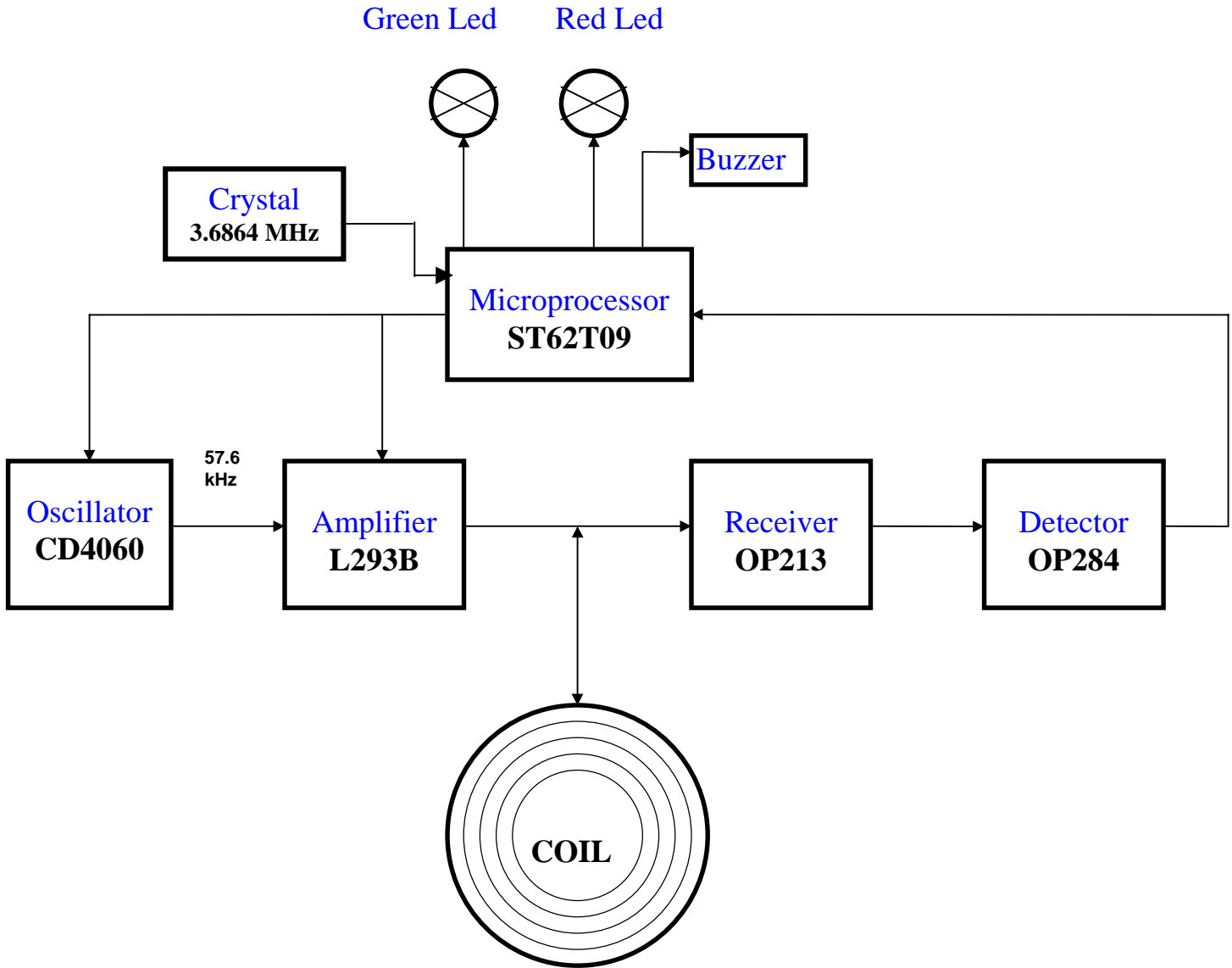


# ZB001



The oscillator generate a tension of which frequency is about 58 kHz.

The amplifier drive the coil and make the label to oscillate. The tension on the coil is about 150V peak to peak.

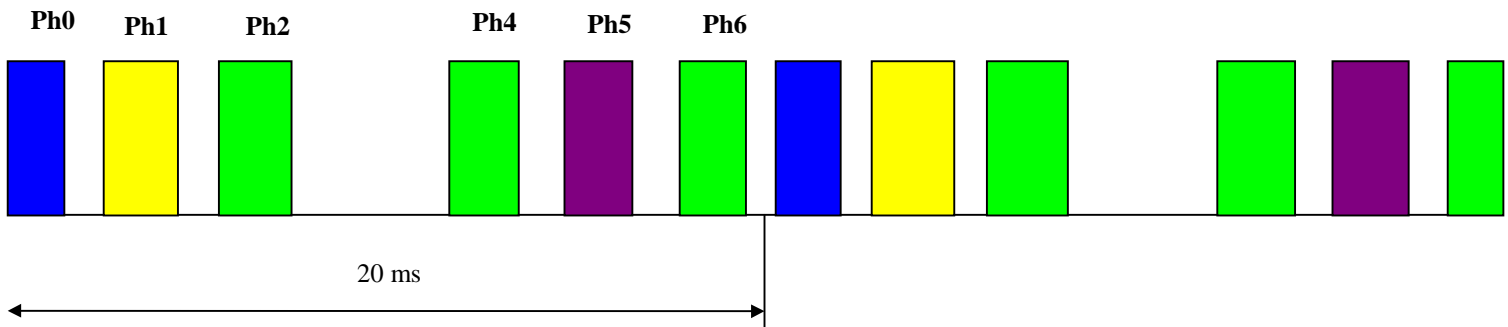
The receiver is a amplifier and a pass-band filter of frequency about 58 kHz. It take the small signal of the coil (the oscillator is down) , amplify it to the detector.

The detector transform a alternative signal to a continue signal. Only the envelop of the primary signal is interesting for the microprocessor.

The microprocessor make the oscillator on and then make it down. Then it make several measure of the detector.  
The result is

- nothing to do
- detection of a label
- inhibition :detection of a noisy signal (screen of a monitor for an example.
- synchronization : detection the emission of another Ultra-Max system.

The microprocessor read also the battery tension, drive two lights and a buzzer.



Ph0 : **Emitting**. The microprocessor make the oscillator and the amplifier on.

Ph1 : **Detecting**. The microprocessor make the oscillator and the amplifier off. Then it measure the continue signal of the detector output. This value is to decide if a label is near.

Ph2,Ph4, Ph6 : **Synchronisation**. Ultra-Max system work with 50 Hz cycles or 75 Hz cycles. The Hand held Verifier cycle is 50 Hz. It need three phases to see the Ultra-Max system presence.

Ph5 :**Inhibition**. If the detector output is high, then it is a noisy signal and the first detection signal is not a label.  
The red light is blinking.