

# IE LT SPICE SIMULATION

## GROUP 4

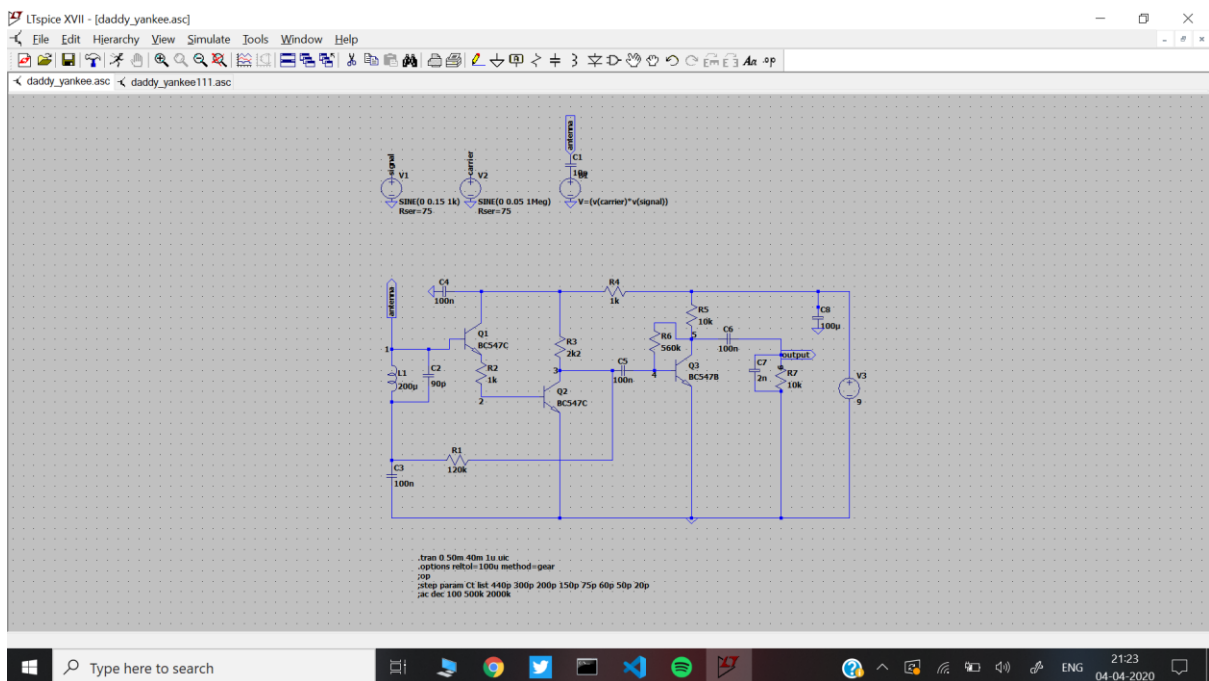
### AM RECEIVER

-Daksh Thapar 2018137

-Rahul Singh- 2018178

-Yashwin Agrawal- 2018205

#### FULL CIRCUIT-



#### STAGES IN AM RECEIVER-

##### 1. Tuner Circuit-

It is a subsystem that receives RF transmissions and converts the selected carrier frequency and its associated bandwidth into IF.

