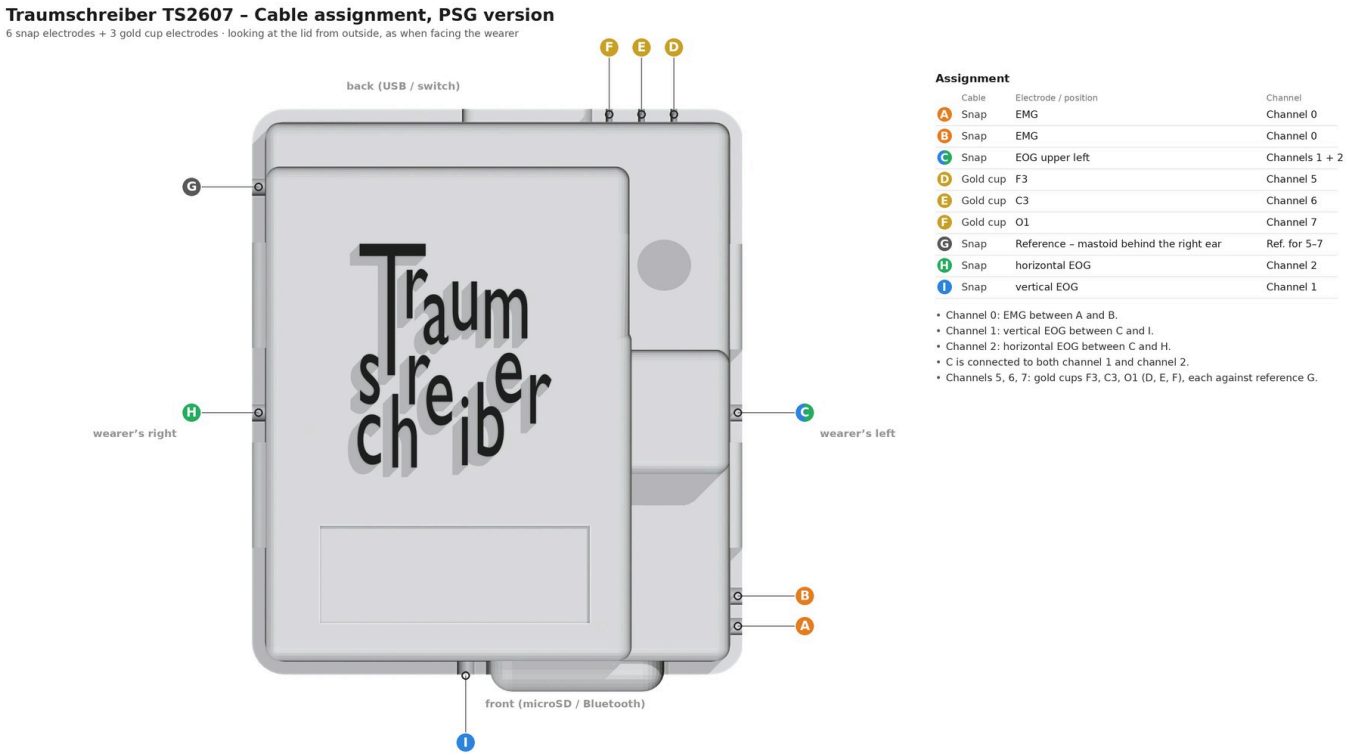
3.3 Attaching electrodes

- Soldered to the board are six leads with snap connectors and three **gold-cup electrodes**, some on longer leads. Clip on the **snap adhesive electrodes**.
- Attach the **gold-cup electrodes** to the scalp with conductive electrode paste (not included).
- Route longer cables **without looping them around your neck** (Section 4).
- Use only the supplied or identical **single-use adhesive electrodes**, each only once. **Do not use an electrode if the gel has dried out or it no longer sticks.**
- Clean the skin before attaching (grease-free, dry).
- The fit should be **loose and comfortable**, never tight.
- Modifications to the device are at your own responsibility.

Electrode positions and cable assignment. Left and right always refer to the person wearing the Traumschreiber. The device sits in the middle of the forehead, just above the eyebrows. The letters on the electrodes match those in the cable assignment (view from above onto the lid).

6 snap and 3 gold-cup electrodes: chin EMG, vertical and horizontal EOG and EEG at F3, C3 and O1 according to the international 10-20 system, against a reference behind the right ear. The top view shows where the gold-cup electrodes sit on the head.





Further configurations: **https://sd20.org/ts/elektroden**

3.4 What the LED and sounds mean

You see / hear	Meaning
After switching on: LED fades in **green**, a short chime and the spoken word "Traumschreiber", then **green twice**	The device has started. Without a microSD card it stays silent; the LED still shows the green sequence as described (starting a few seconds later).
LED **pulses blue**	Ready: the device is waiting for a Bluetooth connection, e.g. from the app on a smartphone or from a computer.
LED changes from **blue to green** and goes off	The Traumschreiber has connected.
After a short button press: LED flashes **1 to 10 times**	Battery level: each flash ≈ 10 %. Red = almost empty, yellow = half, green = full. Examples: **3× orange** ≈ 30 %, **8× yellow-green** ≈ 80 %.
Red 5 times with a loud, low beep, then dark	The **USB cable is plugged in**. The device ends a running recording and **switches itself off**; charging and measuring at the same time is not possible. To continue: unplug the cable, switch the device **off and on again**.

