

Transmitter Operational Description

CIRCUIT DESCRIPTION

The controller is a 2-channels digital proportional radio controller. It's work with Adjust Resistance Proportional Sense Circuit, A/D Encoder, PPN Plus Encoder combined as proportional value encode and channels mixed encode. combined as RF transmitter circuit. The antenna send the RF signal which modulated by RF transmitter circuit.

1. The proportional value sampling:

For Channel 1, it's work with the Adjust Resistance VR4 and other components R12, VR3 for the amplitude control, and then encode by VR1,U1.

For Channel 2, it's work with Adjust Resistance VR6 and then encode by VR1,U1.

2. A/D Encoder:

A/D encode by A/D convert in IC: U1.

3. PMM Plus Encoder:

PMM Plus encode in IC: U1.

4. AM modulation, Transmit Part:

PMM signal combined with R6, Q3, R14, R15, Q4; RF modulation combined with Q2, L1, X2, C12, C13, R20; RF amplifier combined with Q1, L2, R21, C15, C16;

Filter circuit combined with C14, C17, L3, C18, L4, the antenna send the RF signal.

ANTENNA AND GROUND CIRCUITRY

This unit makes use of an external 80 centimeters long antenna. The unit relies on the ground tract of the printed circuit board. No external ground is provided. Energy is supplied 12-volt batteries ('AA' Size).