



IDT Technology Limited

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## Cool RF Projection Clock with animated projection IDT model no. RM818PA

# Technical Description

## Introduction

This unit is a simple radio control clock with projection function. It can activate pillow vibrator through RF carrier in frequency of 433.93MHz. It is designed for indoor usage and it is powered by 2 piece. 'AAA' size battery cells.

## Main MCU

MCU is a simple radio control clock. The clock will automatic update by receiver IC. And send data to projection MCU. This MCU will show information by Main LCD. This MCU detect battery by low battery inspect circuit.

## Projection MCU

Projection MCU is a simple clock which receive data and show information to the projection LCD. Projection MCU also can control the projection LED, when user press light key. When User select pillow vibrator, MCU will transmit data by 433.93MHz RF transmitter Circuit.

## Radio Control Clock Circuit

It is 60KHz AM receive IC modulate. It will receive 60KHz broadcast signal.

## RF transmitter Circuit

It is 433.93MHz AM transmit modulate. The transmitter is made of a Colipitts Oscillator, with a 433.92 MHz SAW resonator (X5) to guarantee the carrier center frequency. The transmitting power will be controlled by adjusting the value of a matching network (L2, C25, L3, C46 and C45) and an attenuator (R9, R8 and R11).

## Low Battery Inspect Circuit

This is MCU detects low battery signal with this Circuit.

## Buzzer and EL

Buzzer will alert the User, when User had set the alarm time and enable the alarm function. EL is work as backlight when User press light key.

## Reset Circuit

It uses reset the unit.

## Function option for operation mode

It uses to select funtional option at the production. Customer cannot see the short pads.