

Care-O-bot Manual

**Extension for
Universal Robot UR5 and connector**

Autors: Florian Weisshardt
Nadia Hammoudeh Garcia
Bernhard Waterkamp

Fraunhofer IPA

Institute for Manufacturing Engineering and Automation
Stuttgart, Germany

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Chapter 1

Universal Robot on Care-O-bot

This chapter is an addition to the Care-O-bot manual which can be found at https://github.com/ipa320/setup/raw/master/manual/Care-O-bot_manual.pdf and explains handling the Universal Robot UR5 arm on Care-O-bot.

1.0.1 The UR arm

1.0.1.1 Startup the UR controller

You can turn on the UR controller by pressing the button next to the key. After pressing the button the button should light up in green and the UR controller should boot up.

Next, you will need to release the emergency stop and initialize the UR arm by following the user interface on the touch panel.

NOTE: You can only release the emergency stop if the UR controller is booted up.

1.0.1.2 Operating the arm

For operating the arm a ROS node needs to be started. This is done by the bringup launch file

```
roslaunch cob_bringup robot.launch
```

or separately with

```
roslaunch cob_bringup ur\_solo.launch ur\_ip:=<<IP ADDRESS OF YOUR UR  
CONTROLLER>>
```

After that you can directly operate the arm by using the `command_gui` or send a `FollowJointTrajectoryAction` to the arm.

1.0.2 The UR connector

To extend the workspace there's a ur connector which is an external 7th axis to the arm to be able to operate on the front and back side.

1.0.2.1 Startup the UR connector

TODO

1.0.2.2 Operating the UR connector

TODO

1.0.2.3 Handle failure situations

This section will cover some failure situation which might appear and how to resolve these.

limit switches TODO

no movement TODO: use `elmo_move_position`