

# 64 Key Infrared Remote Controller Using PT2222M -NEC Code

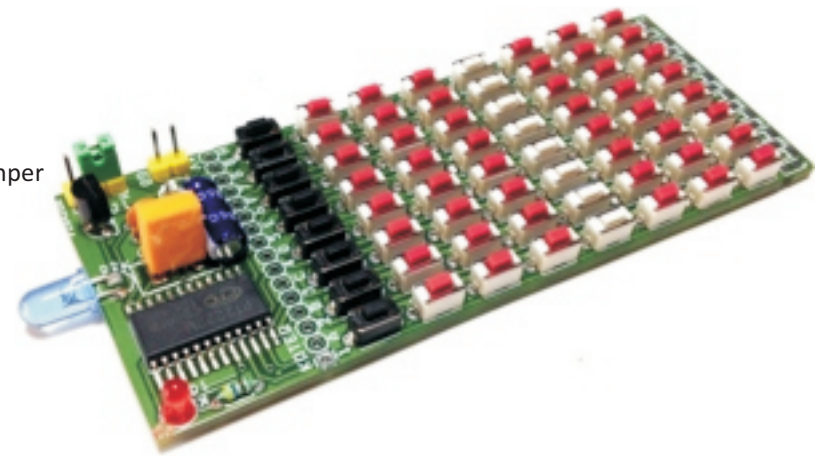
64 channels Infra-Red Remote Transmitter circuit build around PT2222M IC, The IC is pin to pin compatible with NEC uPD6122 respectively, the remote is capable of controlling 64 functions keys and 3 double keys. The PT2222M Infra-red remote control transmission ICs using the NEC transmission format that is ideally suited for TVs, DVD Players, Audio Equipment, Air Condition, etc. By combining external diode and resistors, maximum of 65536 custom codes can be specified. The NEC transmission format consists of leader codes, custom codes (16 Bits), and data codes (16 Bits). It can be used for various systems through decoding by a microcontroller.

## Features

- Low Voltage 2V To 3.3V
- Low Current dissipation: 1uA Max (Standby)
- Custom Codes: 65536 (Set by optional provided diodes and resistors)
- 64 Codes (Single Input) , 3 Codes ( Double Input) , Expandable up to 128 Codes through J1 Jumper

## Application

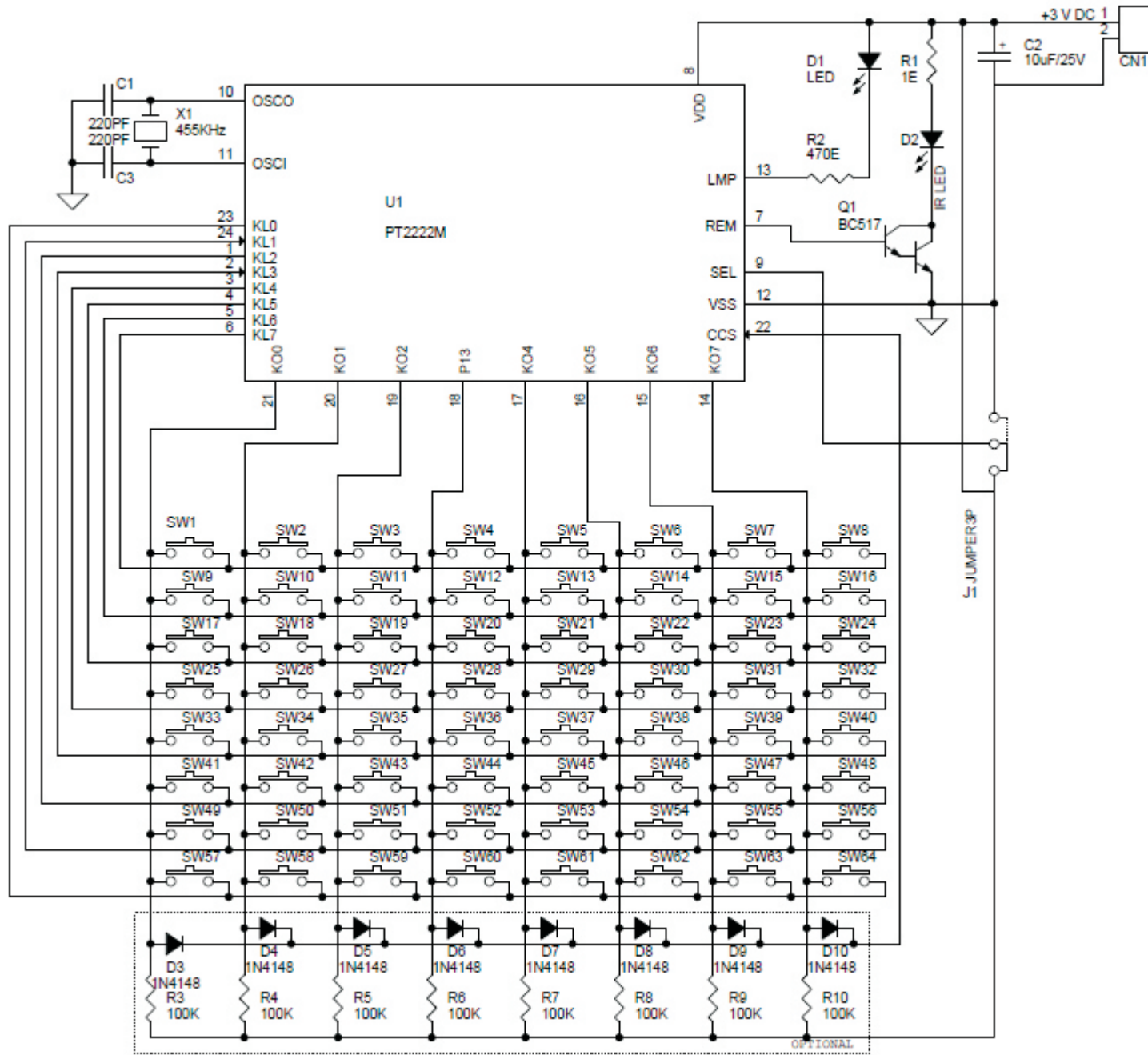
- Audio Equipment
- TV
- Cable TV
- Air Condition
- DVD Player
- Robotics

