

## How To Beatgrid Disco, Funk, Rock & Soul Music Using Flexible / Elastic / Variable Beatgridding

### What is it?

Recap if you're not sure what beatgridding is: It's a "grid" laid over the beats and bars of each track in your DJ software, to tell the software where the beats and bars occur in that track.

A "flexible" or "elastic" beatgrid is a grid that shows the software where it will need to slightly "stretch" (slow down) or "contract" (speed up) sections of any given track, in order to keep that track's tempo or BPM constant when it is played.

The reason for beatgrids at all is that software doesn't actually "listen" to your tracks as you play them - it instead follows the grid in order to know where the individual "thud, thud, thud" main beats and bars are. This info is used when you press sync to beatmix and also for accurate auto-looping and rhythm-based effects - echo, delay etc. Accurately beatgridded tracks enable many of the tricks of modern DJing.

The reason for "flexible" or "elastic" beatgridding is that not all tracks have a 100% constant BPM! Any track that doesn't have electronic, programmed drums, ie that is played by a real drummer, is likely to have slightly fluctuating beats, which means we need to make sure the software knows that, by checking and correcting the beatgrid.

Once we've done this, we can mix with the track like any other in our collection. As long as the software can do this type of "elastic" or "flexible" beatgridding, it can magically made hard-to-beatmix tracks as easy to mix as the most uniform electronic music.

### Why is this necessary?

### How do we do it?

Firstly, we check whether our DJ software has got the beatgrid right by itself - often it has, and DJ software is getting better at working with tracks like this without our intervention, ie "auto applying" flexible beatgrids.

If it hasn't got it right, we go in and edit the track manually, moving through the track and checking/altering the grid so it sits properly on the beats.

This is a somewhat time-consuming process, and there is a knack to it, but once we've done this for a track, it's done - we've magically made a hard-to-mix track as easy to mix as the most uniform electronic music.

We need to be sure we keep a backup of our music and our DJ software's database, because this is where the info is stored. If we lose these, we lose the work we've done on our grids - and anything else we've altered about our tracks in our DJ software.

### How does the software achieve this?

The same way it can lock the key as we speed the track up or slow it down, or alter the key of a track.

Once the software "knows" where a track speeds up and slows down slightly, because we've edited its beatgrid to show it that, it applies digital processing to the track as it plays, to slow down or speed up the track to compensate for this, therefore making the track play at a 100% constant tempo.

It does this without changing the pitch of the track, so as long as the track didn't have any really big tempo changes in the first place (ie a deliberate change of speed), then this will not be noticeable to us when we play it back, yet the track will now be easier to mix with sync, apply auto loops to, and so on.