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Circuit Description

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In transmit mode

When power on, the control stick moved position value become A encode signal is transmitted.

Q1 and crystal for osilator and modulation,Q2 is rf amp,Q3 is rf amp then signal through filter send by antenna.

Antenna and grond circuitry

This unit make use an extenal 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 wirless(RF)TOY AEROPLANE CONTROLLER TRANSMITTER

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

Operation which the usermay choose only.And is used to send button-status dataform

The controller to a wireless receiver connected with motors.

Typical opeartion

Typical opeartion would innolve 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 steam 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.Tha main characteristics

Of this configuration are shown as below:

Frequency ranges 49.890MHZ

Occupied bandwidth(-26db) <100KHZ MAX

Frequency stability +/- 10PPM

Modulation method FM

Output power 80DBuv/m

Reference oscillator

A 16.630MHZ crystal oscillator is used to generate ths reference frequency

It has a stability of +/-10ppm

Amplifier

Ths Oscillator is followed by 2stage amplifiers (one stage is resonance amp) .These final output is 80dbuv/m max

Microcontroller

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

Oscillator

The rx system is controlled by a small microcontroller running with internal 16mhz
Oscillator +/-5%.

pm4:00:00

zw12

pm10

11%

7
7.5
7