

1. Schema

Refer to [fig 1] for the block diagram of the transmitter.

-1. Logic section

Logic section is composed of IC1(microcomputer unit) and the other peripheral/miscellaneous circuits. [fig 2] shows the circuit diagram.

Logic section works:

- *scanning the key-board matrix(including a control lever , mode selectors),and
- *encoding into some appropriate serial code according to the button pressed , and
- *driving the RF section , infrared LED , etc.

-2. RF section

RF section generates the radio frequency signal , including a serial code composed at the logic section , and transmits through the internal monopole antenna.

RF section is composed of:

- *frequency modulator(variable reactance, VC1),and
- *SAW (Surface Acoustic Wave) resonator controlled oscillator (SAW1,Q2),and
- *buffer amplifier(Q3),and
- *band-pass and low-pass filters to suppress the spurious emission(L2 through L6),and
- *voltage regulator(LED1) and transmission control switch(Q1)

2. Serial code format

Refer to [fig 4] for example of baseband format of transmitted serial code.

Due to the button pressed, actual serial code format could be slightly different from this Shown example.

Transmitted radio frequency(RF) carrier shifts higher upon H level of baseband code , and Shifts lower upon L level of it.

3. Operation principle of RF Remote controller.

For the SAT function, it should transmit the RF control signals simultaneously with the Infrared (IR) signal transmission.

The purpose of RF remote control function is to control from the distance that the IR signal can't reach, and /or to control through the objects.(e.g. walls, partitions etc.)