

I have been thinking about the estim implementation from a broad perspective because I can't code. But as someone who understands basically how estim works. There are a few things that anyone implementing it would need to keep in mind.

1. The estim signal type.

- a. There are basically two kinds of estim: dual channel, and triphase. There is also mono but very few use that.
 - i. In dual channel the idea is to use a stereo audio track and have Left and right going to separate pairs of electrodes. You need a minimum of two electrodes to get any kind of feeling because it's basically completing a circuit on your parts. in Dual channel setups the finesse comes in from making the left different from the right. For cock hero type implementations, it usually means offsetting one side by a fixed amount. One channel "hits" on the main beat, and the other channels hits like .5 seconds later. This can be produced from something like a beat track as a foundation.
 - ii. Triphase has to do with the difference between the channels (I think) In this setup you still use 3 electrode outputs, but only 3 electrodes. One is connected to 2 outputs, that's called the common, and as such the signal comes through much more powerfully on this electrode in most implementations. The other two electrodes are hooked up as normal. The sensations come from shifting the current between the left and right channels. (I think, I'm a bit fuzzy on how it works and describing it accurately) Users commonly report this as a stroking sensation, but it can also create much more unique sensations as well. It can be easily created from data like a funscript.

2. The nature of estim itself.

- a. Because this is electricity being sent through your body, there are a multitude of factors that can affect how it feels at any given time. Even the same exact signal can feel different to the same person using the same electrodes on different days. This is because the resistance of skin can shift. Things like hydration can affect it, if it's dried out, cleaner or dirtier. And of course, it will feel different for each person. Everyone probably uses a slightly different electrode setup and has different preferences. what may feel good to one person will not feel good to another. Some people can't use estim at all because they find it painful.
- b. Signals should also generally ramp up at the micro level. Meaning if there is some silence between signals the volume should not return to the same level it was, but instead fade in over a few seconds. When audio suddenly comes back its generally painful. Some creators use this on purpose to create painful files.
- c. Desensitization. This phenomenon occurs after using Estim continuously, even after 5 minutes the sensations can be lessened. The longer you go the more desensitized you will become. This is why estim creators often create gaps of silence in their creations so that your parts have a chance to recover. (For replay this is already there in the form of breaks, and there not being beats all the time) They also usually create a volume ramp. The volume simply increases over time to compensate for the gradual loss of sensitivity.

3. Useful links

- a. <https://milovana.com/forum/viewtopic.php?t=21500&hilit=estim> this could be used to generate sounds on the fly.
- b. <https://milovana.com/forum/viewtopic.php?t=23322> Cheap and easy to make stim box
- c. <https://milovana.com/forum/viewtopic.php?t=24722> Link to a database of a lot of video based estim content.
- d. <https://drive.google.com/drive/folders/1ynxgw-CYAshL5eLZhnyVqeYrBI-pT4Oq> link to a google drive that has a TON of other estim content, most of it older and doesn't have corresponding video. You'll also find that even some of the newer content that has been released was based in part on files found here.
- e. <https://milovana.com/webteases/showtag.php?tag=estim> link to Milovana estim webteases. Might be of interest because it's a live webpage application. Although all of these just play an audio file at a given time.
- f. <https://discord.gg/Yfn2XfRy> link to open estim discord. Many more knowledgeable people there.