

# Chapter-3

## (Lecture-3)

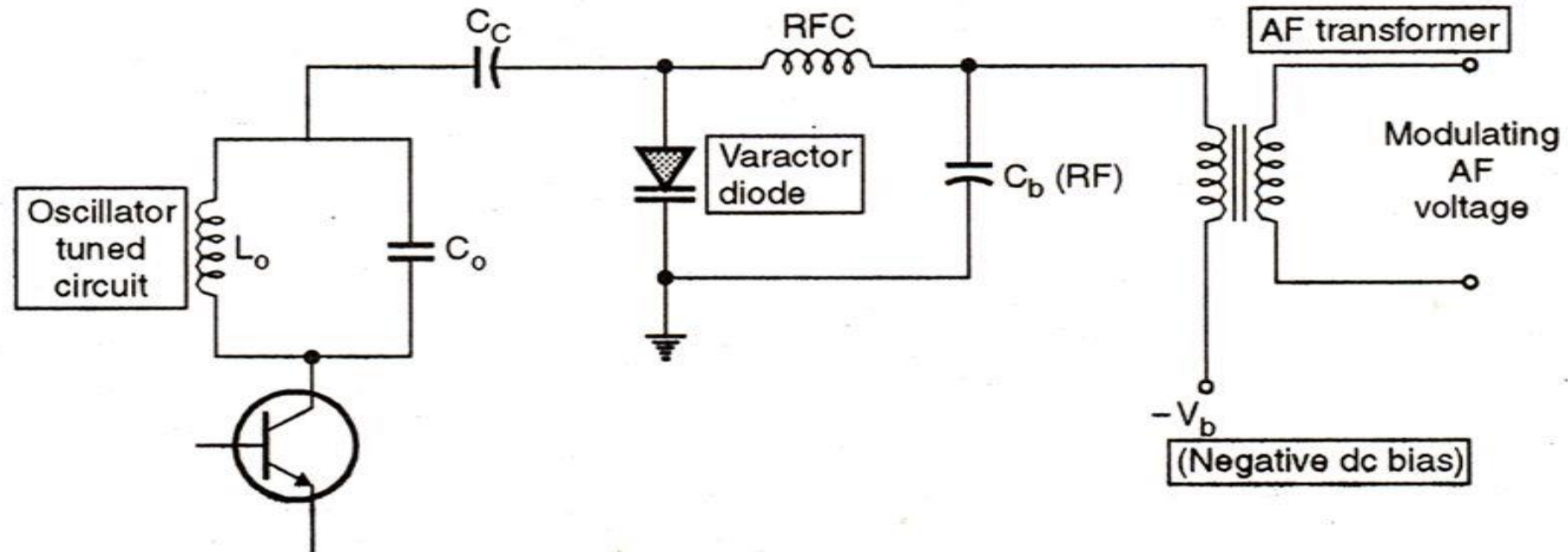
Presented by  
Hasan Murad Munna

## Principle of Varactor Diode Modulator:

- Varactor diode modulator is the direct method of FM generation wherein the carrier frequency is directly varied by the modulating signal. A varactor diode is a semiconductor diode whose junction capacitance varies linearly with applied voltage when the diode is reverse biased.

# Varactor Diode Modulator Circuit Diagram:

## CIRCUIT DIAGRAM OF VARACTOR DIODE MODULATOR



## Basic Principles of QAM:

- QAM (quadrature amplitude modulation) is a method of combining two amplitude modulation (AM) signals into a single channel. ... A QAM modulator works like a translator, helping to translate digital packets into an analog signal to transfer data seamlessly. QAM is used to achieve high levels of spectrum usage efficiency.

# QAM Circuit Diagram:

