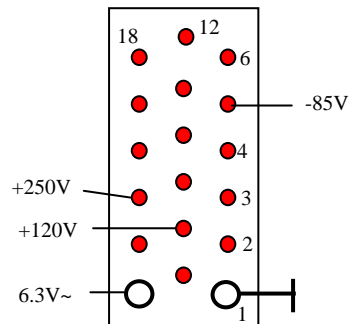


All vacuum diodes CV 469  
 Early Si diodes Ferranti ZS10A and ZS20A

■ A pin in the main 45-pin connector on rear of chassis

● Connector pin on this module  
 Common pins on module connector are shown here  
 + = +120V, " - " = - 85V



All reply pulses to range gate

### STARN-21 Video and Azimuth Circuit Diagram

Reverse engineered 2 -7-2007 Original made by STC in 1955

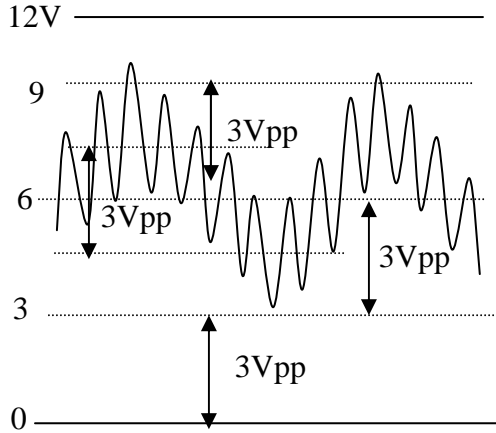
# Description of the Azimuth Curcuits.

## Video decoder, module 7

The received signal from the ground beacon enters at pin 12 of the video decoder, and applied to a delay line. When the delayed first pulse coincides with the second pulse of the TACAN twin pulse signal, then the normally conducting triodes V3 and V4 are cut-off for a few us., producing a positive pulse on their anodes.

The positive pulse on V4 is still proportional with the amplitude of the received pulses. After a short delay, the cathode follower V5 stores the peak value of the pulse in the 1nF capacitor. The delay is needed to allow V6 to discharge this capacitor somewhat, because the next peak may be lower than the last received one.

This way, the capacitor voltage rides over the peak values of the received signal, producing this waveform:



After cathode follower V7, the 15Hz and 135Hz components are filtered out, and used for the coarse and fine bearing indicator.