Cordless Pressure-Sensitivity and Electromagnetic-Induction System

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1. Abstract

Wireless transmission because of its wireless characteristic, also has the following shortcoming to need to overcome, to will affect falls lowly to: Easy to disturb - in the present environment many electric appliances products to be able to send out the electromagnetic wave, creates the disturbance to the communication, affects the wireless communication the quality. Easy to intercept - because the wireless transmission is easily intercepted, for guarantees the network transmission the security, must use Frequency Hopping Solves, to the human body health influence, will wireless affect the factor which the user will use future wireless to transmit whether will be able universally and massively applies, will be decided to user's receptivity.

2. Introduction

The system with cordless pressure-sensitivity and electromagnetic-induction of the present study comprises the first wireless apparatus and the second wireless apparatus. The first wireless apparatus comprises the first sub-circuit for emitting and receiving an electromagnetic wave with a specific frequency, and the second wireless apparatus comprises the second sub-circuit for emitting and receiving an electromagnetic wave with a specific frequency. The first sub-circuit comprises: an inductance coil, a rectifier that is coupled with the inductance coil and a charge sub-circuit. The second sub-circuit comprises: a sub-circuit for generating a specific frequency that is coupled with the control sub-circuit and a two-way gate control sub-circuit.
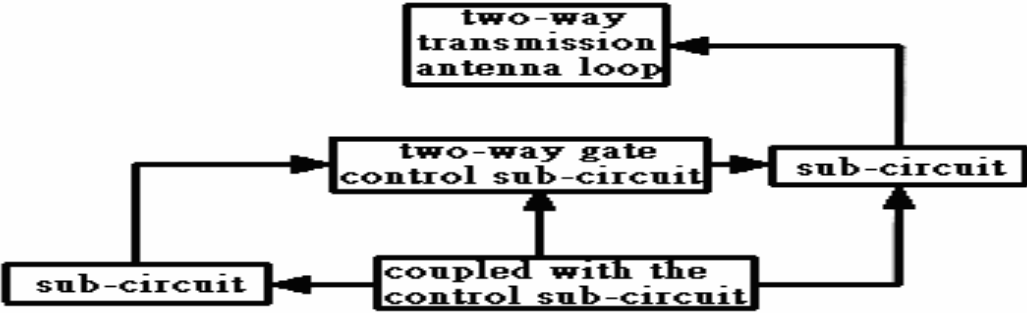
3. System Architecture

The penetration directional antenna launches the RF power source actually is a non- loss process, it delivers the efficiency probably about 85%, sufficiently compares favorably with with any section

high performance switch regulator. Of between two antennas energy transfer efficiency by the antenna size, between the RF wave distance wave length as well as two antennas decide (here in order to simplify question to suppose non- transmission loss, therefore equation in the formula does not contain wave beam intensity). If the supposition transmitting antenna diameter is DT, the receiving antenna diameter is DR, the RF wave length for λ ($\lambda=1/f$, f is the RF frequency), the antenna distance is H, but k is a proportionality constant (usually chooses 1.2), we may obtain: DTDR=2k λ H certainly also must consider the power source density the question. For example, American food and the medicine administrative bureau (FDA) forces to stipulate is apart from microwave oven surface two lnch place, each square centimeter microwave radiation should be 5 milliwatts. Besides satisfies the equation, such safe request also possibly can miniature perform to the antenna size to limit.