##### 2. RF Amplifier-

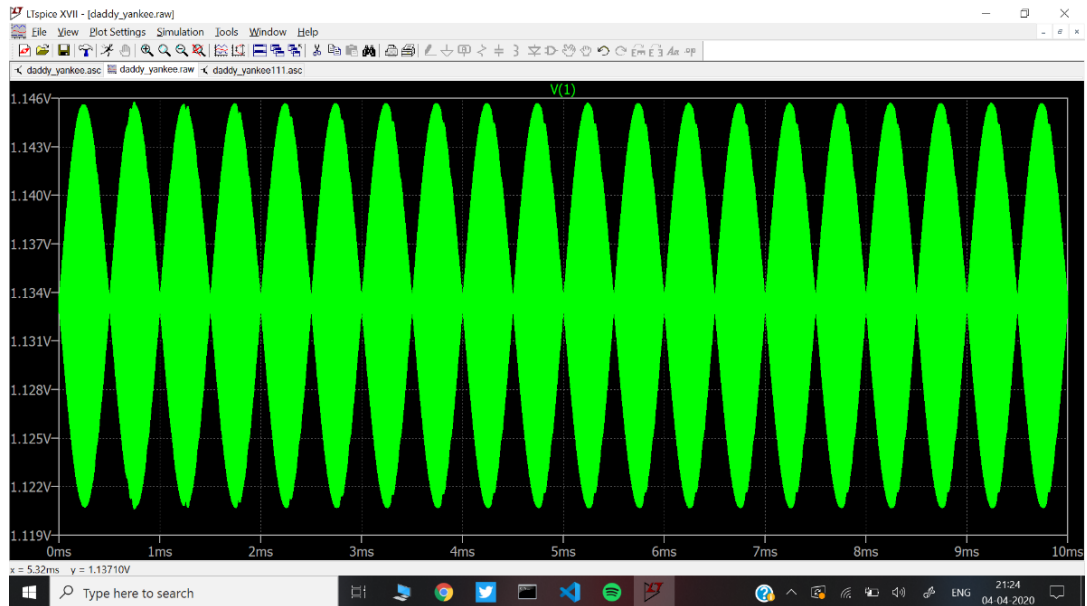
Q2 and Q1 form a Darlington Pair for high gain and high impedance.

##### 3. Demodulator + Audio Amplifier-

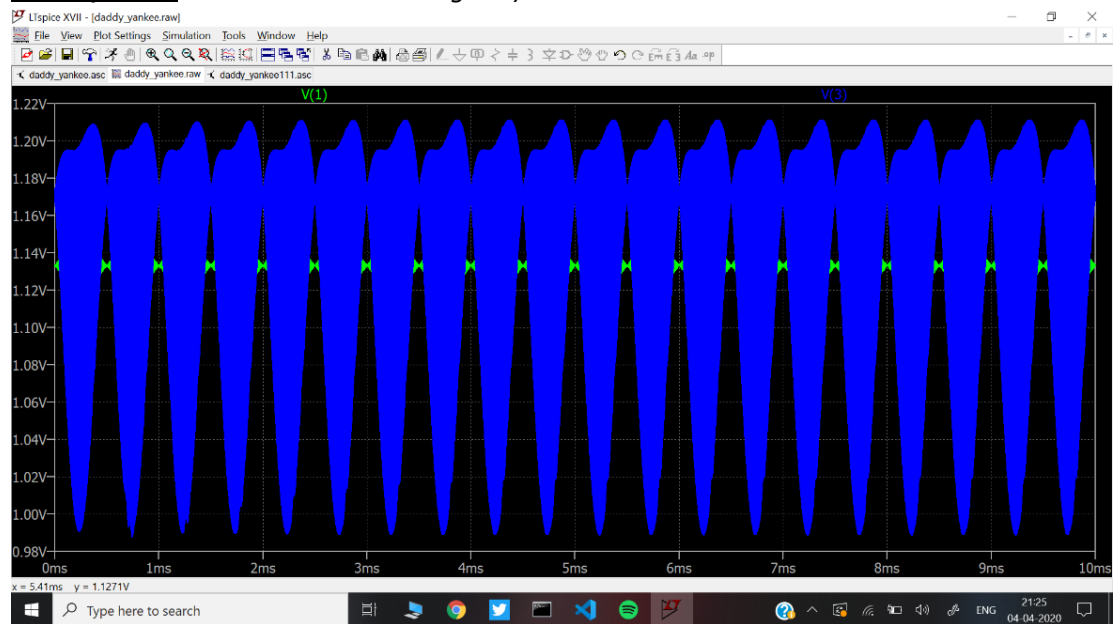
It is an electronic circuit used to recover the information content from the carrier wave signal.

Transistor Q3 has a dual purpose; it performs demodulation of the RF carrier whilst at the same time, amplifying the audio signal.

