Dex

Timecode Vinyl Engine

Prolapsoft

Table of Contents

Introduction

Welcome to Dex!
Dex is a small program for processing **time code vinyl**.
Armed with a specially encoded disk and a turntable, you can convert movements of a *record* into movements of your mouse.
You can also control other audio software (through MIDI) that may not have been designed to work with time code vinyl.

Setup

Dex requires the following equipment:

- A **computer**
- A **turntable**
    - Any ordinary turntable will work, but you may want to get one with a DJ cartridge to avoid damaging records.
- An **audio cable**, to connect the turntable to the computer's sound card line input
- A **timecode vinyl disk**
    - This is an ordinary 45/33 RPM vinyl record which contains a special signal that computers can read. If you play it normally in a record player it won't hurt your equipment - it'll just sound like a high pitched whine. You can get these disks off eBay for $10-20.
    - Dex is compatible with most common timecode vinyl formats. It has been tested successfully with Serato Scratch disks and Numark Virtual Vinyl disks. Nonetheless you have good odds of other types working. Experiment with them!

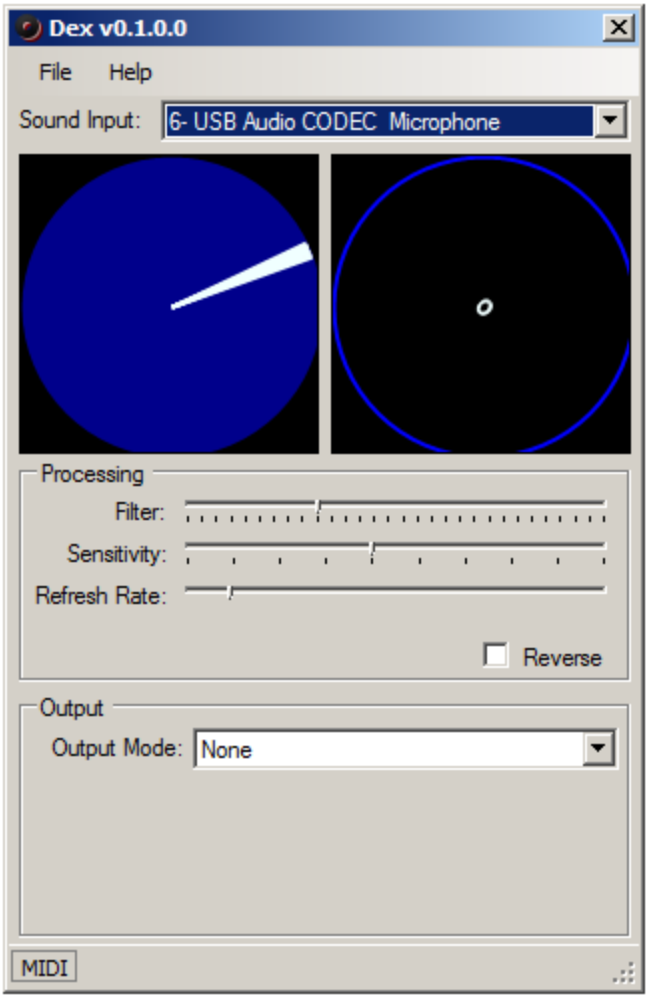
Once you've assembled the required equipment, all you have to do is plug the line out of your turntable into the line in of your computer, and pop on the vinyl disk.
At this point you're ready to run Dex!

User Guide

Getting Started

1. Start Dex
2. Select the soundcard your turntable is plugged into in the **Sound Input** box.
3. Move the stylus onto the record and press play on the turntable.

At this point, you want Dex to be looking something like this:



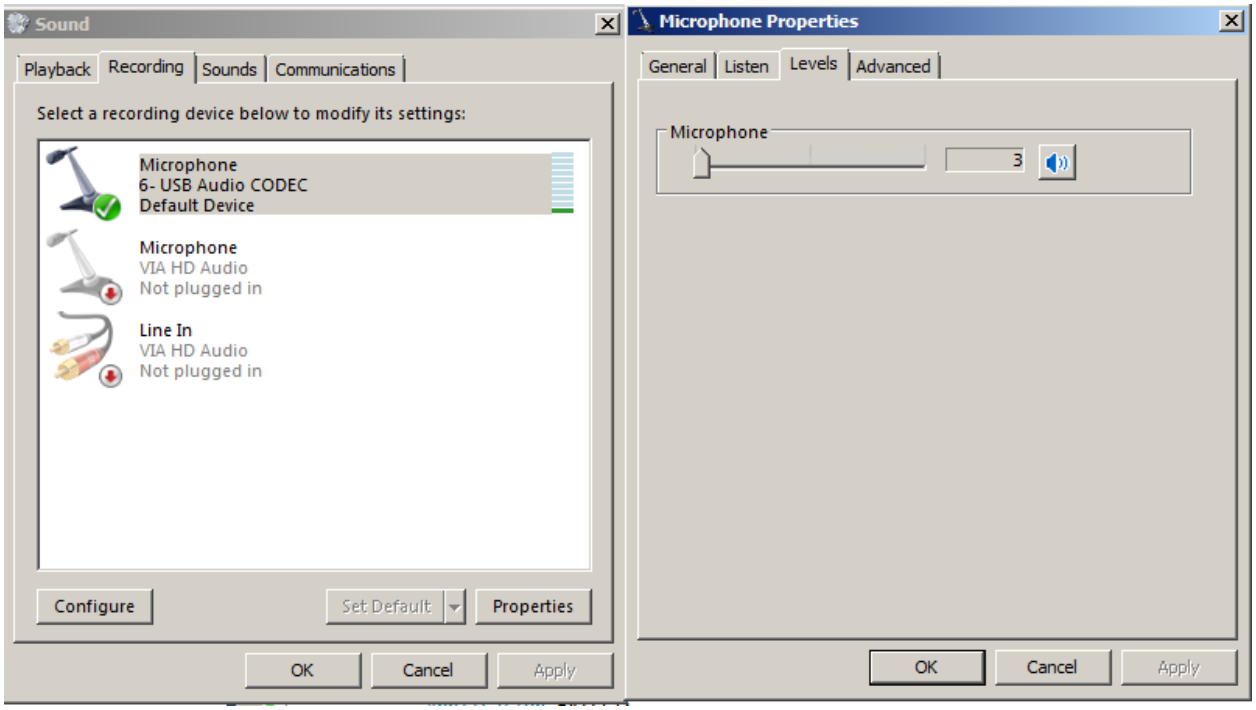
The left hand side should be spinning, and there should be a small white circle in the right hand side.

If the circle in the right hand side is much bigger, you need to reduce the input gain of your sound card. Dex will still work with a high input gain, but it might tend to skip when the disk is being handled or there are vibrations in the room.

Adjusting Gain

To reduce your sound input gain, open up your Sound Properties in Windows, select the Recording tab, and choose your sound card. Select the Levels tab.

With the turntable playing, move the gain slider up or down until only the bottom segment of the volume bar lights up:



Choosing an Output Mode

Now that the program is reading the timecode disk, let's put that to use.
Dex has four different types of **Output Mode**:

- **Mouse Left-Right**
  - Turning the record clockwise moves the mouse right, anti-clockwise left
- **Mouse Up-Down**
  - Turning the record clockwise moves the mouse down, anti-clockwise up
- **MIDI**
- **Sound Device Volume**
  - Turning the record clockwise turns the volume up, anti-clockwise down

You may have noticed that being able to move the mouse in all directions requires two turntables. If you have two turntables, you can simply launch Dex twice and point each to a separate audio input.

MIDI

Dex's MIDI functionality allows you to use turntable controls in audio software that wasn't designed for it - FL Studio, Pro Tools, etc. Exactly how you use its MIDI functionality is up to you and depends on the software you use it with, but it's quite likely you're going to want a **MIDI loopback**.

A MIDI loopback takes a MIDI output (such as what Dex produces) and feeds it back into an input (such as your audio software). You can either use a hardware loopback (in which case you simply plug a physical MIDI cable from a MIDI-out into a MIDI-in on your computer) or a software one.

We use and recommend the free LoopBe1 for this purpose:
http://www.nerds.de/en/loopbe1.html
Prolapsoft doesn't have any affiliation with nerds.de, we just really like their software.

Processing Settings

You can improve the performance of Dex's movement by adjusting the **Processing** settings:

- **Filter** smooths out the movement of the turntable over time slightly. Moving the slider to the right will smooth it out more, but moving it to the left will make it a little more responsive.
- **Sensitivity** controls how fast the output moves in relation to the turntable speed. Moving the slider to the right will result in more change of output for a given movement, whereas moving it to the left will result in less.
- **Refresh rate** controls how often Dex will update the output. Moving to the left will mean jerkier movements but better performance, while moving it to the right will result in smoother movements but slower performance.

Version History

v0.1.0

- Initial release

Legal

- Dex is **closed freeware**. Distribute it as you see fit.
- Please do not sell or reverse engineer it.
- Use at your own risk - any damage to hardware or person is your own problem.
- Comes with no guarantees or warranties, not even implied guarantees of merchantability or fitness for a particular purpose.