4. Conclusion

Another object of the present study is to provide a specific frequency producer. This study can apply the specific frequency producer, so as to generate a specific frequency, and the specific frequency is transmitted via two-way antennas of the tablet to induce current and voltage in the peripheral apparatus that has a charge circuit with inductance coil. The present study can achieve the effect of a wireless charge. Therefore, this study corresponds to economic effect and utilization in industry. In accordance with the present study, a new system with cordless pressure-sensitivity and electromagnetic-induction is provided.
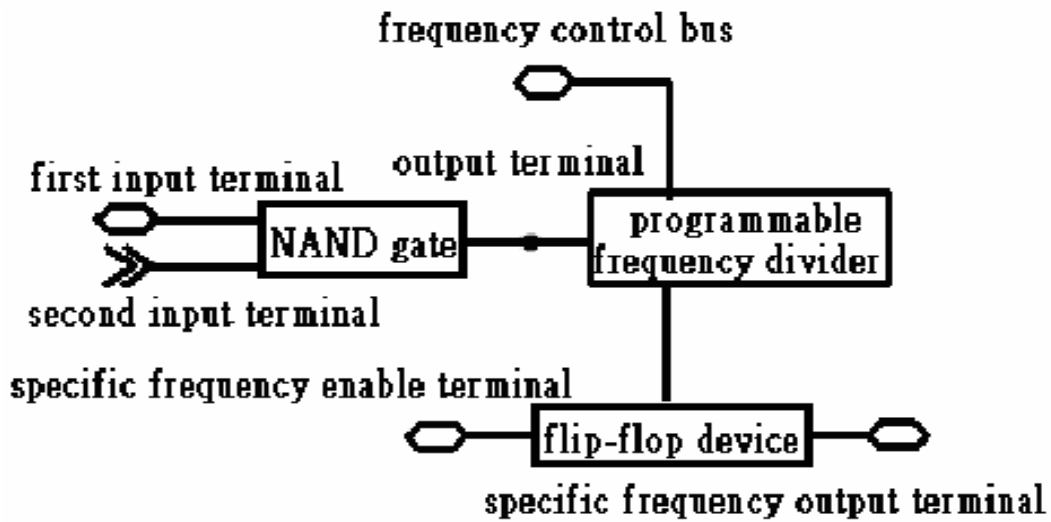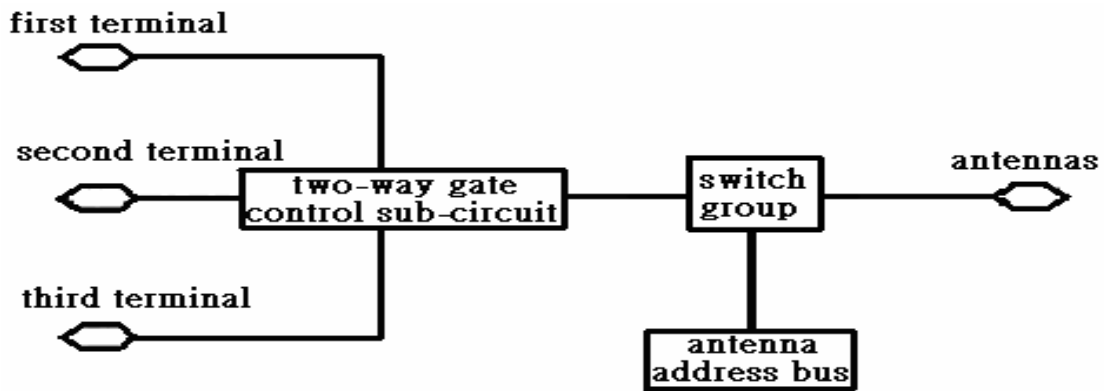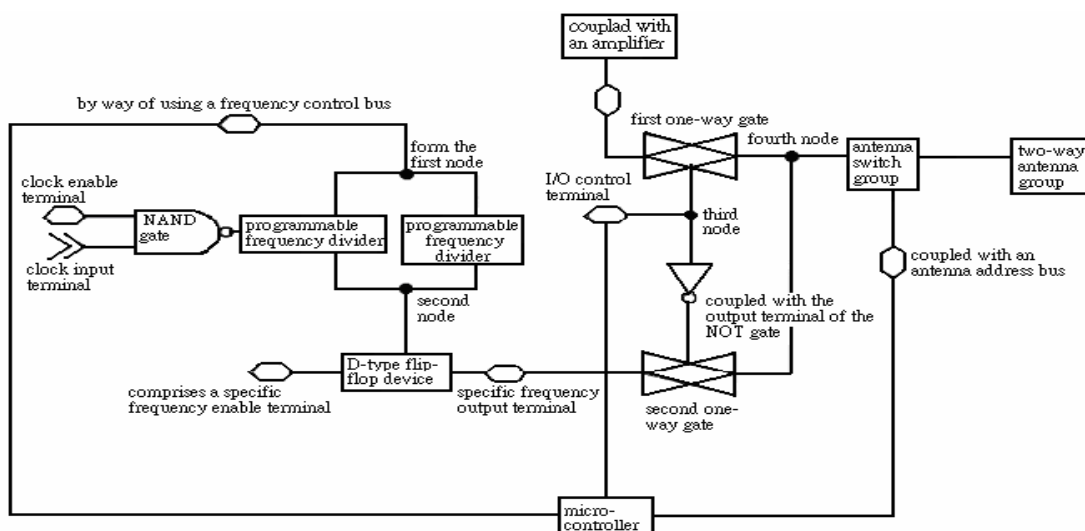

