



### Here is how to make JD respond to Dance:

1. Find a song you would like to make JD dance to. Upload this song on to your computer.
2. From file menu, choose new project and select JD – Bare.
3. Skip over the lessons
4. Sync servo profile
5. Under “Auto Position”, select “Stand from Sit” and then “execute”.
6. Under the Project tab, click on the “Add” button
7. Select “Audio” and then “Sound Board (EZB)”
  - a. We have added a control (or behaviour) to the robot
8. Once frame is loaded, click anywhere in the blank line and locate the audio file on your computer.
9. Once you audio file has loaded, click on edit

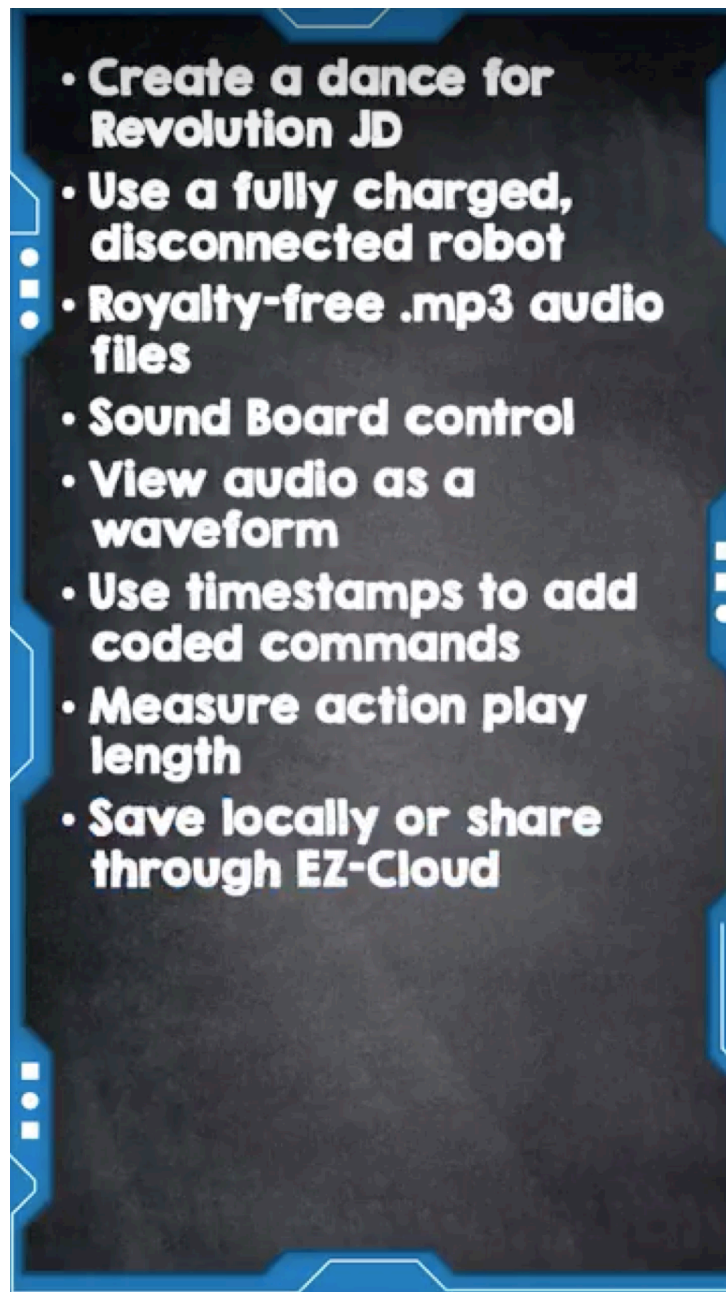
### Explore...

Right click anywhere on the audio track:

- Choose “Actions”:
  - This list will appear in true script for you, not Blockly
  - Choose the action (s) you would like to add
  - Hit “Play” to see what you have added to your song and how your robot reacts

Once you have mastered how to add dance moves and make them play, please show your teacher.

Here is how to create voice controls for your robot:



Your turn, let's see what you can create. Get as complex as you like! Remember, if you don't get stuck, it's too easy!

## Professor E's Quiz

- 1) Which control window is used for adding movements to a sound?
- 2) What can be used to mark where the actions are placed within a waveform?
- 3) Why is it important to measure how long an action takes to play?

Answer 1:

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Answer 2:

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Answer 3:

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Bonus Question:

What is the difference between "Sound Board (EZB)" and "Sound Board (PC)"?

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Name: \_\_\_\_\_  
Class: \_\_\_\_\_ Due Date: \_\_\_\_\_

**EZ-Robot**

## Understanding Music Composition Through Robotics

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### Your task...

MOST songs in popular genres normally have between 3 and 6 different sections or parts. Your task is to demonstrate understanding of the different – and repeating song sections in a chosen song.

- Each element must have its own unique set of moves
- If the element repeats, the movements must be the same (for example, the chorus).

### Different Song Elements:

1. **Intro:** This is quite often the same chords/dynamics as the verse or chorus, mainly the verse. (“When You Were Young” by the Killers is an example of the chorus being used as an intro).
2. **Verse:** Normally a pretty straightforward structure, containing four to 8 chords.
3. **Chorus:** Again, normally pretty straight forward, and consisting of four to eight chords. There is normally a change in the dynamics of a chorus to make it stand out. These include volume, intensity, catchiness (is that a real word?), and timbre.
4. **Bridge:** This is often literally a bridge-between the verse and the chorus, or the chorus and the verse. This is especially useful when you have a key change from one to the other, or the transition from verse to chorus or vice versa isn’t particularly smooth.
5. **Middle 8:** This section is used to break up the song so it isn’t just a sequence of Verse-Chorus-Verse-Chorus. Can change the whole feel of the song, and if used properly can make or break it. Again, the dynamics are normally different to add variety.
6. **Outro:** Finally, like the intro, this can often simply be a repeat of the verse or chorus chords/structure, but can also be totally different. Remember, there are no rules.

Let’s see what you can create. Get as complex as you like! Remember, if you don’t get stuck, it’s too easy! Please show your teacher when done.