# Script for Newronika Device

**Programming with HDCPROG**

1. Here we have our **HDCPROG**, which is used to program the **HDCSTIM** device. Let's see how we set it up:
2. Connect the **black wire** to power the HDCPROG device. Plug it in as shown.
3. Grab the **grey cable** and connect one end to the HDCPROG and the other to the HDCSTIM device.
4. The **HDCPROG** device can only be activated when it is connected to the HDCSTIM. While they are connected via the grey cable, switch **ON** the HDCSTIM device using its power switch.
5. The first thing that appears on the HDCPROG screen is a prompt to insert a **code**. This code is **unique for each clinic or medical professional** using Newronika devices.
   **TIP:** Who sets the code? The manufacturing company provides the code upon purchase via SOZO Brain Center. If the code is lost, we can retrieve and resend it.
6. Insert the code and press the **confirm button** in the bottom right corner.
7. You will now see **six menu options** on the screen:
   - **Stim**
   - **Treatment**
   - **Channels**
   - **Report**
   - **Date and Time**
   - **Info**
8. **Select "Stim":** This window allows you to set the **intensity, duration, and ramp** of the stimulation.
   - **Intensity** ranges from **1200 µA (1.2 mA) to 2000 µA (2.0 mA)**.
     You can change the intensity value by 1, 10, or 100 units using the arrow keys.
   - **Duration** refers to how long each session lasts—usually **15, 20, or 30 minutes**, depending on the protocol.
   - **Ramp** is the time it takes for the current to rise from 0 to the set intensity. Typically:
     - For **2.0 mA**, ramp is **5–10 seconds**

- For ≤ **1.8 mA**, ramp is **10–15 seconds**

9. In the top right corner, a **yellow summary box** displays your current settings for intensity, duration, and ramp.
10. To **save your settings**, press the **confirm and save** icon in the bottom right.
    If you don't save before exiting, your settings will not be retained.
11. Once saved, the **yellow summary box** will update. You may now return to the main menu.

**Treatment Window**

12. Select the **Treatment** window.
13. Choose between:
    - **Free Mode** – allows unlimited stimulation sessions.
    - **Controlled Mode** – restricts sessions based on a schedule set by the clinician (e.g., minimum 6 hours apart).
      **Tip:** In Controlled Mode, patients cannot initiate extra or early sessions outside the scheduled times.
14. **Free Mode** is ideal for **in-clinic** use or for frequent use.
    After selecting your mode, **confirm and save** your choice. Free Mode requires a **double confirmation**.
15. Return to the **main menu**.

**Channels Configuration**

16. Select the **Channels** window. Choose between:
    - **One-channel stimulation** – one anode and one cathode
    - **Two-channel stimulation** – two anodes and one cathode
      **Tip:** The selection depends on the **target area** and the **neuromodulation protocol** being used.
17. **Sham Mode** is for **research** and acts as a placebo. **Ignore for clinical use.**
18. After selecting your channel configuration, **confirm and save** to update the yellow box. Press the arrow in the top left to return to the main menu.

**Other Menu Options**

19. **Report Window** – used during follow-ups to check patient adherence to the stimulation protocol.
20. **Date and Time** – used to configure the system clock.
21. **Info** – provides additional details on the programming system and device specs.
22. Once programming is complete, **turn off** the HDCSTIM device and **disconnect** the grey cable.

**Setting Up and Using HDCSTIM**

1. Open the **HDCSTIM kit**.
2. Inside, you'll find **three silicone electrode pads**:
    - **2 red anodes**
    - **1 black cathode**
3. Each **thin grey wire** connects an electrode pad to the **adaptor**:
    - The **metallic end** connects to the pad
    - The **silicone end** connects to the adaptor's color-coded ports
4. Insert the **black cathode** into the **black port**.
5. Insert the **red anodes** into the **red ports**.
   **TIP:** If using **one-channel stimulation**, insert the anode into the port labeled **CH1**. Otherwise, the session won't start.
6. Attach the adaptor to the **HDCSTIM** device.
7. Use the **yellow sponge pockets** to hold the electrodes.
8. **Moisten the sponges** with saltwater (not dripping). Use a ¼ teaspoon of salt per 100 ml of room-temperature drinkable water.
9. Insert the electrodes into the correct sponges:
    - **Smaller sponges** for **anodes**
    - **Larger sponge** for **cathode**
      **Tip:** Always insert the **flat side facing up**.
10. Apply **ultrasound gel** generously on the flat (upward-facing) side of the sponge.
    **TIP:** For thick hair, apply gel on the electrode surface **and** the sponge.
11. Repeat the process for all three electrodes.

**Electrode Placement**

12. Clean the scalp with **antiseptic gel** if the patient has:
    - Hair dye
    - Hair/face creams
    - Oil-based products
    - Thick hair (use bobby pins to expose the area)
13. Place the **white hair net** over the head, ensuring it's snug and fully covers the scalp.
14. Position the electrodes according to the clinician's **neuromodulation protocol**.
    **TIP:** For frontal placements (e.g., F1–F2, F3–F4), orient wires **away from the face** for comfort.
    **TIP:** For spinal placements, use **supportive tape** to secure electrodes.

**Stimulation Session**

15. Switch on the **HDCSTIM device**. The screen will display:
    - **Intensity**
    - **Channels**
    - **Session Duration**
16. Hold the **black START button** for **16 seconds**.
    Once released, the **countdown timer** begins.
    **TIP:**
        - If the **blue stim light flickers**, electrode contact is poor.
        - An **"EL OFF" error** will appear.
        - To fix it:
            - Turn off the device
            - Reapply gel
            - Reposition electrodes
            - Restart device and session (timer resumes correctly)
17. After the session ends, **switch off the device** before removing electrodes and hair net.
18. Remove sponges, **wash them with soap and water**, and let them dry.
19. Wipe electrodes with **dry tissue**.

**Battery and Reprogramming**

1. The device uses **batteries** (no charger).
    - If the screen is **faded** or battery icon is **low**, replace the batteries.
2. After **99 sessions**, the device will show error **P00**, indicating the need for reprogramming.
3. To reprogram:
    - Connect the stimulation device to HDCPROG
    - Open the **Treatment** window
    - Select **Free Mode**, confirm and save (twice)
    - The **Report** section will now reset to blank
      **Tip:** During follow-ups, ask how the patient feels with the current settings. Ask about **itching, redness**, or other sensations.
4. When done, **turn off the stimulation device** and **disconnect it from HDCPROG**.

**Side Effects**

- **Mild redness or itching** at electrode site – **normal**, will fade.
- **Fatigue or drowsiness** – also normal.
- Some may feel **energetic or hyperactive** – equally normal.
- These responses vary as the brain adapts to the neuromodulation process.

The patient might have some redness or itchiness in the area of stimulation- this is normal and it will fade. If these sensations are extreme they should inform their clincian. The patient might also feel some fatigue or drowsiness but also might feel the exact opposite so hyperactive and energetic. This is still normal as the body and brain are experiencing something new and need to get used to this.