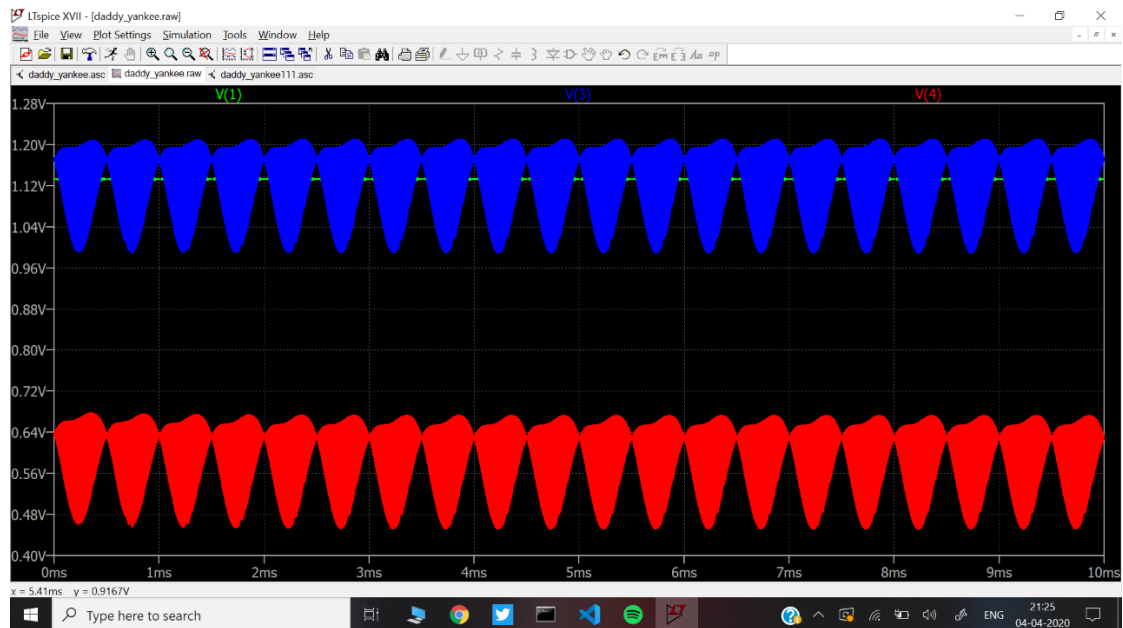
### Input Antenna Signal (V1-> 1 in the circuit diagram)



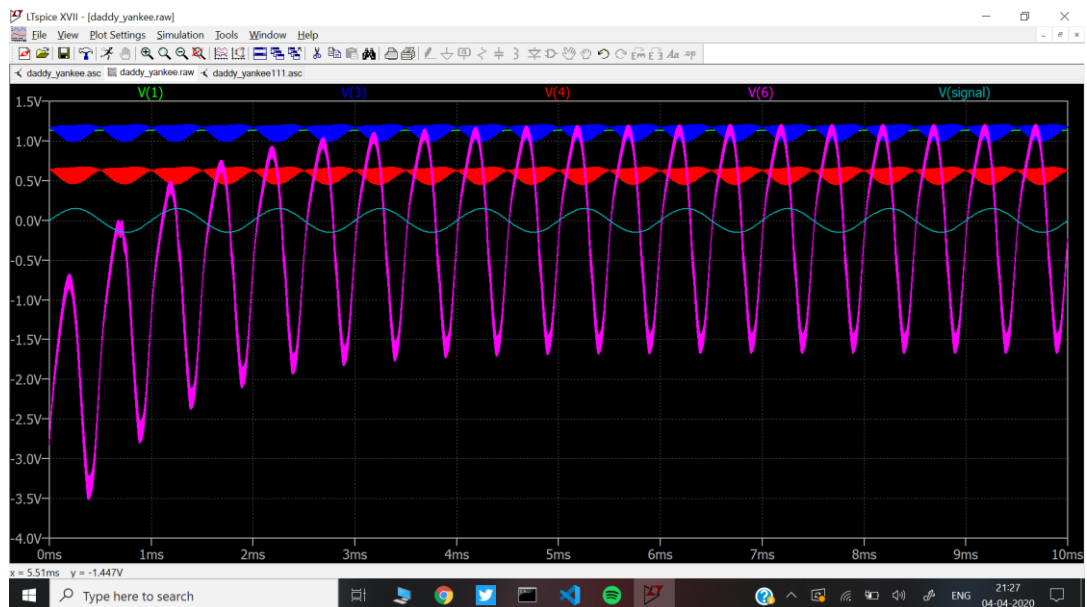
### RF Amplifier (V3-> 3 in the circuit diagram)



### Shift using Capacitor C5 (V4-> 4 in the circuit diagram)



### Demodulator + Amplifier (V6-> 6 in the circuit diagram)



## INPUT MESSAGE SIGNAL VS RECEIVED SIGNAL

( $V(\text{signal})$ )- Input signal,  $V(6)$ - received signal)

