

Just Guitar Ninja Dance: Instruction Manual

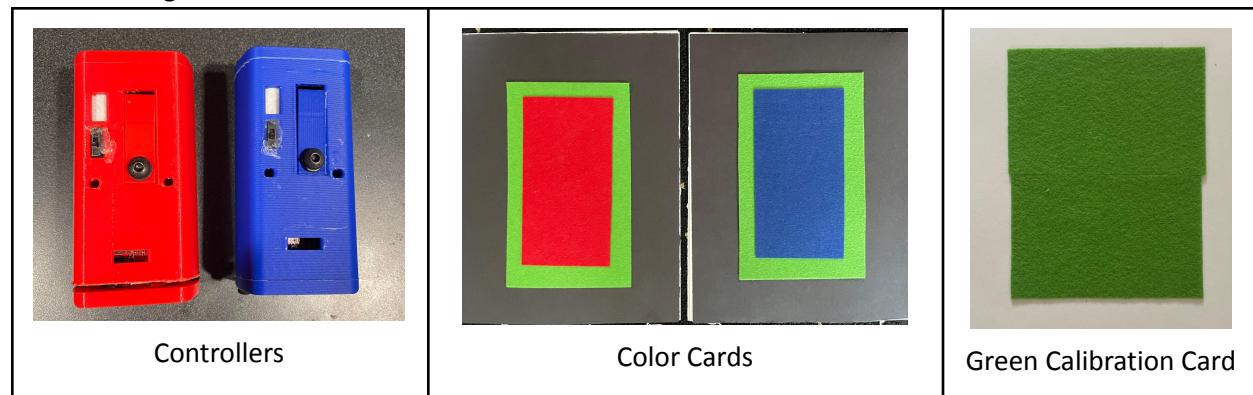
Hello and welcome to Just Guitar Ninja Dance! You're in for a fun-filled musical experience. This game is based on the popular video games Guitar Hero, Just Dance, and Fruit Ninja but with a new and exciting twist. Essentially you will be playing as a "key" on the guitar controller, and your goal is to clear the falling music notes by matching the specific lane in which they are falling along with the motion indicated by the notes' symbols.

Setup

Equipment

Before we get started, you will need to gather the following:

- One USB web camera: <https://a.co/d/30C08Im>
 - Alternately you could use your onboard computer webcam
- One USB microphone: <https://a.co/d/3nXGQpI>
 - Alternately you could use your onboard computer microphone
- Two game controllers
 - Player 1: Red
 - Player 2: Blue
- Two color cards
 - Player 1: Red
 - Player 2: Blue
- One green calibration card



Environment

Setup gameplay equipment in a well lit, ideally quiet room atop a table with lots of room for movement.

Camera

Place the camera on a flat surface facing you [the player(s)].

Microphone

Mount the microphone behind the view of the camera (so as to not interfere with the field of view) so that it can pick up player speech.

Controllers

Slide the power switch to activate the controllers. The green light indicates that the controller is on, and the red light will flash to indicate that the controller has connected to WiFi and is calibrating to an idle state.

***NOTE:** For the time that the red light is on (10 seconds), hold the controller flat, pointing straight ahead of you and still.

****NOTE:** If feedback is not apparent from the controller during gameplay, go ahead and reboot it. The ESP32 hardware is prone to occasional disconnection.

Color Cards

For gameplay, wear your corresponding color card by putting it on over your head so that it can rest on your chest.

Keep the green calibration card handy for the localization calibration setup.

Launching the Game

Localization Calibration

Upon launching the game, a camera feed window will appear. To calibrate the localization detection to the lighting environment, align the color fields with the green box in the center of the camera feed and press 'c' on your keyboard to input the color.

Calibration occurs in the following order: red, blue, then green (using the green calibration card). Once all of the colors have been input, you're good to go.

Menu Navigation

The buttons of the menu are as follows:

1. Start
 - a. Select song and start the game
2. Settings
 - a. Set the Team ID (Team A or Team B): this will be written on your controller
 - i. **NOTE:** making sure this is correct is integral to starting the game correctly

- b. Set the number of players on your team
 - i. Can be 1 or 2
- 3. Tutorial
 - a. Instructs players through the basics of gameplay
- 4. Quit
 - a. Exit the game
- 5. Multiplayer
 - a. Enter remote gameplay mode (see Remote Gameplay section for more information)

Voice Recognition

The menu can be navigated using the computer mouse, but it can also be navigated with voice recognition. To perform voice recognition follow the following steps:

1. Hold the button on the Human Guitar Hero controller
2. Say the keyword associated with the button of interest
3. Release the button

Here is a table of the key words and associated functionalities:

Menu Button or Game Functionality	Keyword
Start Game	“Start”
Pause	“Pause”
Unpause/Continue	“Pause” or “Continue”
Quit To Menu	“Quit”
Settings	“Settings”
Team A	“A”
Team B	“B”
One Player	“One”
Two Player	“Two”
Multiplayer	“Multi”
Start	“Start”
Play	“Play”
Create (a remote lobby)	“Create”

Select Songs/Lobbies	Letter next to song of interest "A", "B", "C", etc.
Return	"Return"

Standard Gameplay (Non-Remote)

Tutorial

Enter tutorial mode for an instructional walkthrough of the game. It will have each player perform each of the four motions in each of the four lanes of gameplay.

The four motions are as follows:

1. Forward push
2. Leftward swipe
3. Rightward swipe
4. Upward lift

The lane detection works by utilizing camera feed to locate the position of the color cards in the frame. The game shows the player position by having a colored square mirror the player's location on the screen. Thus to clear a note, the player must move to align their square with the lane in which their colored note is falling and also perform the specified motion rapidly.

One Player

Single player gameplay involves just the red player.

Two Player

Two player gameplay involves both the red player and the blue player. The score is cumulative for both players, so the goal is to maximize the score *cooperatively*.

Remote Gameplay

Remote gameplay includes two "teams" of either one or two players playing from separate locations competitively. The two teams play on a single song, switching back and forth in 30 second increments. Whichever team has more points at the end of the song wins that round.

Opening a Lobby

To start a remote session, one of the participating teams must open a lobby to host the game. Upon opening the lobby, the team needs to specify a song to play as well as the number of players on both

teams. Then, they must wait for the other team to join the lobby to start the gameplay. Note that each song may only have one lobby open at a time.

Joining a Lobby

On the remote screen of the menu, there is a display of the currently open lobbies, their corresponding songs, and number of teams joined. Any lobby with only one team can be joined for gameplay. Upon joining the lobby, the opposing team is able to start the gameplay.