

# ElectraStim Axis Firmware Update

**IMPORTANT NOTE:** Before carrying out a firmware update on your ElectraStim Axis (model EM200) please ensure that...

1. Your Axis firmware version is older than V1.5 as this is the latest release
2. You wish to have all of the features listed below as updates are non-reversible

## How do I identify my Axis firmware version?

When Axis is switched on the power-up welcome screen will show your version number in the top right corner of the display. You can also access it through the “View Tech. Info” option in the Configure menu.

VERSION	RELEASE DATE	UPDATE FEATURES
1.5	1st October 2024  <b>NOTE:</b> If your Axis already has V1.5 installed do not carry out an update.	1. Frequency control feature added to Wave and Pulse patterns such that the user can choose to over-ride the default frequency and select any frequency from 20Hz to 200Hz. Wave patterns 10 and 11 are excluded as they already step through different frequencies.
1.4	5th October 2023  <b>NOTE:</b> If your Axis already has V1.4 installed do not carry out an update.	1. Bug removed to prevent occasional spurious output while Nerd Mode active. 2. Gesture sensor ID range increased to include 0xA8 devices  Please note that if updating from V1.3 to V1.4 no obvious changes will be immediately apparent.
1.3	1st October 2021  <b>NOTE:</b> If your Axis already has V1.3 installed do not carry out an update.	1. Wave/Pulse pattern menus updated to include variable speed options to both synchronised and alternating patterns by utilising the accelerometer tilt functionality. The Sync. Slow patterns are now called Sync. Fixed. The Sync. Fast patterns are now called Sync. Variable. Tilting Axis to the left will slow down the pattern rate. Tilting to the right will increase the speed.
1.2	12th October 2020  <b>NOTE:</b> If your Axis already has V1.2 installed do not carry out an update.	1. Tilt Mode modified so as to utilise both X and Y planes of the integrated accelerometer to control the stimulation frequency between 20Hz and 200Hz and the pulse width from 0 to 160us respectively. A damping function also allows the user to change the response time of tilt motions to create long or short sustains for each plane independently. 2. The line-in and microphone DSP filter settings modified to give a sharper response.

VERSION	RELEASE DATE	UPDATE FEATURES
1.1	23rd Sept. 2019  <b>NOTE:</b> If your Axis already has V1.1 installed do not carry out an update.	<ol style="list-style-type: none"> <li>1. Intensity range changed from 0-50 to 0-99 to be in keeping with ElectraStim SensaVox and other high power stimulators. The auto-climb rate is now twice the speed.</li> <li>2. The last used Mode and Option are now saved when switched off and resumed when next switched on.</li> <li>3. The beeper can now be muted while practicing gestures in the Configuration menu.</li> <li>4. Gesture control now enables all Modes to be repeatably selected and no longer stops at the Configuration menu.</li> <li>5. On all modes that require user stimulus or audio input the "stimulation baseline" has been removed such that the range of stimulation strength starts at zero.</li> <li>6. Feature added to Configuration menu "7. Setup Line-in" to enable the trimming of any input offset errors visible when there is no audio input.</li> <li>7. The Line-In audio sampling has been improved so as to prevent aliasing in the frequency range 200Hz to 2KHz. Audio sampling will work above this range but there will be an attenuation coefficient of -20dB/decade. Stimulation strength (pulse width) is normally controlled by the amplitude of the audio signal but frequencies above 2kHz could be utilized to perform frequency to intensity control.</li> <li>8. When connected to the USB charging cable it is now possible to use the CH2 intensity buttons to select the different battery parameters as follows... <ul style="list-style-type: none"> <li>• Reserve (%)</li> <li>• Battery voltage (mV)</li> <li>• Battery current draw (mA)</li> <li>• Battery Power draw (mW)</li> <li>• Battery Health (%)</li> </ul> </li> <li>9. New Configuration Menu option to allow intensity Auto Zero feature when changing Modes to be disabled/over-ridden. Stimulation is paused whilst in the Configuration menu and resumes when it is exited. Recommended for experienced users only.</li> <li>10. The intensity levels on both channels can now be simultaneously decremented with the press and hold feature.</li> </ol>
1.0	15th Jan 2019	Original firmware release