



**IDT Technology Limited**

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## FACSIMILE COMMUNICATION

### Technical Description

Desktop dual-band Radio Controlled Projection Clock with remote PIR (Passive Infrared) motion sensor

- Radio Controlled Clock function
- Polyphonic alarm sound
  - Projects time and alarm status on ceiling or vertical wall
  - Indoor Temperature display
  - Receive signal from remote motion sensor
  - Soothing Sound function
  - Optional feature for wireless wake-up vibrator
  - Package includes: 1 x clock unit (receiver)  
1 x remote motion sensor (sender)

The RMR939PA is powered by 6V d.c. (4 x “AA” battery). In circuit diagram of RMR939PA, U1(SIC63666) is MCU, it perform indoor temperature and data to transmit RF signal and drive alarm detection and handling function. U4(TRS5H120), U5(4051), U14(4051) and U7(2073) is melody circuit. U8(MSM64162A) is a the projection of MCU. it perform the data to transmit and drive LCD display. U4(msm64164c) and U1(6011) is RF clock receive IC , it perform the data handling function for RF clock. The RF receive circuit of RMR939PA is a super-regenerative type. It’s centre frequency is 433.95MHz, U1-A is a an envelope detector and U1-B is a comparator. Q1, Q2 is a LNA. L5,C5,C2,C7 is to matching between antenna & LNA of the super-generative receive module.

The transmitter is made of a Colipittis Oscillator, with a 433.92 MHz SAW resonator (X1) to guarantee the carrier center frequency. The transmitting power will be controlled by adjusting the value of a matching network (L6, C43, L10, C33, C31, L12 and C44) and an attenuator (R23).