

Wireless Communication

Introduction

Amplitude Shift Keying

- Introduction
- Generation of ASK signal
- Detection of ASK signal

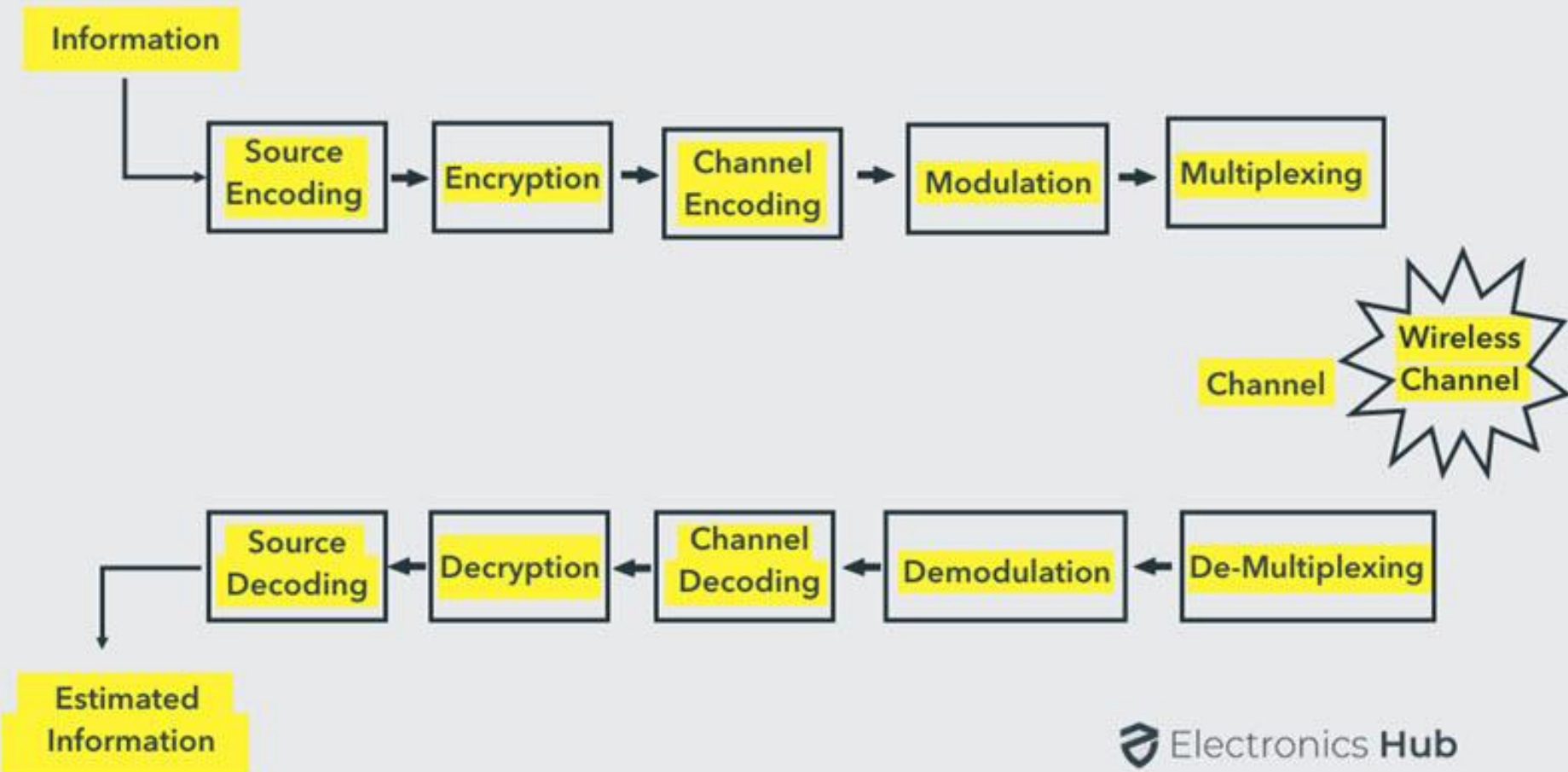
RF 433MHz module



INTRODUCTION

Wireless communication involves the transmission of information over a distance without help of wires, cables or any forms of electrical conductors.

Elements Of Wireless Communication System



Elements of Wireless Communication

- The source encoder converts information waveforms to bits, while the decoder converts bits back to waveforms.
- The channel encoder converts bits to signal waveform, while the decoder converts received waveform back to bits.
- Then the signal is modulated using a suitable Modulation Technique (PSK, FSK, QPSK). We use ASK.

