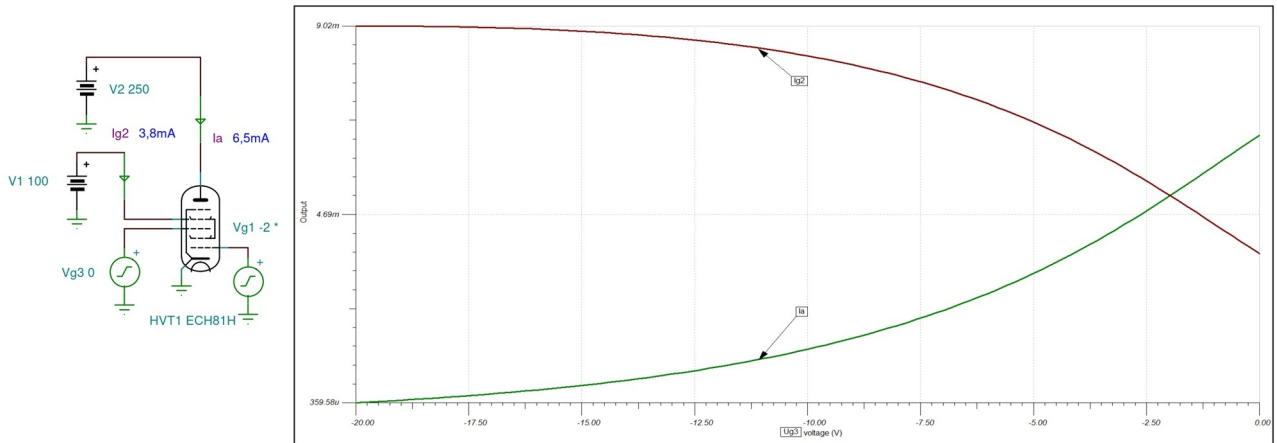
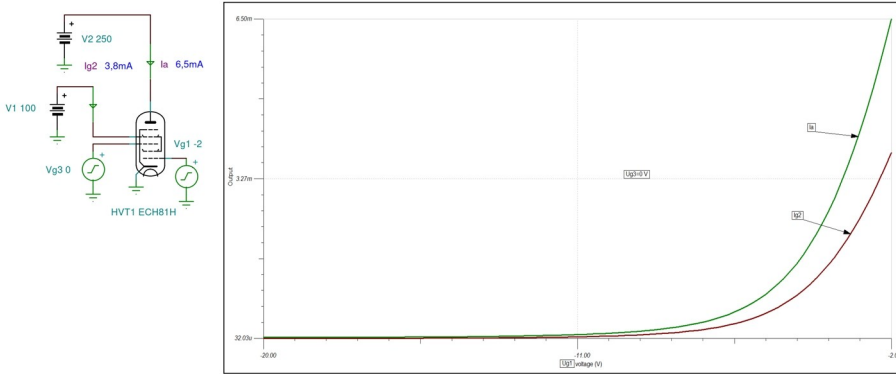


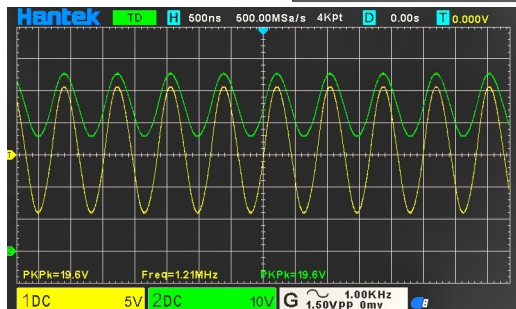
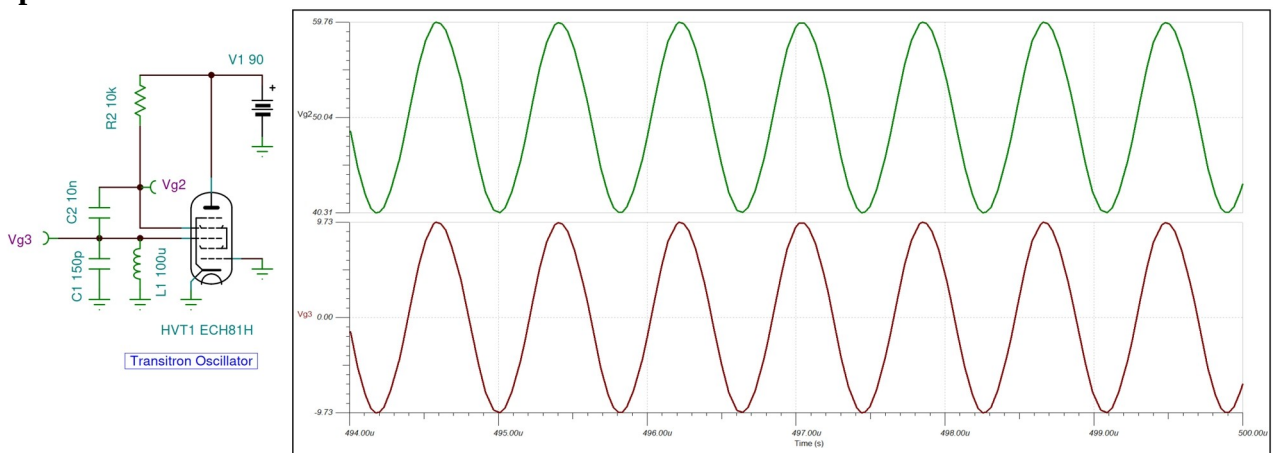
## ECH81 (6AJ8) Triode-Heptode Spice Model

