Troubleshooting the Manipulator Robot

1. The manipulator robot consists of seven aculators/motors in total. This includes three Robotis MX-64s (from the bottom) and four AX 12-As, including the gripper at the end of the arm.

2. Each aculator has a default ID number of 1. The aculators have been assigned an ID of 1-7 from the bottom to the gripper for MATLAB coding.

3. By default, MX-64s and AX 12-As function in a different baud rate. All the aculators have been assigned a baud rate of 1 Megabits for ease.

4. The robot currently works on Firmware Version 1.0, which can be installed using RoboPlus. Downloaded it here:

http://en.robotis.com/BlueAD/board.php?bbs_id=downloads&mode=view&bbs_no=1152561&page=1&key=&keyword=&sort=&scate=SOFTWARE

5. The Expert Tab on RoboPlus provides a Dynamixel Wizard tool which is used to tune the manipulator. There are newer versions like R+, but they do not work with the AX series.

6. *Remember*: Reinstalling the firmware will delete the assigned ID's and Baud Rate values[#]. To avoid damage to the aculator, it is important to make sure that only one aculator is connected at a time and the correct firmware is being installed.

7. After Clicking on Open port on the top row, the software will automatically detect the Dynamixel aculators.

8. All modifications made on Dynamixel wizard which will be saved.

9. Always use (100-240V~1 A 50/60 Hz) input and (12 V ~5A) output adaptor.

10. Detailed troubleshooting for stuff like LED blinking and motor related issues and self checklist at Robotis' website/forum here:

http://en.robotis.com/BlueAD/board.php?bbs_id=self_checklist&scate=DYNAMIXEL

http://forums.trossenrobotics.com/forumdisplay.php?102-DYNAMIXEL-amp-Robot-Actuators

 # Source- Experience: The baud rate values including the whole control table can be accessed through RoboPlus. The robot will fully function only when the Baud rate is set to 1. Make sure to properly identify the COM port. If something blows up, call or email Robotis directly.