UNIVERSITI TEKNOLOGI MARA

DESIGN AND ANALYSIS OF TRAINING BALL THROWER DEVICE

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ABSTRACT

When a human opponent is not available to return a volley, ping pong ball launching devices can be used as a means of practising. At present, there are only a limited number of systems available in the market. However, considering the high cost and complex design of these systems, it may not be advisable for a ping pong player to invest in one of them. The objective of this project was to create a more efficient and cost-effective ping pong ball launcher. The ping pong ball launcher that was created had an innovative design. It utilised motors with variable speed control to distribute the balls onto a launching track and then launch them. The designer will show how their new ping pong launcher works and explain how to help customers choose the more affordable option.

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CHAPTER ONE
INTRODUCTION

1.1 Background of study

Nowadays, ball thrower devices that are related to sports have become common and universal to an athlete. It also known as ball launchers or pitching machines are mechanical devices designed to propel balls with precision and consistency. There are many devices found in various sport and training scenarios, usually used in tennis, football, baseball, cricket and of course, table tennis.

The primary objective of the ball thrower device is to deliver balls at specific speeds and frequencies, providing athletes with consistent practice opportunities. From that, it can improve the skills in controlling the environment of the game. It also can be a valuable tool for training purposes enabling players to practice shots, footwork, and reaction time.

Table tennis is one of the ball sports which is very general in using ball training devices. It is a sport that played by two or four players struck a small lightweight ball over the net with plastic rackets in a hard table. Table tennis consists of various types of strokes such as push, drive, loop, chop and block. Therefore, training is a must if anyone has a master these table tennis skills. Indeed, the most effective training method in table tennis is multi ball training.

Multi-ball training with various method for rotation, speed, position and nonstop ball striking can adjust for the less forward and backward times in order to enhance the practice efficiency. Furthermore, continuous striking in multi-ball training can enhance the strength and intensity of training, which can help players improve their techniques and tactics.