The ECH81 triode heptode was designed the role of frequency changer (mixer) in superhet receivers for AM reception. The two valves share a common cathode. The 6И1П-ЕВ is the Russian designation for the ECH81 triode heptode.

### Heptode DC Characteristics



### Heptode Transitron Oscillator



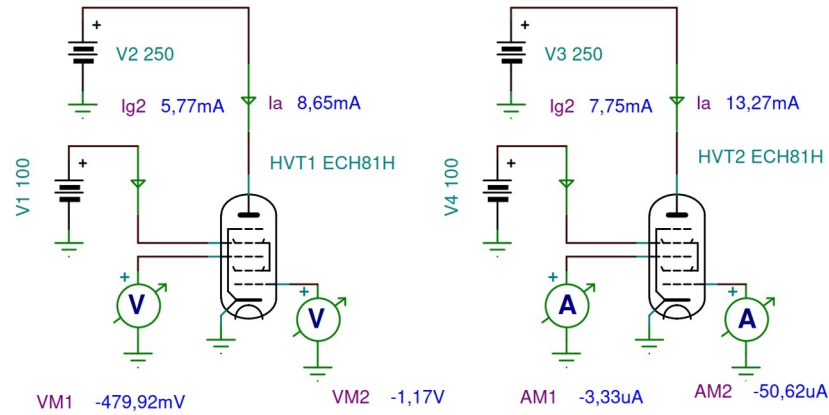
**Green: Vg2**

**Yellow: Vg3**

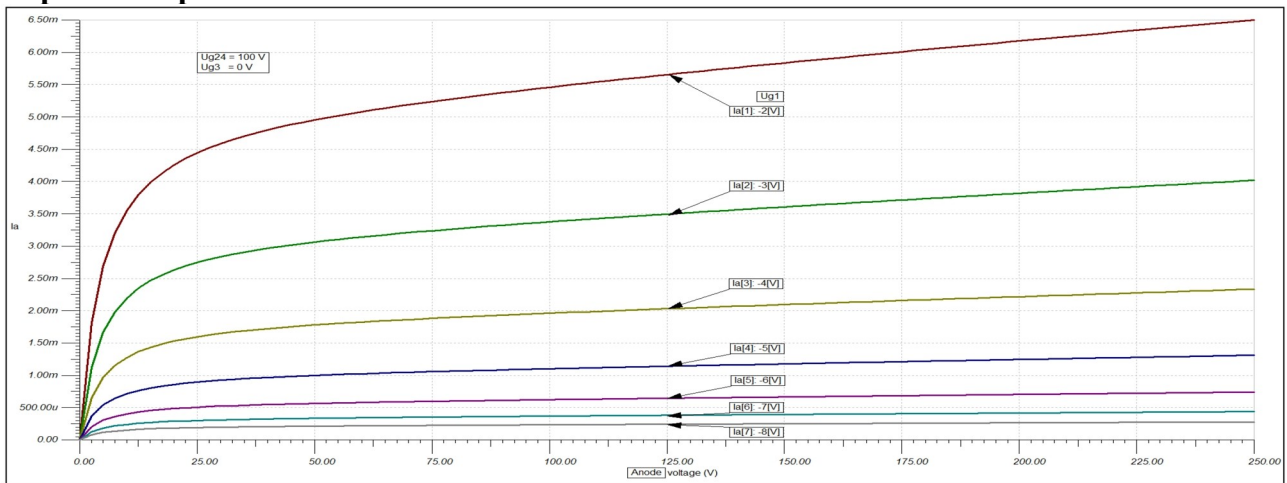
The waveforms of the real tube transitron oscillator are very close to the model.

The screen grid (g24) has negative differential resistance with respect to the cathode and can be used to create oscillations.

