

RC3922T--TECHNICAL DESCRIPTION:

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The RC3922T is a battery (two 1/3N cells) powered door chime transmitter contained in plastic casing, and meant to be vertically mounted on a wall, door, or post-pole. The unit uses a large RING button that is 2.50 inches in diameter and makes it easier for physically impaired people to activate the transmitter. The general shape is the same as an old-fashioned inverted key-hole.

The case is made of plastic and measures 5.35 inches in height, 1.65 inches in thickness (button included) and 3.210 inches wide. The case is two pieces, the front and back. The front is the main bulk of the case and mounts to a back cover via three side screws. The back cover also has four holes on it for mounting the transmitter to a surface. Access to the case interior is needed for replacing batteries, SCROLL button activation, and changing the address jumpers.

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 the shorted position. This is the normal address setting. If two or more of the RC3922T units are used in proximity (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 crystal, is activated. Once activated, the micro sends out a pulse-position encoded modulation word to a Atmel U2745 RF IC, which generates 315MHZ using a 9,8745MHZ crystal, and is functioning 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 employs a PCB track loop antenna.

The power supply is two 1/3N Lithium cells for a total of 6VDC. The output directly supplies a 4.4V regulator, which in turn supplies both the microprocessor and the RF section.