

# THE WORK FLOW OF WL1805

The WL1805 PORTABLE FM STEREO TRANSMITTER is mainly connect of two parts:


- 1:the frequency modulator part.
- 2:the power supply circuit.

## Part1:


The BH1417F is a FM stereo transmitter IC that transmits simple configuration. The IC consists of a stereo modulator for generating stereo composite signals and a FM transmitter for broadcasting a FM signal on the air. The stereo modulator generates a composite signal which consists of the MAIN, SUB, and pilot signal from a 38kHz oscillator. The FM transmitter radiates FM wave on the air by modulating the carrier signal with a composite signal. Frequency is set for North America.

### Features

- 1) It is possible to improve the timbre because it has the pre-emphasis circuit, limiter circuit, and the low-pass filter circuit.
- 2) Built-in pilot-tone system FM stereo modulator circuit.
- 3) The transmission frequency is stable because it has a PLL system FM transmitter circuit.
- 4) PLL controls data input in parallel (4bits, 14ch for North America).

 **Absolute maximum ratings** (Ta = 25°C, In measurement circuit.)

Parameter	Symbol	Limits	Unit	Conditions
Supply voltage	<b>Vcc</b>	+7.0	<b>V</b>	<b>Pin8,12</b>
Data input voltage	<b>Vin-d</b>	0.3~Vcc+0.3	<b>V</b>	<b>Pin15,16,17,18</b>
Phase comparator output voltage	<b>Vout-p</b>	.0.3~Vcc+0.3	<b>V</b>	<b>Pin7</b>

 **Recommended operating conditions** (Ta = 25°C)

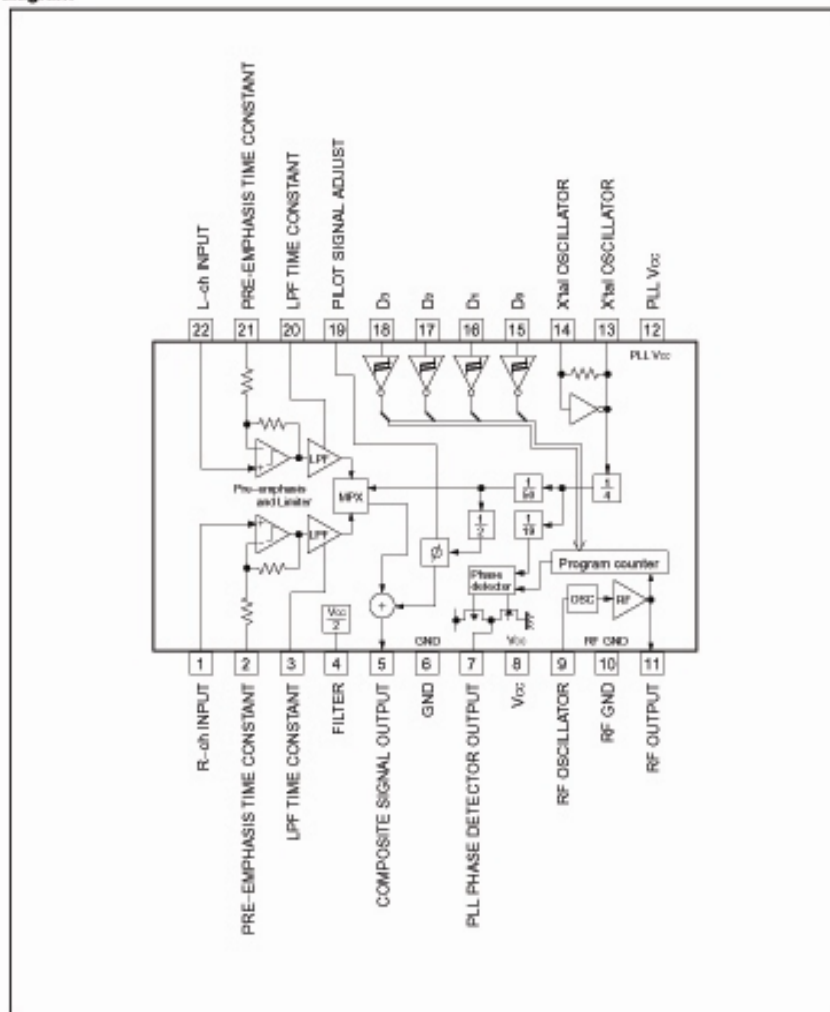
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating supply voltage	Vcc	4.0	-	6.0	V	Pin8,12
Operating temperature	Topr	-4.0	-	+85	°C	
Audio input level	Vin-A	-	-	-10	dBV	Pin1,22
Audio input frequency band	fin-A	20	-	15K	Hz	Pin1,22
Pre-emphasis time constant set up range	τ PRE	-	-	155	uS	Pin2,21
Transmission frequency(200kHz step)	fTx	88.7,106.7	-	88.9,107.9	MHz	Pin9,11
Control terminal "H" level input voltage	Vih	0.8Vcc	-	Vcc	V	Pin15,16,17,18
Control terminal "L" level input voltage	Vil	GND	-	0.2Vcc	V	Pin15,16,17,18

Stereo audio signal(Pin1,22) amplified after and the 38KHz signal will be mixed and processed, then this stereo modulated signal will be add to the outside oscillator, Pin11 export the modulated 88.1-107.9MHz radio signal, then this signal be amplified after be send to space by one antenna.

Change the voltage of the programmable control port(pin15,16,17,18 connected to swith), the output

frequency from antenna could be change into twelve point: 88.1, 88.3, 88.5, 88.7, 88.9, 106.7, 106.9, 107.1, 107.3, 107.5, 107.7, 107.9MHz.

●Block diagram



Part2:

The power supply circuit is mainly consist of DC/DC converter 78L05, 6V DC voltage from DC-JACK can be convert to 5V by the 78L05. this part can supply 5V voltage to all other IC and circuit to work. the 4×AAA battery can supply 4-6V voltage to all other IC and circuit to work. the 4×AAA battery.