What is modulation?

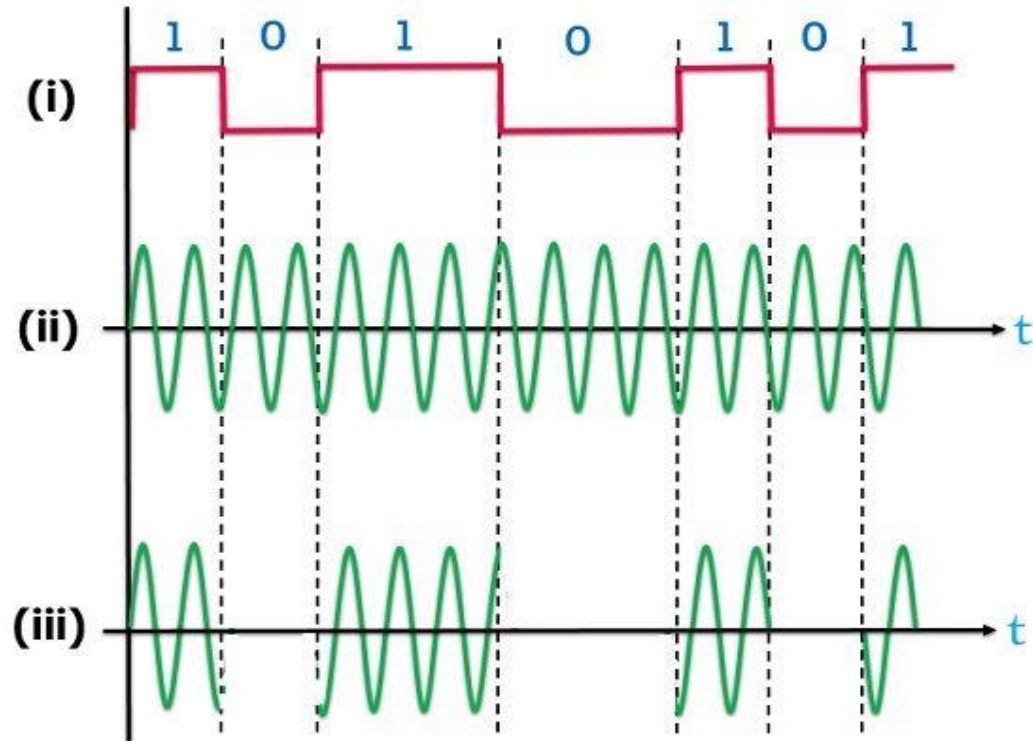
- Modulation is a process where a high frequency carrier signal is mixed with low frequency message signal.

Why is it necessary?

- Throughput is less at low frequency.
- (Wireless) High frequency → Size of antenna decreases.

