

kulturBOT Instruction Manual

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1 Getting Started

Hello there! You have been tasked with taking care of my kulturBOT! Welcome to the team! We are glad to have you with us. Here are some things to get you started working with kulturBOT.

1.1 Quick Facts

Twitter Profile: @kulturBOT

Facebook Profile: Facebook Homepage

Expected Battery Life: 3 Hours.

Expected Charge Time: 3 Hours.

kulturBOT uses **The Futurist Manifesto** by *F. T. Marinetti, 1909* to create its tweets.

kulturBOT's speech comes from the last 200 things it has tweeted.

1.2 my kulturBOT's Anatomy

my kulturBOT is made from a version of the iRobot Create which is directly related to the popular in house robotic vacuum cleaner. Hidden under the front of the strainer, kulturBOT has three buttons. These three buttons are used to control various functions of kulturBOT. Refer to Figure 1 for the names of these buttons. Also take note of the names of the LED's.

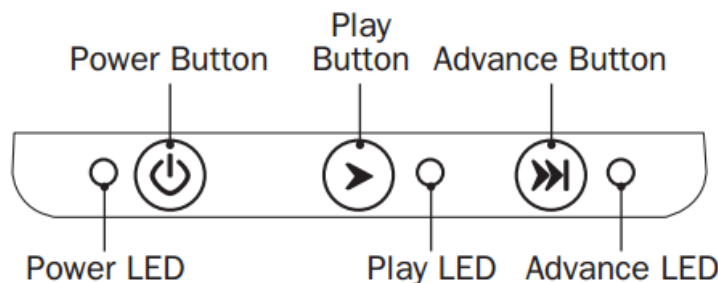


Figure 1: Three Buttons Found Under Strainer

1.2.1 Is kulturBOT turned on?

To determine if kulturBOT is on, observe the **Power LED**. If it is **Green**, kulturBOT is on. If it is **Orange/Amber** kulturBOT is on but needs to be charged (See Section 2.4). If the **Power LED** is not on, kulturBOT is either off or the batteries are dead.

2 Normal Operation

The following outlines how to get my kulturBOT operating normally.

2.1 Laptop Server and Twitter Feed

1. With the Laptop logged in, open up Visual Studio from the desktop shortcut and hit **F5**. A black Console window will open up. Refer to Figure 2 for an example of how it should look.

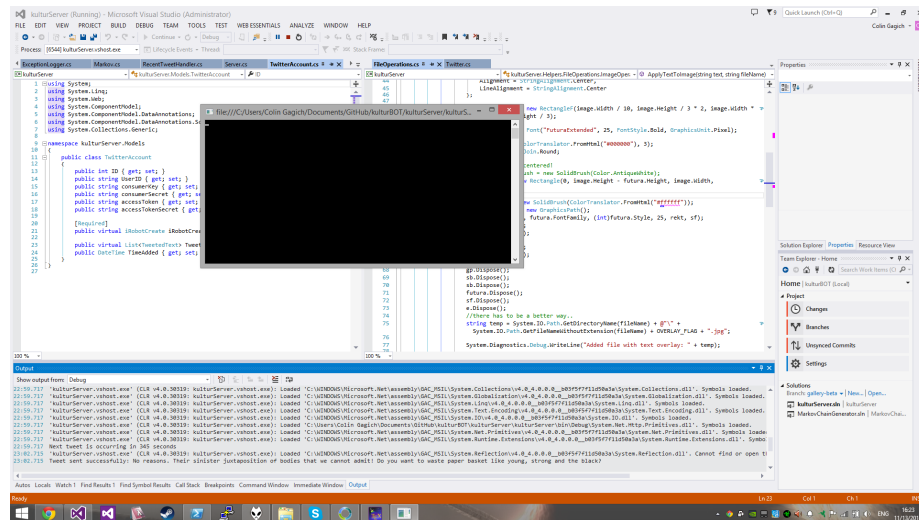


Figure 2: Normal Operation of the Laptop

2. Check the kulturBOT twitter feed and ensure a tweet has been sent in the last 60 seconds. If after waiting 2 minutes no tweet appears, refer to Section 3.1. Under normal operation, no messages will appear on the black console window. If there is a problem with the internet, there will be a message in the black console window.
3. To set up the live twitter feed, first connect the laptop to the projector. Ensure the projector is set up as an external display (should automatically do this). Open up Chrome from the Desktop shortcut and navigate to the kulturBOT twitter feed.
4. Enable the Chrome Browser Plugin "Auto Refresh Plus". Set the interval to 1 minute and press **Start**. See Figure 3 for reference.
5. Fullscreen the Chrome Browser by pressing **F11**.
6. **NOTE:** When the Laptop turned on and the black console window is open, it will tweet **text without an image** every 2-6 minutes. This

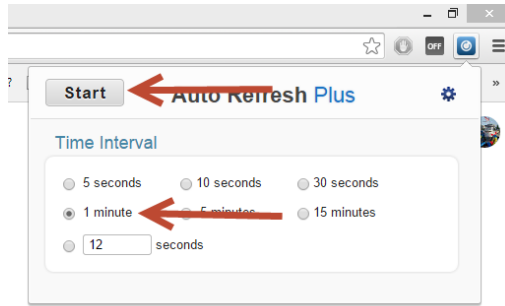


Figure 3: Auto Refresh Plus

happens independently of kulturBOT being turned on and functioning. Because of this, the Laptop should be shut down when the gallery is not open.

2.2 Connecting to the my kulturBOT Unit

2.2.1 From a MAC or Linux Machine

1. Ensure you are on the same WiFi network as kulturBOT. In this case, kulturBOT was on the WiFi network: **Robot** with password: **Robot**
2. Open up the Terminal and enter in the following command.

```
ssh _pi@10.20.58.151
```

NOTICE: The 'underscore' character represents a space.

3. You will then be prompted for a password. The password is: **raspberry** While you are typing in the password the cursor will not advance, this is a security measure.
4. You have now started an "SSH Session" with kulturBOT. This allows you to send commands to it. To get kulturBOT to move and function normally, run the following two commands, pressing enter in-between each of them.

```
cd _kulturBOT/Test\_Client\_Server /
sudo _python _picam .py
```

kulturBOT should *beep* and then everything should function normally. The Terminal window must remain open or kulturBOT will stop functioning.

2.2.2 From a Windows Machine

Instructions coming soon.

2.3 Stopping my kulturBOT

1. Wait until kulturBOT has temporarily stopped moving. This should happen every 15-30 seconds.
2. From your Terminal Window, press **CONTROL + C**. This will end all functions on kulturBOT.
3. To end the SSH Session with kulturBOT, enter the following command.

```
exit
```

If you were unable to stop kulturBOT using the previous steps, try these next:

1. Find the kulturBOT unit.
2. *Aggressively* press the **Power Button** as depicted in Figure 1.

2.4 Charging my kulturBOT

1. Determine if the kulturBOTunit is on. Refer to Section 1.2.1
2. IF kulturBOT **is on**, press the **Advance Button** one time. You should immediately hear two quick *beeps*. Now press the **Play Button**. kulturBOT will move on its own and find it's charging dock.

NOTE: if you do not hear two quick beeps after pressing the Advance Button, restart kulturBOT.

3. IF kulturBOT **is not on** or **wont turn on** manually pick up kulturBOT and place it onto it's charging dock.

3 Troubleshooting

3.1 kulturBOT isn't tweeting!

3.2 kulturBOT is taking pictures but not moving.

3.3 kulturBOT won't turn on.