FIG.1

frequency control bus

output terminal

first input terminal

NAND gate

programmable
frequency divider

second input terminal

specific frequency enable terminal

flip-flop device

specific frequency output terminal

FIG.2

first terminal

second terminal

two-way gate
control sub-circuit

switch
group

antennas

third terminal

antenna
address bus

FIG.3

coupled with
an amplifier

by way of using a frequency control bus

first one-way gate

fourth node

form the
first node

clock enable
terminal

I/O control
terminal

antenna
switch
group

two-way
antenna
group

NAND
gate

programmable
frequency divider

programmable
frequency
divider

third
node

clock input
terminal

coupled with an
antenna address bus

second
node

coupled with the
output terminal of the
NOT gate

comprises a specific
frequency enable terminal

D-type flip-
flop device

specific frequency
output terminal

second one-
way gate

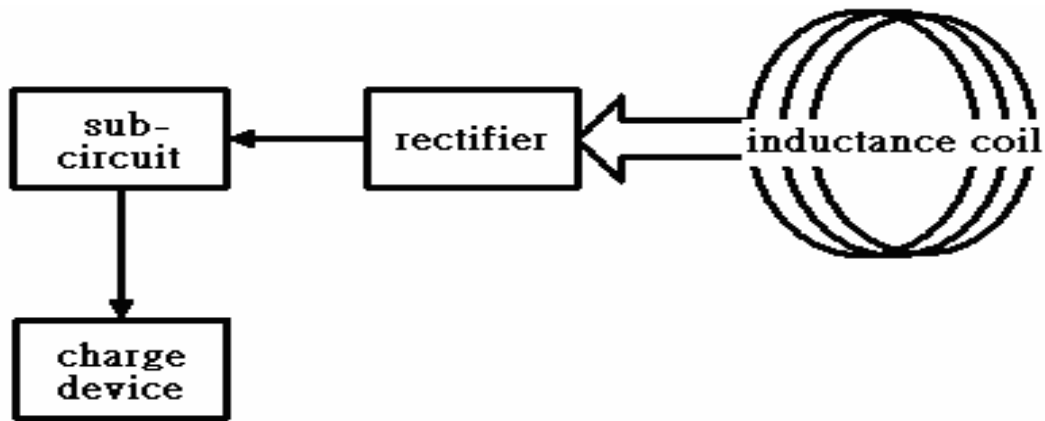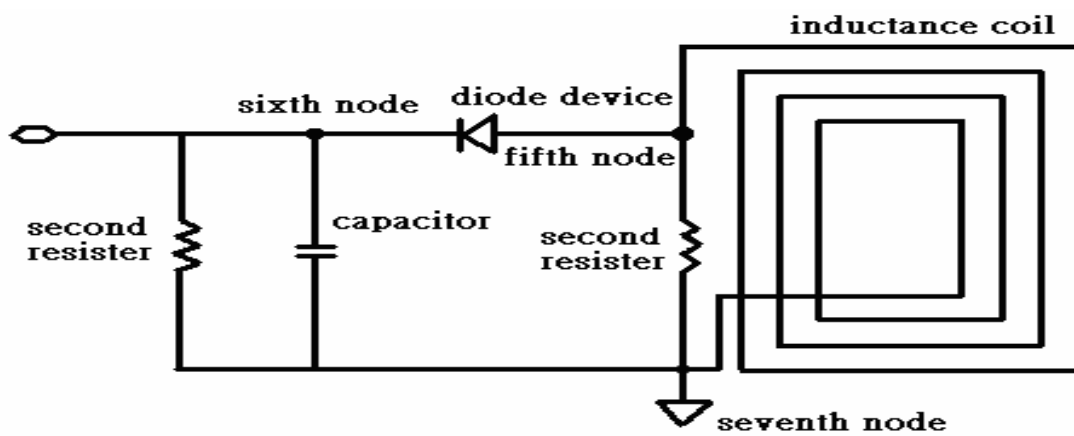micro-
controller

FIG.4

FIG.5

FIG.6

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