# IQ MODULATOR BASICS

- BLOCK DIABRAM & OPERATION

Herrit /

- A LOOK AT A FEW MODULATION TYPES
- IMPAIRMENTS & THEIR EFFECTS
- SSB SUPPRESSION TEST

#### PRE-REQUISITE VIDEOS:

#170: BASICS OF IQ SIGNALS, MODULATION & DEMODULATION

# 167: HOW A DIODE RING MIXER WORKS

#### EXTRA STUDY:

# 171: IQ SIGNALS PARTIT: AM & FM PHASOR DIABRAMS

# 83: BASICS OF RF MIXERS

# 260: RF DIODE MYER LO DRIVE LEVEL

#### I a MODULATOR BLOCK DIABRAM

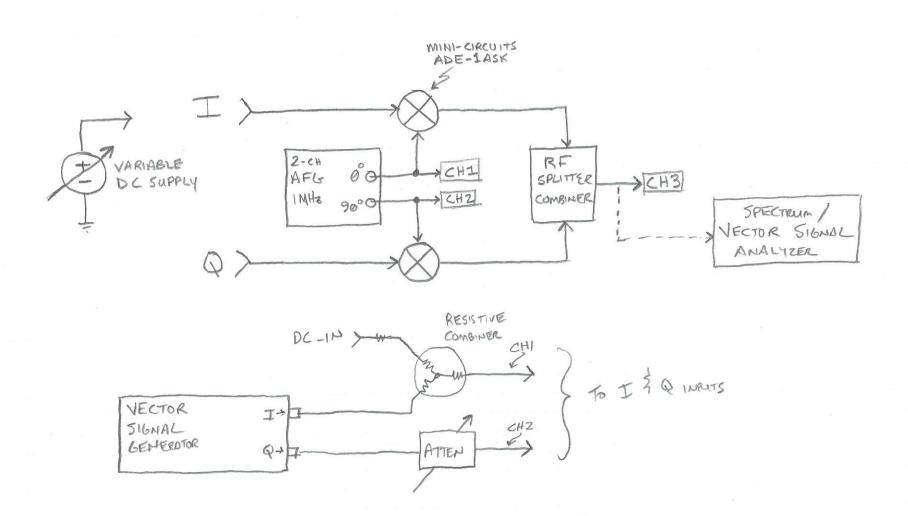
$$I(t) \Rightarrow Cos(\omega t)$$

$$LO \Rightarrow PF_{\alpha u T}$$

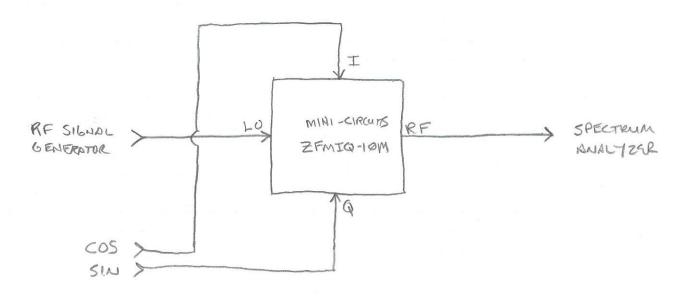
$$I(t) * cos(\omega t) + Q(t) * sin(\omega t)$$

$$Q(t) * sin(\omega t)$$

## I Q MODULATOR TEST CIRCUITS



## IG MODULATOR SSB SUPPRESSION



SIMUSOIDS DRIVEN IN QUADRAMIE