

CHAPTER 1

INTRODUCTION

1.1 Background

Sorting is an activity in which there is a process of selecting objects or separating objects, based on certain conditions, characteristics, or conditions. Sorting is often used by people out there for various purposes. One example is a sorting system for separating packet delivery based on packet volume and packet weight.

Maybe out there, there are already some people who make or even use a sorting system for their needs. However, some of them still use it manually, not yet integrated with the computer (microcontroller). Because in their sorting process, there is still human intervention (separating packages based on volume and weight of packets). It makes the sorting process ineffective.

Based on the above problems, the authors make an arduino based packet delivery system prototype. It makes the sorting process to be integrated with the microcontroller. Where in this project using various sensors and components of arduino. Thus, by using the sensors and components in this project, a prototype of packet delivery system based on the volumetric weight and the actual weight of the package can be created.

1.2 Scope

Based on the problems that discuss about the delivery package sorting system, the purposes of this project include:

1. Arduino based microcontroller sorting system.
2. Sorting system based on 2 categories: volumetric weight and actual weight.

3. The package to be measured using an ultrasonic sensor, should have the dimensions corresponding to the transmitter and receiver (packages that have dimensions smaller than the transmitter and receiver, will not be properly measured by ultrasonic sensors).
4. Package used in this project should have a flat surface shape (cube-shaped package, or beam) because ultrasonic sensors can only measure and work optimally if the object or package has a flat surface.

1.3 Objective

This project is designed to facilitate a person in the process of sorting the delivery package, based on the actual weight (actual weight of the package) and also the volumetric weight (weight obtained from packet volume calculation). So that later the package will be separated based on actual weight and volumetric weight automatically by arduino-based microcontroller without any human intervention.

