



Here is how to make JD respond to dab (making a “flip book”):

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. Find the “Auto Position” window and click on the gear
 - a. We will begin working in the right side of this window
8. Scroll down and click on “STAND”
 - a. This will give you the position of JD standing
9. Click on “New Frame” and name this “Dab 1”
 - a. We will now be working within this frame
 - b. Any servos we modify in this frame, will be connected to “Dab 1”
 - c. Using the *right click* on the mouse, move the servos into the correct first position for your dab.
 - i. Please remember, you cannot use 0 or -1
 1. 0 means *release the servo* so you can move it manually
 2. -1 means *don't change the servo position at all*
10. Once completed first frame, click on “New Frame” again – it will automatically name this “Dab 2”
11. Continue this process until you have completed programming your dab

Please remember to get a friend to hold your JD while you reposition his leg so he doesn't fall over!!! Don't get frustrated with the math and reversed servos... YOU CAN DO IT!!

12. Once complete all frames, click on the “Action” tab at the top. Select “New Action”
 - a. Call this action “Dab”
13. Scroll through the list a double click on each of your frames in the order you would like them to occur, as many times as you would like them to occur.
 - a. Be sure to add an ending position, such as “STAND”
14. Click “Save” to save your work.
15. This will now appear on the home page of the “Auto Position” window
16. Show your teacher when done

Explore...

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! Once complete, please show your teacher.

Bonus...

Can you remember how to add voice to a dance move? Can you remember how add voice command?

Give it a try – you might have to watch the video again...

Here is how to create the dab:

- **Create a custom action**
- **Use a fully charged, disconnected robot**
- **Create frames in the Auto Position control**
- **Start from a standing position**
- **Frames are copied to help with transitions**
- **Adjust servo degree values**
- **Choose a custom action name**
- **Create the frame sequence**
- **New action is added to Auto Position**
- **Add a verbal execution phrase**
- **Edit speech recognition script in Blockly**

Professor E's Quiz

- 1) Which control window is used for creating custom actions?**
- 2) What is a frame?**
- 3) What type of recognition is used to verbally trigger actions?**

Answer 1:

Answer 2:

Answer 3:

Bonus Question:

Why do the leg servos not have the same number when making them bend?