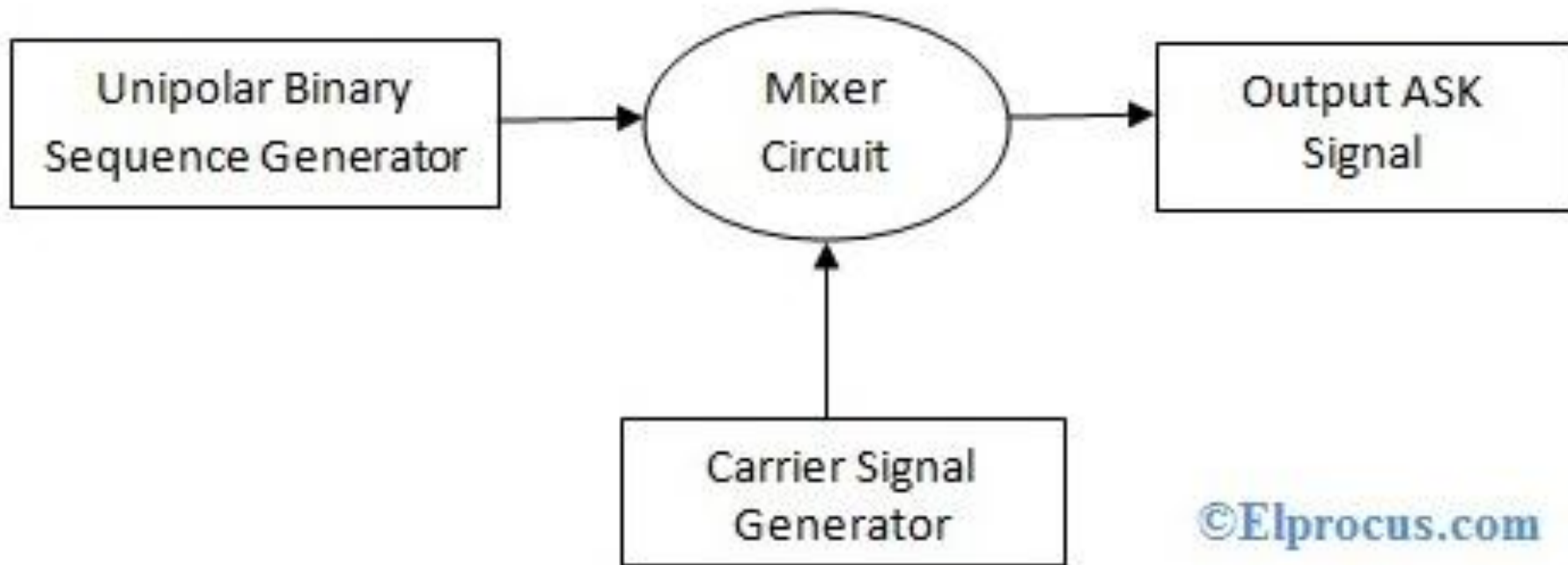
Amplitude Shift Keying

- The amplitude of carrier signal varies with respect to amplitude of message signal.

