

Circuit Description

In transmit mode

When power on, the control stick moved position value become A encode signal is transmitted. Q1 and crystal for oscillator and modulation, Q2 is rf amp, Q3 is rf amp then signal through filter send by antenna.

Antenna and ground circuitry

This unit make use an external antenna, This antenna is inductively coupled.

This unit relies on the ground trace of the printed circuit board. No external ground is provided. energy is supplied by A 9.6VDC 006P alkaline battery.

Background

The device described herein a wireless(RF)TOY AEROPLANE CONTROLLER TRANSMITTER

For use with the toy aeroplane controlled receiver. It has only one channel of

Operation which the user may choose only. And is used to send button-status data form

The controller to a wireless receiver connected with motors.

Typical operation

Typical operation would involve the user turning on the unit to the toy game

when turned on, The unit comes up on the default channel and transmits a continuously stream data. The user can not, At will .Change to any other of the predefined channel.

Configuration

The transmitted rf circuitry consists of a crystal controlled oscillator,

Follow by rf amplifier & filter and antenna. The main characteristics

Of this configuration are shown as below:

Frequency ranges	27.145MHZ
Occupied bandwidth(-26db)	<100KHZ MAX
Frequency stability	+/- 20PPM
Modulation method	FM
Output power	80DBuv/m

Reference oscillator

A 27.145MHZ crystal oscillator is used to generate this reference frequency

It has a stability of +/-10ppm

Amplifier

This Oscillator is followed by 2stage amplifiers. These final output is 80dbuv/m max

Microcontroller

The tx system is controlled by a small microcontroller running with 4mhz +/-5%

Oscillator

The rx system is controlled by a small microcontroller running with internal 16mhz

Oscillator +/-5%.