## G1 and G3 Splash Currents

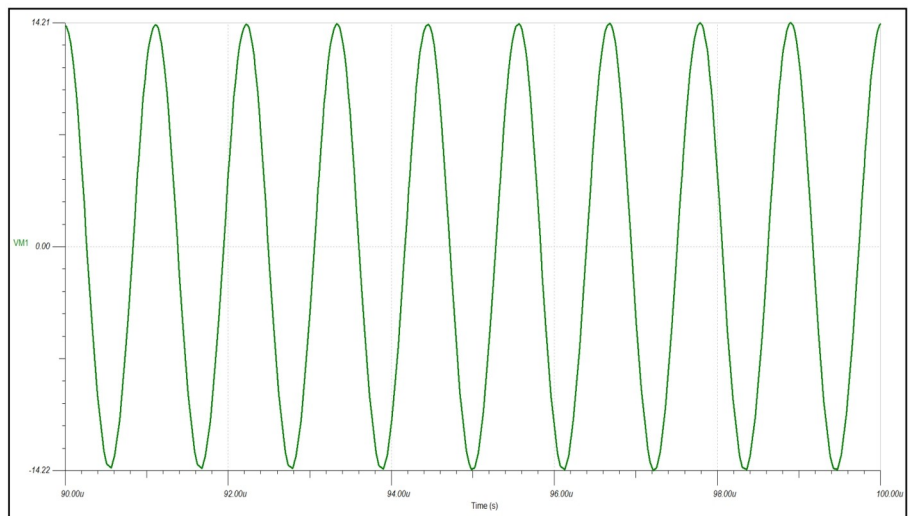
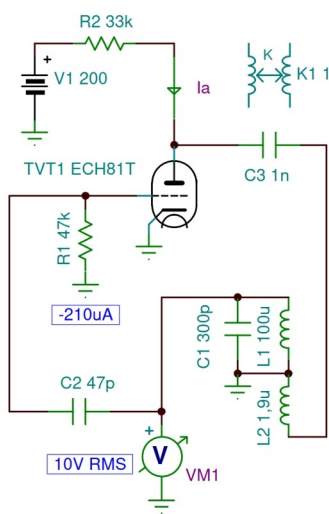


## Heptode Output Characteristics



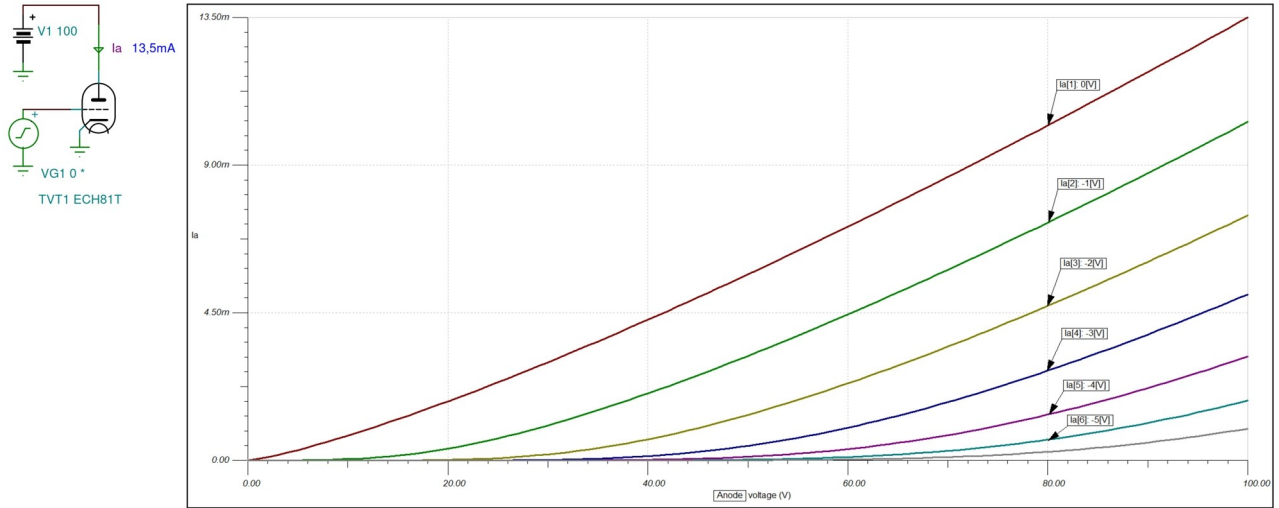
The triode is to be used as the local oscillator feeding the 14 Volts amplitude sine wave to the heptode mixer.

## Triode LC Oscillator

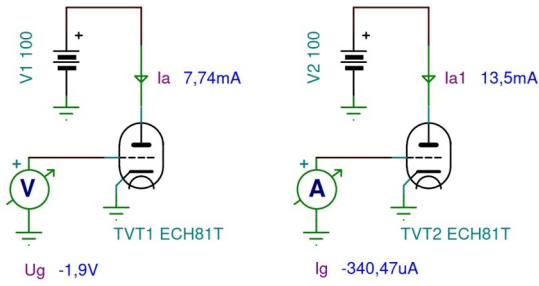


L1 and L2 are series connected coupled inductors ( $K=1$ ).

### Triode Output Characteristics



### Triode G1 Splash Current



### Triode G1 Diode Forward Characteristics