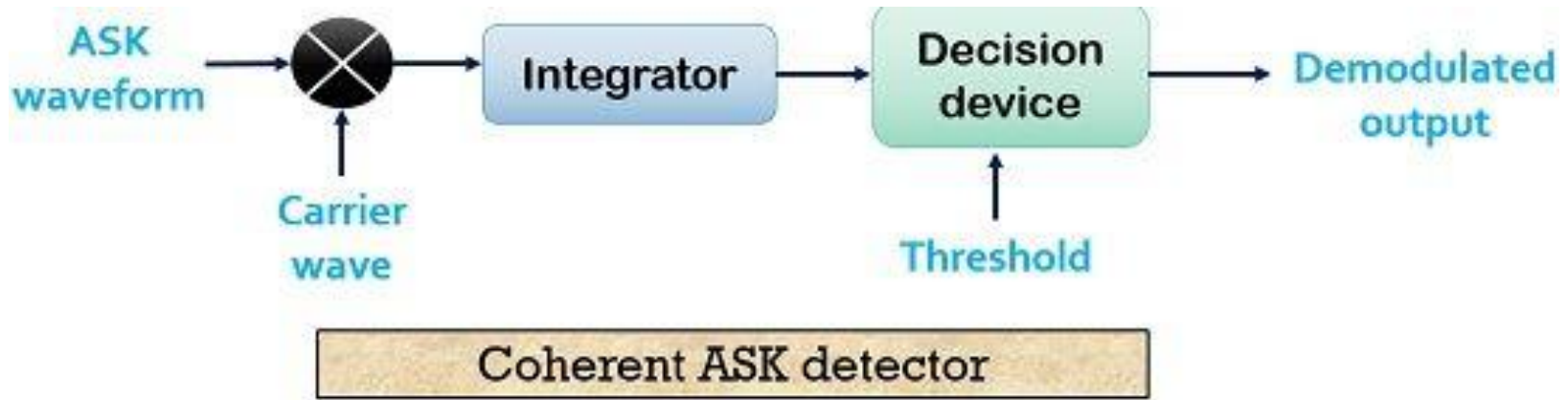


(i) = Digital bit sequence
(ii) = Carrier wave
(iii) = ASK modulated wave

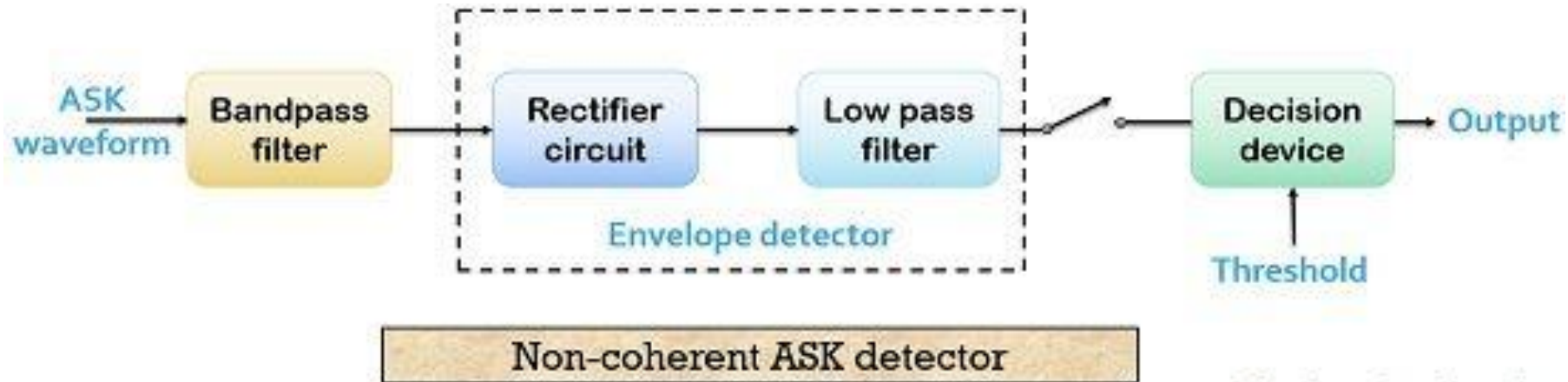
ASK Modulation



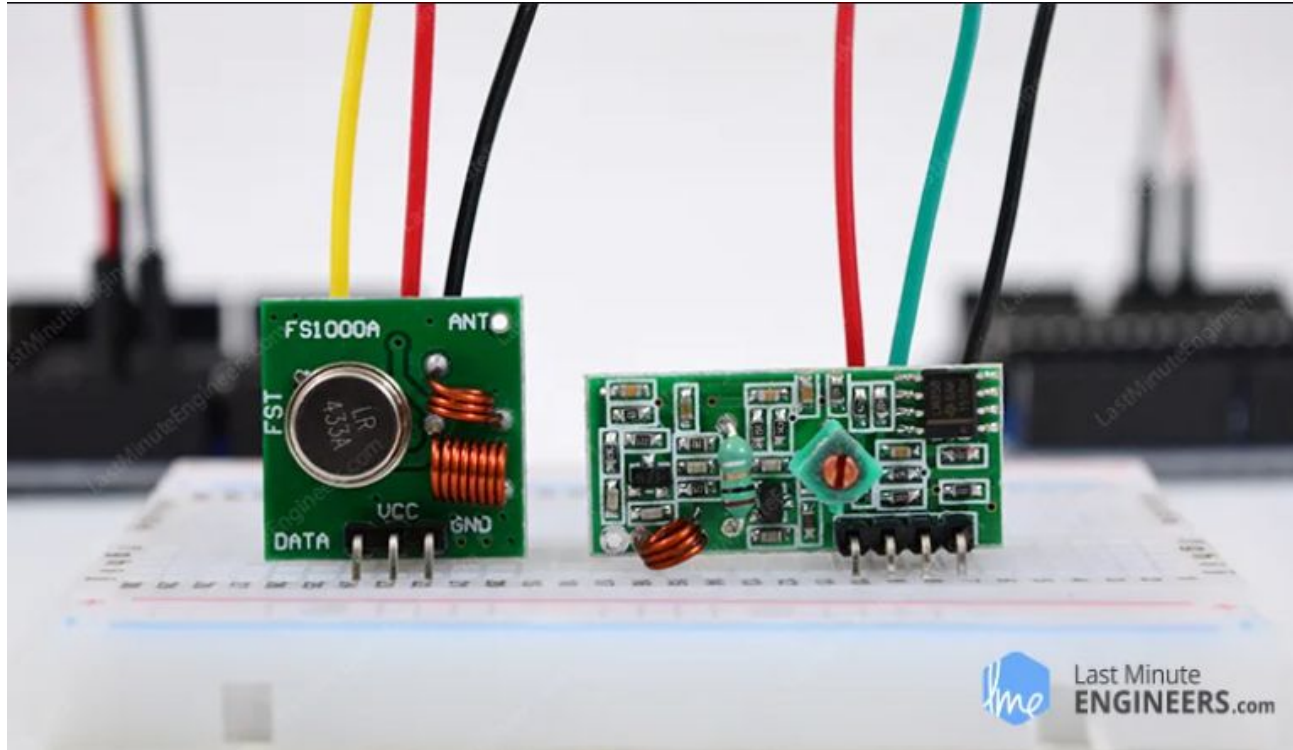
ASK Demodulation



ASK Demodulation



RF 433MHz Module



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