Airport Security Luggage Scanner System with Conveyer Belt Arrangement

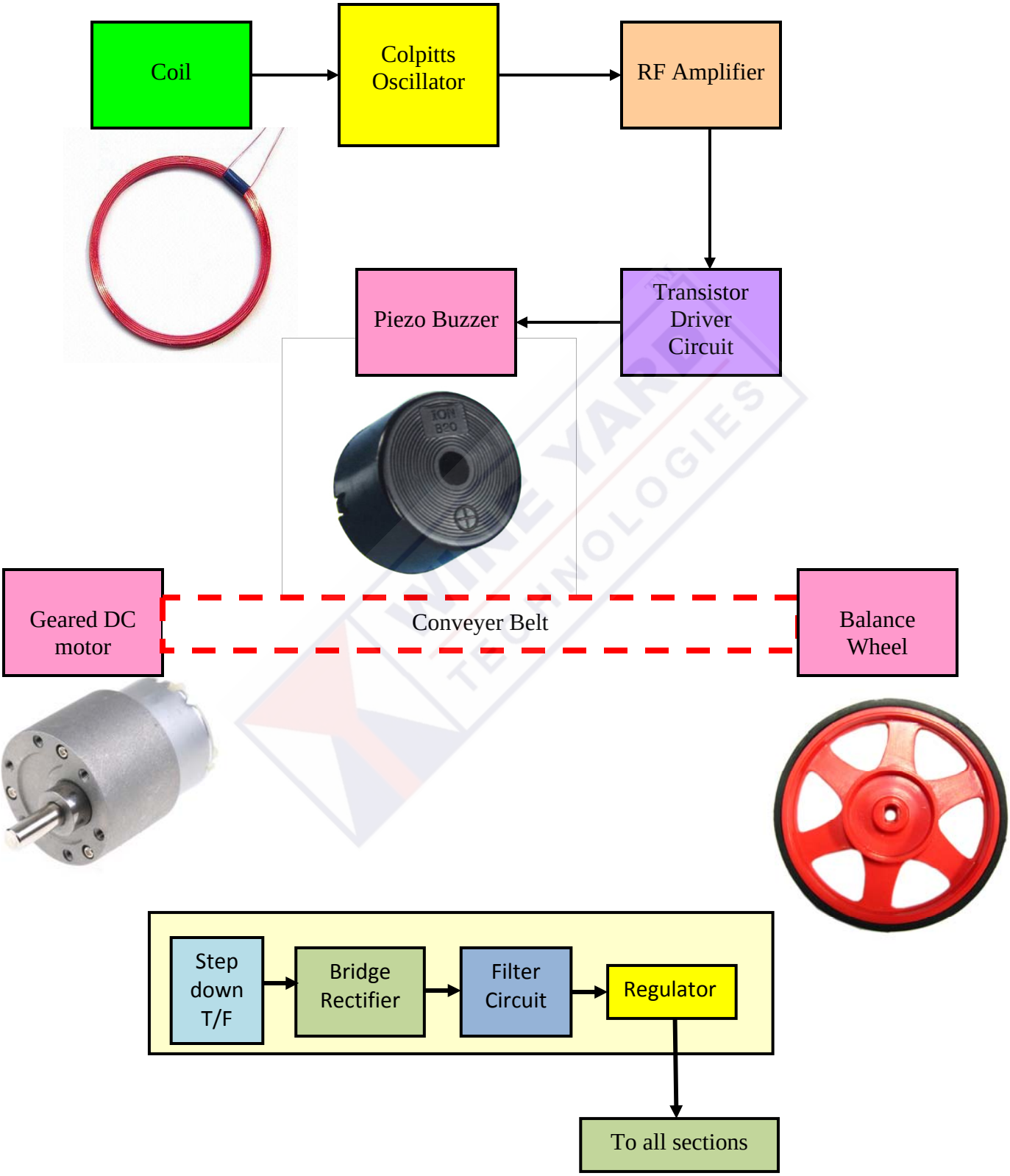
Security is a prime concern in airports, temples, museums and theaters. This project is a simple yet powerful project. It scans the metal objects and produces a beep sound for audio indication.

This project uses Colpitts oscillator as its main circuit. Transistor based Colpitts oscillator is designed to generate RF frequency. This RF output is amplified by RF amplifier section.

An NPN transistor is used as switch in this project. Whenever a metal is detected, RF frequency is generated and this is amplifier by the RF amplifier section. This amplified signal sends a control signal to the NPN switching transistor. The transistor is operated in saturation and cut off mode to work as a switch. This transistor drives the small DC buzzer.

A geared DC motor with 60RPM is used to control the conveyer belt. Robotic free balance wheel is used to support the conveyer belt on the other end.

This project uses regulated 12V, 750mA power supply. 7812 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac out put of secondary of 230/18V step down transformer.



Advantages:

Highly sensitive

Audible alert with Buzzer

Visual identification with LED

Low cost and reliable circuit

Sensitivity can be adjusted

Applications:

Airprots

Museums

Shopping Malls

Theaters

Temples and Pilgrimage places

Abstract Prepared By

TM

WINE YARD TECHNOLOGIES