OPERATION DESCRIPTION FOR 49MHz FM WIRELESS HEADPHONE

Transmitter;

The transmitter is switched and connected to the input audio signal. The AF signal flow the voltage control capacitor diode to modulate with an oscillation frequency which controlled by a phase lock loop controller IC SA8803. This circuit is a transmitter for FM and amplifier by a transistor 9018G to transmit the RF signal by a rob antenna.

Receiver;

It received the signal from the wire antenna at the head belt. The signal flow a Transistor RF signal amplifier and go into a mixer which combine with a crystal control local oscillator. It produce an IF signal and it go into a FM receiver IC TA2003 to demodulate the AF signal. The TAD2822M amplified the AF signal and flow the speaker to provide the audio sound to the user.

Antenna and ground circuitry

This unit set makes use of a external flexible rob antenna for the transmitter and external fixed wire antenna for the receiver. Those antenna are inductively coupled. The unit set relies on the ground tract of the printed circuit board. No external ground provided. Energy is supplied by a 6 Volt batteries or AC/DC adaptor for the transmitter and 3 Volt batteries for the receiver.