Robotics Learning Series

Radar vehicle



Developed by Joinmax, this building-block robot uses modular parts to construct its body, while programming software and sensors enable a range of interactive functions.

Learning Target

01

Knowledge goal

Learn to use.

02

Ability goal

Familiar with the use of ultrasonic modules, master the use of ultrasound and motors.

03

Emotional attitudes and values

Automated industrial manufacturing, freeing hands, accumulating experience, and cultivating logical reasoning skills.

Learning Target

01

Learning focus

Master the use of ultrasonic sensors.

02

Learning difficulties

Understand the flexible use of computing modules and conditional judgments.

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Course Introduction



Course Introduction



Let's look at a picture. Thinking?

1. What is radio?
2. What can the radar measure?

Radar means "radio detection and ranging", that is, using radio methods to find targets and determine their spatial position. Known as "radio positioning". A radar is an electronic device that uses electromagnetic waves to detect a target. The radar emits electromagnetic waves to illuminate the target and receive its echoes, thereby obtaining information such as the distance, the azimuth, and the height of the target to the electromagnetic wave emission point.

Course Introduction



Radar vehicle

Know the Radar vehicle

Radars are based on different technologies (such as lasers, ultrasound, microwaves) and have different functions (such as finding obstacles, predicting collisions, adaptive cruise control), and using different working principles.

This class will build a radar called the radar robot, and it can be used to measure distance.

Teaching New Knowledge



Teaching New Knowledge

Design is the process of conveying a vision through reasonable planning, careful planning, and through various forms of perception. Human beings transform the world through labor, create civilization, create material wealth and spiritual wealth, and the most basic and main creative activity is creation. Design is a pre-planning of the creation activity, which can be used to understand the planning techniques and planning processes of any creation activity.



Teaching New Knowledge

Radar vehicle graphics







Design Assembly



Design Assembly



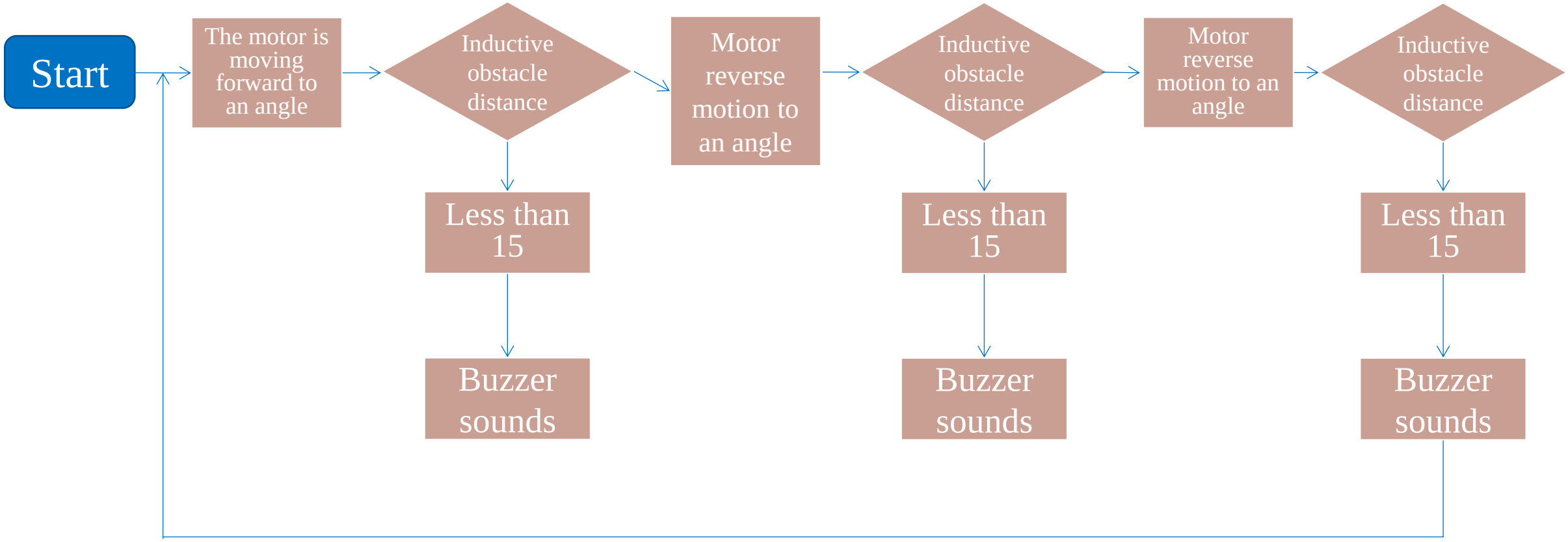
Assembly requirements

1. stable structure
2. focus is right
3. shape match

Programming and Debugging



Programming and Debugging



Programming and Debugging

Task 1

The radar car rotates in place, detects an obstacle and sounds an alarm.



Checking Effect



Test Effect



Review the learning content and deepen your impression.

Question 1 Create a source?

Question 2 The mechanical principle of the robot?

Question 3 The direction of the change?

Thank you for watching

