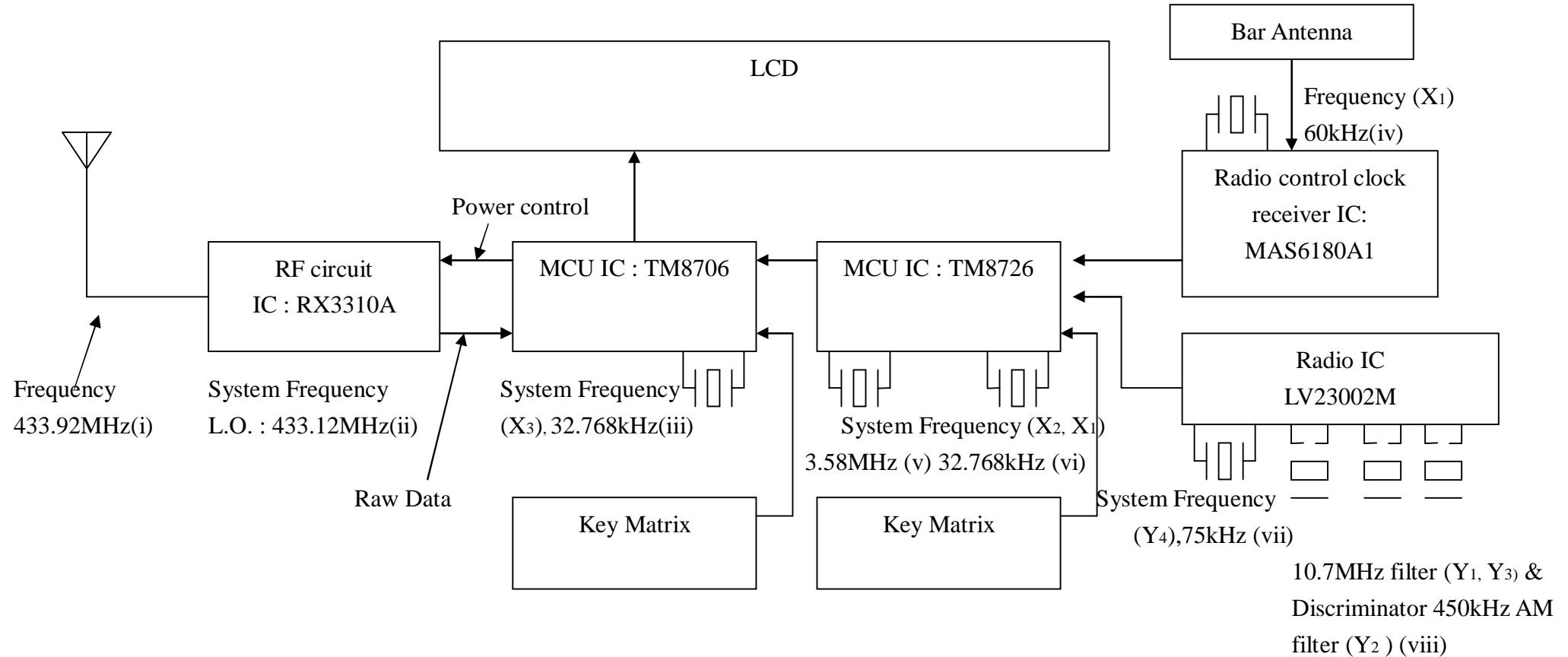


## Block Diagram of 4950 ( Rx )



- (i) The frequency is the frequency that the antenna received
- (ii) The L.O. is 433.12MHz
- (iii) The frequency is the clock of the MCU for normal operation
- (iv) The frequency is the frequency that the antenna received
- (v) The frequency is the fast clock of MCU for the communication with radio IC LV23002M.
- (vi) The frequency is the the clock of the MCU for normal operation
- (vii) The frequency is the operating frequency of radio IC LV23002M
- (viii) The 10.7MHz filter and discriminator is for FM radio
- (ix) The 450kHz filter is for AM radio

### ***Technical Description of the Circuit:***

The product can divide into three parts, RF, radio and Baseband, the RF circuit is a single conversion, super-heterodyne architecture receiver IC. The incoming RF signal received by the antenna is fed to the RF input terminal of the IC RX3310A, then the RF signal is then amplified by the LNA in the IC RX3310A. The amplified signal will fed to the mixer input, the LO for the mixer is generated by the external LC tank circuit, in the above circuit, the LO is 433.12MHz, the IF ( $F_{RF} - F_{LO}$  ) is then demodulated by the demodulator in the IC RX3310A and the IC RX 3310A provide the raw data. The data is then fed to the baseband MCU TM8706 for decoding and the MCU TM8706 will display the decoded temperature at the LCD. On the other hand, the RCC receiver MAS6180A1 receives the RCC signal and decodes the signal to raw data for the TM8726, and then the TM8726 display the time and date form the data received. TM8726 also controls the operation of radio IC LV23002, which requires a 75 kHz crystal. This radio IC LV23002 operates with 10.7MHz filter and discriminator for FM radio and 450 kHz filter for AM radio respectively.