



TR5830 Operation Description

Operation Description Tx-TR5830

Tx-5830 is a Video and audio sender which receive the input video and audio then modulated to FM-modulated signal and upconverting to 5.8GHz band and send it by 5.8GHz antenna. And also receive the IR extending signal from Rx-5830 via 433.92MHz carrier frequency and regenerated to IR signal to control the AV sources. The detailed operations are described as followed.

Powering

The Tx5830 deploy a DC-12V adaptor, the input DC power are through 2 Voltage regulated ICs 7805,78L09 then provide 2 different voltage for modules.

Video and audio Transmission

1. The input video and audio are sent to the “video and audio modulation module” then modulated to FM-modulated signal
2. The modulated FM signal is fed into 5.8GHz Tx module, which upconvert the signal into 5.8GHz band
3. There are 4 channels are available by sliding the slide switch, the frequencies are 5790,5828,5847,5866 MHz
4. Then the RF signal is fed to a 5.8GHz antenna and transmitt out.

IR Extender reception and regeneration

1. IR receiving module take the received RF signal and decode it to original data
2. Then through a IR regenerated circuit to produce IR electric signal,(user can change the IR carrier frequency via a slide switch to match the IR carrier frequency of their device)
3. Then the electric signal is convert via a IR Mouse(there is a IR LED) to IR signal to control the audio and video source.

Approved

林茂榮

Checked

蕭訓桐

Prepared

黃世忠



TR5830IR Operation Description

Operation Description Rx-TR5830

Rx-5830 is a Video and audio receiver which decoded the signal from 5.8GHz antenna then convert the signal to composite video and audio to TV set. And also transmitt the received IR signal from user press the remote controller, then coded and upconvert to 433.92MHz carrier frequency and sent to an IR extender antenna and radiated to the Tx-5830. The detailed operations are desribed as followed.

Powering

The Tx5830 deploy a DC-12V adaptor, the input DC power is through Voltage regulated ICs 7805 to provide 5Vdc for modules.

Video and audio reception

1. The input RF signal from a 5.8GHz antenna, then fed into a 5.8GHz Rx Module.
2. The 5.8GHz Rx module downconvert the RF signal into FM signal. There are 4 channels are available by sliding the slide switch, the frequencies are 5790,5828,5847,5866 MHz
3. The FM signal is fed into a FM de-modulation module and convert to Composite Video (or S-Video) and Audio RL
4. Then the Video and audio are fed into a TV set.

IR Extender transmission

1. IR signal receiving module take the received IR signal from the remote controller (user to press any key) and code it to digital data
2. Then through a IR extender 433.92 MHz SAW filtered siganl generater circuit. Then through an amplifier circuit to produce RF signal,
3. Then the RF signal is thorough a bandpass filter to provide useable 433.92MHz RF signal
4. Then the bandpass filtered RF signal is fed to a transmitter ciruit and though a 433.92MHz antenna to send back to Tx5830..

Approved

林茂榮

Checked

蕭訓桐

Prepared

黃世忠