

4120T1--TECHNICAL DESCRIPTION:

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The 4120T1 is a small battery (two CR2032s) powered door chime transmitter contained in plastic casing, meant to be wall/door-frame mounted, and serve as an RF replacement for regular house-hold wired doorbells. The case is made of plastic and measures 3.30 inches long, 1.10 inches wide and .810 inches tall, with the button protruding another .155 inches for total height of .965 inches. The case opens manually for battery changing and there are two screw holes on the case back-cover for mounting the transmitter to a surface.

There are two user momentary pushbutton switches on the transmitter, one for the RING function and a second for the SCROLL function. The scroll function is to change songs on the receiver. There are also 5 ADDRESS jumpers, all hard-wired & soldered to the board, in shorted position. This is the normal address setting. If two or more of the 4120T units are used in proximity and with two different receivers, an address jumper may be cut on one xmtr-rcvr set to differentiate the two rcvr-xmtr sets and allow independent operation.

Operation: When a button is depressed a micro-processor, clocked with a 4MHZ resonator, is activated. Once activated, the micro sends out pulse-position encoded modulation to the RF section and functions in the ASK mode. The theoretical duty cycle of the modulation is about 13%. The total transmission time is 1.6 seconds. The modulated bits are unique to the receiver and contain address bits, song bits, and more. The RF section is a simple one-transistor, SAW controlled 315MHZ oscillator, and employing a loop antenna.

The power supply is two CR2032 Lithium batteries for a total of 6VDC. The output directly supplies the RF section and a 3V regulator that is used to supply the microprocessor.