

OPERATION DESCRIPTION FOR 49MHz FM WIRELESS OUTDOOR SPEAKER CEW210

Transmitter;

The transmitter is switched and connected to the input audio signal. The AF signal flows through the voltage control capacitor diode to modulate with an oscillation frequency which is controlled by a phase lock loop controller IC SA8803. This circuit is a transmitter for FM and amplifier by a transistor C9018 to transmit the RF signal by a rod antenna.

Speaker Receiver;

It receives the signal from the wire antenna at the speaker cabinet. The signal flows through a Transistor RF signal amplifier and goes into a mixer which combines with a crystal control local oscillator. It produces an IF signal and it goes into a FM receiver IC SC1088N to demodulate the AF signal. The KA2206D amplifies the AF signal and flows through the speaker to provide the audio sound to the user.

Antenna and ground circuitry

This unit set makes use of an external flexible rod antenna for the transmitter and external fixed wire antenna for the receiver. Those antennas are inductively coupled. The unit set relies on the ground track of the printed circuit board. No external ground is provided. Energy is supplied by a 7.5 Volt battery or 9.0 AC/DC adaptor for the transmitter and 12 Volt battery or 12V AC/DC adapter for the receiver.