

Principles of Operation

The OSMAC Base is a multi-functional unit that can be used to communicate between the built-in speaker/microphone, pagers, two-way radios and the telephone interface. The internal circuitry is comprised of numerous elements as shown on the block diagram below. These include radio transceiver, telephone interface, microprocessor, front panel I/O, DTMF encoder/decoder, CTCSS encoder/decoder, speech synthesizer (DAC), microphone amplifier, speaker amplifier, analog filters, limiting amplifier and analog switch matrix. The microprocessor controls all circuitry as needed for the desired communication function. The encoders generate needed audio signals and the decoders detect incoming control signals on the received audio. Analog switches route the analog signals within the unit.