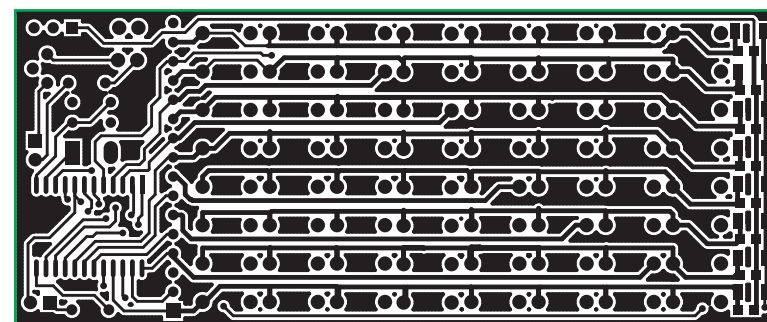
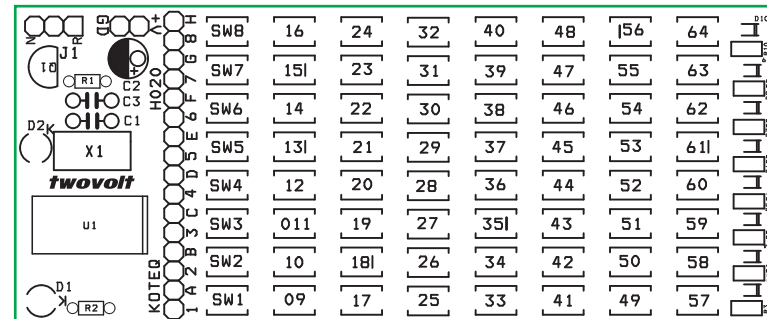
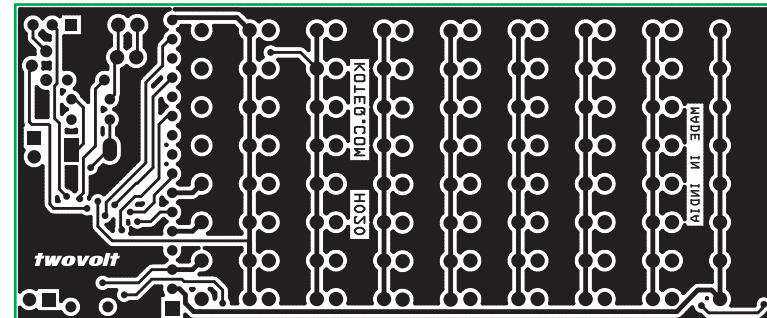


## Key input pins (KI0 to KI7), key input/output pins (KI/O0 to KI/O7)

When several keys are pressed simultaneously, the transmission of the corresponding signals is inhibited by a multiple-input prevention circuit. In the case of double-key input, transmission is inhibited if both keys are pressed simultaneously (within 36 ms interval); if not pressed simultaneously, the priority of transmission is first key, then second key. When a key is pressed, the custom code and data code reading is initiated, and 36 ms later, output to REM output is initiated. Thus if the key is pressed during the initial 36 ms, one transmission is performed. If a key is kept pressed for 108 ms or longer, only leader codes are consecutively transmitted until the key is released. Keys can be operated intermittently at intervals as short as 126 ms (interval between two on's), making this an extremely fast-response system.

- **The REM output pin outputs the transmission code, which consists of the leader code, custom code (16 bits), and data code (16 bits)**
- **By controlling D7 of the data code with this pin, the PT2222M can transmit 64 and 128 different data codes, respectively. By connecting the SEL pin to VDD or VSS via on board Jumper , D7 is set to "0" or "1", respectively.**
- **By placing a diode between the CCS pin and the KI/O pin, it is possible to set a custom code. When a diode is connected, the corresponding custom code is "1", and when not connected, it is "0".**
- **The LMP pin outputs a low-level signal while the REM pin outputs a transmission code.**





BOM			
SR.	QNTY.	REF.	DESC.
1	1	CN1	2 PIN HEADER CONNECTOR
2	2	C1,C3	220PF
3	1	C2	10uF/25V
4	1	D1	3MM RED LED
5	1	D2	5MM INFRA RED LED
6	8	D3,D4,D5,D6,D7,D8,D9,D10	1N4148
7	1	J1	3 PIN JUMPER
8	1	Q1	BC517
9	1	R1	1E
10	1	R2	470E
11	8	R3,R4,R5,R6,R7,R8,R9,R10	100K OPTIONAL
12	64	SW1-SW64	2 PIN TACT SWITCH
13	1	U1	PT2222M SMD
14	1	X1	455KHz RESONATOR

