

Circuit Comparison
vintageTEK museum
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Attribute	High Speed Contract Oscilloscope	517	517A
Input	0.01 uF into 4.7 meg	170 ohm distributed grid line	Same
Sensitivity	100 mV/div	100 mV/div	50/100 mV/div, 12/24 kV
Vertical Display	1 inch p-p linear deflection	+/- 2cm	No change
Risetime	5ns (70 MHz), 5% overshoot	7ns (50 MHz), free of ringing and overshoot	No change
Horizontal	40 inch/us, 10ns/cm-?	10ns/cm-20us/cm	No change
High Voltage	12KV, Dumont CRT, 16V/cm	24KV, Dumont CRT, 38V/cm	12/24KV Tektronix CRT, 12V/cm
Preamp	12 6AK5's, fixed bias and gain, K grounded. 270 ohm grid and plate lines	14 6AK5's, variable bias for 2:1 gain adjust, K grounded plus 8 6CB6's, K bias. 120 ohm grid and plate line	No change
Trigger pick off, preamp out	6J6 trigger pickoff, 6J6 into 93 ohm delay line	6CB6 trigger pick off. 125 ohm delay line into 3 6CB6's convert to push-pull 125 ohm output	No change
Output Amp	2:1 gain adjust via a pot, 3 6AK5's convert to push-pull, 20 push-pull fixed bias, K grounded to deflection plates via 0.01 uF, 4.7 Meg. 330 ohm plate and grid lines only reverse termination on output.	36 cathode biased push-pull distributed amps to deflection plates via 0.01 uF, 4.7 meg. 205 ohm grid and plate lines with only reverse termination on the output	No change
Heaters	Unregulated	Regulated	No change
Cathode bias for 6CB6's		150 ohm, 50 uF, 3 volts	150 ohm, 50 uF, 6 volts
Tubes	108	130	No change
Weight	75 lbs + 57 lbs = 132 pounds	76 lbs + 72 lbs = 148 pounds	No change
Power		1250 watts	No change
Price	\$50,000 contract in 1949	\$3500 in 1950 - 1964	
Schematic	CLB=C Logan Belleville 1950	GSR and EDS 1952	LAP and EDS 1956

Tubes	6AK5	6CB6	6GH6
Heater mA	150	300	
Input C	3.9 pF	6.5 pF	
Gm	5K	8K	
Plate mA	7.5	13	
G2 mA	2.5	3.7	
Selected for	Normal or better Gm and low microphonics	Low grid current. Higher current disturbs the grid line impedance	Suppressor grid within close limits