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4. Warnings — please read carefully

⚠️ **Cable routing / strangulation risk** With **longer cables** (extended configuration) a cable can wrap around your neck during sleep: route cables so that they **cannot loop around your neck or other body parts**; **do not extend cables yourself**. The device is **not suitable for unsupervised young children**.

⚠️ **Flashing light / epilepsy / photosensitivity** The device can emit **light stimuli**. If you have epilepsy or photosensitivity, use the light features only after **consulting a physician**.

⚠️ **Volume** Avoid sustained high volume.

⚠️ **Charging**

- Do **not charge the device while wearing it on your head**.
- Do **not charge the device under a blanket, pillow**, or anywhere heat can build up.

- Use only a **CE-marked USB power adapter**.

⚠️ **Damaged device** Do **not continue to use or charge** a visibly damaged device (cracked housing, damaged cable). Contact support (Section 11).

⚠️ **Skin** If you experience skin irritation or an allergic reaction, **remove the electrodes immediately** and stop use. Do not reuse electrodes.

⚠️ **Moisture / water** The device is **not waterproof**. Do not use it in or over water; keep it dry.

⚠️ **Misuse Never place the device in a microwave** or similar appliance — fire hazard due to the battery. Use it only as described in these instructions.

⚠️ **Small parts** Keep electrodes, the microSD card and other small parts away from young children — choking hazard.

⚠️ **Medical implants** If you have a pacemaker or similar implant, consult a physician beforehand. Do not wear during an MRI scan.

⚠️ **Data backup** Back up important recordings yourself on a regular basis.

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5. Cleaning & care

- Wipe the housing with a **slightly damp, soft cloth**. Do not use solvents.
- Store the device dry, at room temperature, away from direct sunlight.

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6. Removing & replacing the battery

The battery is **user-replaceable**, without special tools.

Safety: Switch the device off and unplug the charger. Do not puncture, crush, bend or heat the Li-Po battery. Do not use a swollen/damaged battery — dispose of it properly (Section 9).

Removal: (1) Carefully open the housing at the seam (e.g. hook the tine of a fork under a plastic clip and bend it up slowly and only slightly until it releases; take care not to break the clip). (2) Gently pull the small connector **straight off** — hold the plug, **not the wire**. (3) Remove the battery.

Installation: (1) Insert the new battery's plug straight, without force, into the connector (mind the orientation). (2) Place the battery, don't pinch the wire. (3) Gently press the housing back together. (4) Charge and check operation.

Spare battery: same type — Akyga AKY0833 (LP503040), Li-Po 3.7 V / 560 mAh, with protection circuit (PCM) + NTC, 1.25 mm Molex connector, 3-pin. Available from electronics retailers.

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7. Technical data (summary)

Parameter	Value
Product / model	Traumschreiber TS2607
Sensors / outputs	Biosignal inputs, microphone, light sensor, button / LED, speaker
Radio	Bluetooth Low Energy, 2400–2483.5 MHz, max. 9.46 dBm
Battery	Li-Po 3.7 V / 560 mAh, Akyga AKY0833
Charging	USB-C, 5 V ⎓ 0.3 A

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8. More information

Tutorials and further information:
https://github.com/sd20-org/traumschreiber
Operation via **PC or smartphone**.
Website: **https://traumschreiber.de**

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9. Disposal

This device contains electronic components and a battery. The **crossed-out wheeled bin** symbol on the device and the battery means: the device and the battery must **not be disposed of with household waste** but collected separately. Return the device free of charge to a local collection point for waste electronics. Retailers with a sales area for electrical equipment of at least 400 m² and food retailers with at least 800 m² that sell electrical equipment also take back old devices free of charge; for online retailers, storage and shipping areas count. The battery can be removed before disposal (see Section 6) and handed in separately at a battery collection point (retailer, municipal recycling centre); alternatively it is disposed of together with the device as electronic waste. Lithium batteries can catch fire if damaged: do not damage the battery and hand it in so that it cannot break.

Delete personal data: the microSD card in the device may contain recordings of your biosignals. You are responsible for deleting this data before returning or disposing of the device (e.g. remove the card and format it).

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10. Conformity

Hereby, ISDT gemeinnützige UG (haftungsbeschränkt) declares that the radio equipment type **Traumschreiber TS2607** is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://sd20.org/isdt/de/projects/ts/konformitaet/

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11. Manufacturer, support & complaints

ISDT gemeinnützige UG (haftungsbeschränkt) c/o Haus des Engagements, Neue Große Bergstraße 3-5, 22767 Hamburg, Germany

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