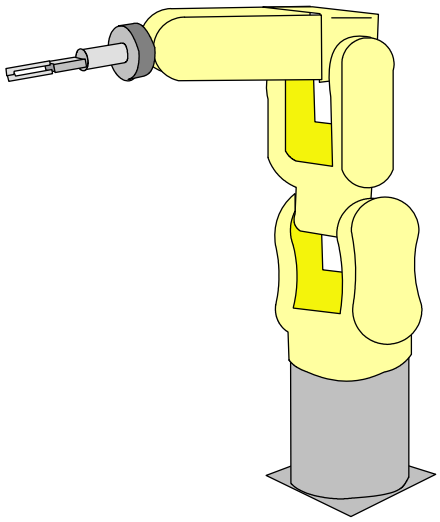
LAB 7 - FANUC ROBOT 1



ITEMS NEEDED

1. Fanuc Robot
2. Robot software
3. Fanuc Robot Handout

INTRO

Industrial robots are becoming increasingly used in our economy. Robots are good at fast, "un-intelligent", repeated motions. One of the largest industrial robotics companies is FANUC ("FA-nuck", some pronounce it as "fah-NUHK"). A purchased industrial robot will have many sophisticated features that we did not have with our little Arduino-driven projects. This includes well-developed software (including simulation), safety features (safety curtain, watch-dog timer safety, etc.), sophisticated controller, teaching pendant, etc. Purchased robots will already have the kinematics built into the software.

The educational system we will use also comes with a vision system. This involves using a camera and passing the visual information to the robot controller. Such systems allow the robot to view the position and orientation of objects it is trying to pick up. A common task for a robot is PICK AND PLACE. That is, the robot is trying to pick up an object and place it in a desired location.

REFER to the FANUC HANDOUT by CT.

7.1 Exercises

Students will perform a set of BASIC tasks as outlined below.

1. Battery change - students will work with instructor to change the batteries (possible)
2. Jog robot - in both JOINT and WORLD coordinates
3. I/O IR Light - turn the IR light on and off
4. I/O gripper - open and close the gripper