

## Universal-Robots Emergency stop situations.

In the unlikely event of an emergency situation where one or more robot joints needs to be moved and robot power is either not possible or unwanted, there are three different ways to force movements of the robot joints without powering the motors of the joints:

1. Active backdriving: If possible, power on the robot by pushing the "ON" button on the initializing screen. Instead of pushing the "break release" button to power up the joint motors, push the teach button on the back-side of the teach pendant. A special backdrive mode is entered and the robot will loosen its breaks automatically while the robot is hand guided. Releasing the teach button re-locks the breaks.
2. Manual break release: Remove the joint cover by removing the few M3 screws that fix it. Release the break by pushing the plunger on the small electro magnet as shown in the picture below.
3. Forced backdriving: Force a joint to move by pulling hard in the robot arm. Each joint break has a friction clutch which enables movement during high forced torque. Forced backdriving is intended for urgent emergencies only and might damage the joint gears and other parts.  
Do not turn any joints more than necessary and beware of gravity and heavy payloads.

