HOW THE SILWATCH RECEIVER OPERATES

A high-frequency signal received by the internal loop antenna is amplified by the RF AMP (Q1). Signal components in the undesired band are eliminated by the SAW FILTER (FL1), and added to the MIX (Q3). Also, signals of 6 times the signal from the local oscillator that oscillates at the frequency of 1/6 of circuit frequency - 450 kHz by the LOCAL OSC. (Q2) and crystal (X1) are also added to the MIX (Q3), and MIXED with the signals from the RF.

After being converted to the signal of 450 kHz of IF and amplified by the IF AMP (Q4), as well as after elimination of the frequency components other than 450 kHz by the BAND PASS FILTER (FL2), and after being fully amplified and demodulated at the IF-IC (A1), they are waveform generated to digital signals by the internal comparator, and input to the CPU (A4).

When the data is analyzed by means of the software processing of CPU (A4) and matches with the proper ID, an alarm is issued by a vibrator together with the corresponding message display.

The CPU (A4) has a clock function and an alarm function in addition to the receiving operation.

The operating clock of CPU (A4) is performing the intermittent reception at 32.768 kHz and at a rate of 1 time per second(approx. 30 sec.). When detecting a preamble signal from the transmitter, the flame synchronous signal is detected, and an identification code succeeding to it is received for a period of about 3 seconds maximum. When confirming no error in the data received after the detection and matching with the proper ID, the alarm operation functions.

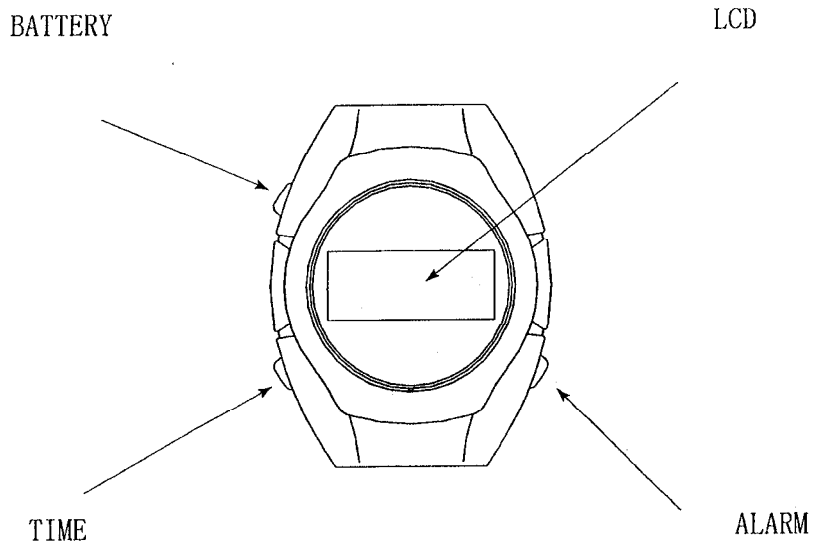
The alarm operation activates the vibrator 3 times for 0.5 sec. Each, and also performs the flickering of the LCD 3 times, and displays for approx. 14 sec. in total. In the meantime, no new receiving operation is carried out.

BATTERY Cell check by the back light

LCD Displays the message.

TIME Make the time matching mode, as well as set the "Hour"

ALARM Make the alarm set mode, as well as set the "Second".


BATTERY
LCD
TIME
ALARM