Robot Programming Lab #14 Palletizer JD Jones and John Nelson

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Point Value = \_\_\_\_\_\_\_\_\_\_\_/300 points

In this lab you will be utilizing all you have learned throughout the semester to create a palletizing program. It is highly suggested to start this program from scratch. Previous students have tried to modify a previous lab with great frustration. The first step is to create a flow chart to perform the basic tasks. I highly suggest using the whiteboard. You will CREATE A NEW PROGRAM name it lab 14 with your name as the first 6 characters.

**YOU MUST HAVE YOUR FLOW CHART COMPLETED AND APPROVED PRIOR TO STARTING YOUR ROBOT PROGRAM!**

Your program will perform a basic palletizing program.

Items the program must include:

1) Standard start of the program items,

a. Setting frames, speed and open gripper.

2) Excellent descriptions of

a. Registers

b. Positions and Position registers

c. Labels

d. Inputs and outputs

e. What the program is doing.

3) The robot will pick up a box from the conveyor when the box present sensor is activated.

4) Robot turns on an output only when it is in the way of the conveyor.

5) It will place the boxes onto the pallet with 5 boxes in the X direction and 3 boxes in the Y direction. **There will be 15 boxes on the pallet when it is complete.**

6) You will only program 1 position register on the pallet. The rest of the positions will be done with offsets. Utilize as many of the offset methods you need to complete this task.

7) The program MUST have an approach and then place for each box. This prevents crashes of the boxes.

8) When the last box is done the robot will turn on an output to say the pallet is full.

9) When the pallet is changed the robot will start over again from the beginning.

Points for

A) Start of the program items. 20 pts

B) Descriptions of the program items 50 pts

C) Flow chart 50 pts

D) I/O’s on and off at the correct times. 20 pts.

E) Performing the X direction box placements. 50 pts

F) Performing the Y direction box placements. 50 pts.

G) Not crashing into previous boxes. 10 pts.

H) Written explanation of your program. 40 pts.

I) Saving and printing your program. 10 pts

INSTRUCTOR’S INITIAL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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