Wireless Clock Operation Principle

TX circuit:

1. use battery or AC adaptor Power supply to the stable voltage IC5(CYT6169), the stable voltage 1.5V DC will supply. this power to the clock IC2(MTK5010),use the crystal Y2(32.768KHZ) to adjust the standard frequency. In the mean time,the stable voltage 1.5VDC will drive the clock IC2 to display the LCD,use key K2(mode), K3(set),K4(Adjust) to adjust the time of clock.

2. If the switch S1 select to buzzer position, when the alarm is on and IC2 number pin33 will output the signal to transistor Q10 to drive the buzzer sound.

3. If the switch S1 select To vibrator position ,when the alarm is on,the IC2 number pin33 will output the signal to R11, C4 and coupling to IC3 opposition amplifier HEF4069 number pin1, combine some components to amplify, rectify the circuit then double opposition, it will output the DC high level frequency signal to drive the transistor Q5(2N3904) and Q6(S8550),the 3VDC power will input to IC4(EX34063) number pin6, The IC4,L2,D3,R16,R17,R18,CE5 combine together to have DC-DC 12VDC rise voltage circuit, output this 12VDC power to Q3(C1815), Q4(C1815), IC1(TL2262R), Q1(2SC2669),Q3,Q4 with the other compoments to construct a low level   frequency 1HZ double stable oscillation circuit, the Q3 will output this 1HZ low level frequency to IC1 number pin12 then control the code, this code will output from IC1 number pin15, the IC1 will combine with the other components to construct a code circuit, Q1,C3,C18,C1,C2,C17, adjustable capacitor for CV1,coil to constract a LC 315MHZ high level frequency oscillation circuit. the IC1 number pin15 will

output the DC code signal to Q1, the Q1 will oscillation then combine the PCB coil to transmit 315MHZ code signal

Receive circuit:

1. When the switch select to on position, the lithium battery 3.7VDC will supply the power to IC3(S812) to stable output the power 3VDC,the IC2(CYT809) is a DC3V detect IC to pretect the lithium battery leakage the power, the Q2(S9018). L1, C1, C2, C3, PCB and the other components to constract a receive circuit, the code signal pass through R5, C6 and coupling to Q3(C1815) then amplify the signal,C8 coupling to IC4(TL2276) number pin12, this IC will Amplify the de-code signal then the number pin15 will output the high level frequency let the Q5(S8050) drive the motor MG1.

Charge battery:

AC power adaptor plug into the receiver jack1 will input the power to IC1 (CYT5026) number pin4,this IC1(CYT5026) combine the other componcuts then can charge the battery from number pin3.