

*No question provided*

## Transmitters – Power Amplifiers

Linear means 'perfect copy' with no distortion

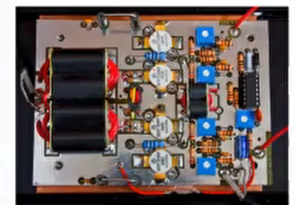
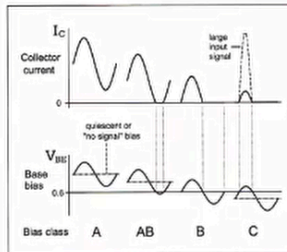
Same applies to internal and external amps!

Remember the Class A amplifier?

- Perfect copy, but inefficient
- **AM and SSB must have linear amplification**
- If amplitude changes not replicated, quality of modulated waveform suffers

Class A/B 'good enough'

Class B also seen to be linear IF two devices used in 'push-pull' circuit – each one amplified half the waveform



*No question provided*

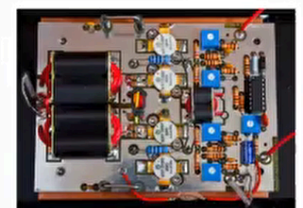
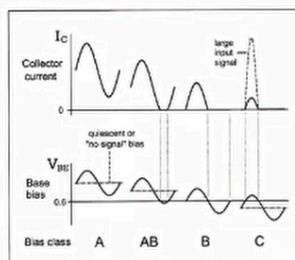
## Transmitters – Power Amplifiers

**CW and FM: do not need linear amplification**

Class C amplifier is more efficient, but definitely not linear

CW is simply on/off so missing some of waveform not a problem; still same frequency

FM modulation is in frequency not amplitude; missing some of the waveform not important so long as change in frequency is unaffected



What is a linear amplifier?

No question provided

Proposing to mix a 9MHz SSB signal with a 2MHz VFO to get a 7MHz transmitter.

Which of the following is likely to be an unwanted mixer product?

A. 2MHz

B. 6MHz

C. 21MHz

D. 50MHz

		Fundamental	Harmonic	Harmonic
	SUM	9	18	27
Fundamental	2			
Harmonic	4			
Harmonic	6			

		Fundamental	Harmonic	Harmonic
	DIFF	9	18	27
Fundamental	2			
Harmonic	4			
Harmonic	6			