

## Operation Description

The device is a LCD display wireless thermometer with waterproof Transmitter operating on frequency 433.92MHz using for detecting the temperature of the swimming pool automatically then sending to the receiver by every 5 minutes, the data would be displayed on the receiving unit's LCD, the unit is powered by two AA batteries.

### Specifications

Battery Requirements

Operating Voltage: 3.0Vdc

Batteries: 2 x AA battery

### Operating Temperature

Operating temperature : -20 °C to 60 °C

Relative humidity : 0 to 85% non condensing

### Transmission Frequency and Range

Carrier frequency : 433.92MHz

Modulation : ASK

RF output power : 0.126mW

Range : 30 meters

### Periodic Transmission

transmitting the data for 1 seconds and standby for 5 Minutes

## The Description of Circuit of TMT-53590:

### 1. Mainboard section

Power management: 3.0Vdc from two AA batteries.

Three IOCs to response the operational button.

Four IOAs for RF transmitter.

Nine SEGs to control LCD.

### 2. LCD Section

1.2 inch LCD Screen

Two LED light

### 3. ASK Transmitter module

The ST-SAWR is designed specifically for remote- control, wireless mouse and car alarm system operation at 433.92MHz.

### Absolute Maximum Ratings:

Parameter	Symbol	Condition	Specification					Unit
			Min.	Typical			Max.	
Voltage Operation				2.6	3			V
Output power	Psens	DATA 3V 1Kbps Data Rate	315MHz	-11.8	4			dBm
			Supply current	3.1	10		15	mA
			434MHz	-8.5	4			dBm
			Supply current	2.9	10		15	mA
Tune on Time	Ton	Data start out by Vcc turn on	10	20				ms
Data Rate			200	1k			4k	bps
Input duty		Vcc=3V; 1kbps data rate	40				60	%