

Date: 10th August 2006

FCC ID: UGESP205

Circuit Description

The Player basically consists of 2 portions.

Audio Decoder IC1 decodes the audio file from SD/MMC connection and the audio signal is output from the pin 46 (left channel) & pin 39 (right channel). The 12.288MHz crystal provide the clock timing for the overall operation.

FM Stereo transmitter IC6 takes the audio signal from IC1 or Line In input from J1 for the modulation of the FM.

The 38kHz multiplex signal and 19kHz pilot tone are derived by dividing down the 7.6MHz crystal oscillator located at pins 14 & 15 of IC6. The frequency is first divided by four to obtain 1.9MHz and then divided by 50 to obtain 38kHz. This is then divided by two to derive the 19kHz pilot tone.

The varactor diode D4 forms part of this capacitance, the RF oscillator frequency can be altered by varying its value. In operation, the varactor diode's capacitance varies in proportion to the DC voltage applied to it by the output of the PLL phase detector.

The transmitting frequency can be changed by the setting of the Dip Switch SW5.

The transmission output from pin12 of IC 6 goes to the attenuator network and L2 acts as an matching inductor that provide proper coupling of the antenna to the output stage.

The antenna consists of a strip of copper track on the PCB.

Operation Descriptions

The Player is operating at 106.7~107.9MHz. It is powered by a 12V DC car battery and the transmitting frequency is crystal controlled. The Player is always in the playback mode once the SD/MMC is inserted.