

3in1 FM Stereo Audio Transmitter Circuit Description

1. Charger side circuit analysis:

Power is taken from the cigarette lighter adapter at DC12~24V and fed into the DC/DC voltage regular at U3. After being routed to R19/R20 for current limiting and R17/R18 for voltage limiting, power is then output to the USB Female port at a output voltage of $DC5.0\pm0.2V$ and a current of 500mA(max)

2. Transmitter side circuit analysis:

Power is taken from the cigarette lighter adapter at DC12~24V and fed into the 3-term voltage regulator at U1. The regulated 5.0V voltage is then supplied to U2. Left and right channel audio signals now enter through Pin 1 and 22 of U2. After being processed by the U2 IC, the stereo audio regeneration signal is output through Pin 5, while the RF signal is output through Pin 11, amplified by Q2 and finally sent to the antenna end. The transmitting frequency is set by the switch between the range of 88.3~88.9MHZ.