

MODEL 630-HV

A.G.C. in Models 630 and 630-HV

We have currently incorporated an automatic gain control (A.G.C.) system as an improvement in our 630 Models. This system, a circuit diagram of which is attached, L507C, provides easier reception than the 630 for the consumer, requiring less adjustment of the front panel controls when tuning in. It also inhibits picture flicker from sources such as low flying planes, swaying antenna, and power impulses. The remainder of the chassis circuit is the 630 design. The A.G.C. section is an addition to it, bringing it up-to-date.

With this Model, it is possible to switch the selector from channel to channel, and merely adjust the fine tuning control to accurately bring any station into its best tuned in position. It is then generally unnecessary to readjust the contrast, brightness or synchronizing controls. Also, the A.G.C. maintains the picture images in proper tuning once a station is tuned in.

In actual operation, the contrast control functions normally as in the 630 Models. As the contrast control is advanced too far, the video pattern may overload on strong signals. This is due to the reserve gain in our Models. When the contrast control is properly set for normal operation, one may switch from station to station practically without readjustment of this or other mentioned controls.

A study of the A.G.C. circuit will indicate that it is a modified amplified A.G.C. system. It is to be noted that the tube complement is altered with a 6SN7 substituted for the 5J5. This provides a triode section for the A.G.C. circuit.

CHASSIS MODEL 630-HV

Our 630-HV chassis is basically the RCA-630 design and circuit, with the addition of a voltage doubler. The voltage doubler circuit is that specified by RCA, utilizing the 2L17S flyback transformer with an additional 1B3. This HV system has been designed into the usual cage to properly carry the high voltages without corona discharge, bleeding, etc. All components and parts have been selected to withstand long life service under high voltage operation, and to maintain good regulation.

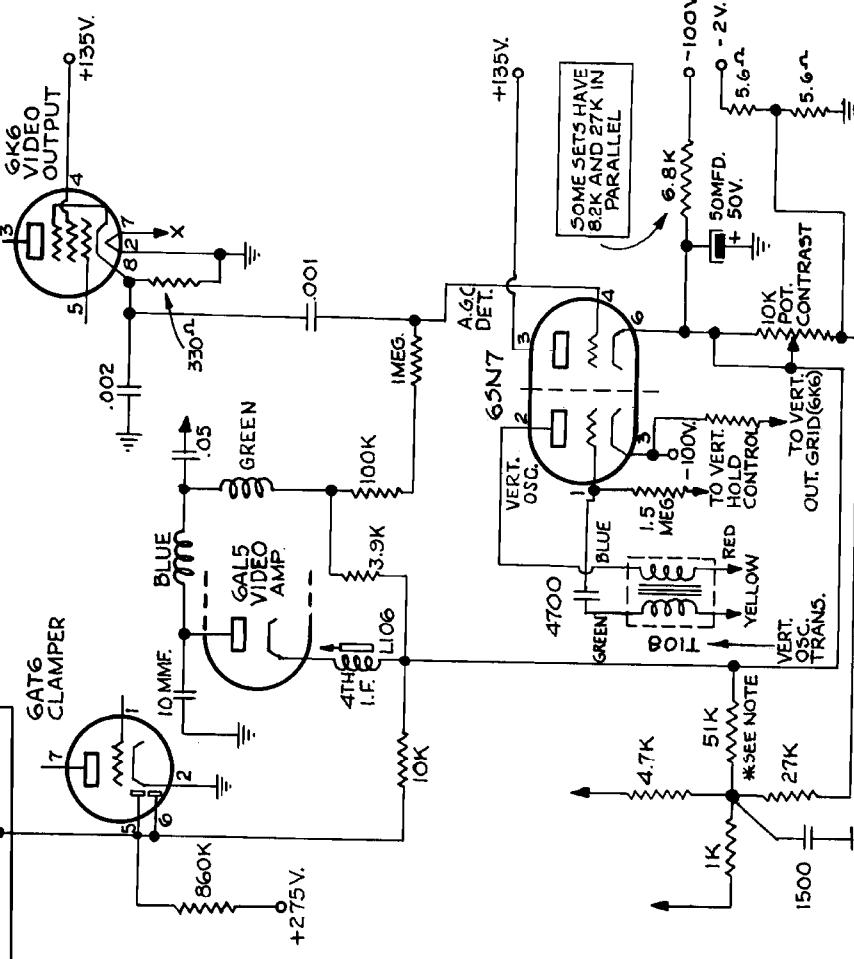
The anode voltage supplied by this Model 630-HV is nominally 15 KV under no load condition; and ranges from 12.5 to 13.5 KV with average CRT tubes in their normal full operating condition. Our Model 630-HV chassis operates all 15" and 16" cathode-ray tubes at rated brilliance, and with reserve deflection.

In addition to the picture adjustments ordinarily found in the Model 630 chassis, a second horizontal linearity adjustment is incorporated. This second control is a potentiometer, located on the rear apron of the chassis between the "Height" and "Horizontal Drive" controls. This second horizontal linearity control is labelled "Horizontal Linearity 2" to differentiate it from the original linearity control still located on top of the chassis, which is now labelled "Horizontal Linearity 1".

All adjustments for picture centering, size, etc. are treated

the same way as in the regular 630. However, in this Model 630-HV, when adjusting the picture for horizontal linearity the controls, "Horizontal Linearity 1", "Horizontal Linearity 2" and "Horizontal Drive" must be adjusted in conjunction with each other to obtain a symmetrical pattern. The order of adjustment of these controls can be best determined by actual observation of the pattern when the set is being installed.

The drawings attached, show the circuit details of the high voltage section of Model 630-HV and the circuit incorporated to give increased height and non-critical focusing adjustments for the 630-HV.

R.F. TUNER

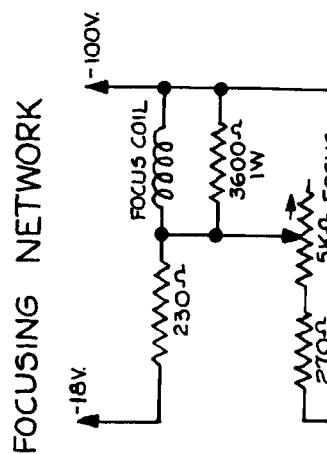
NOTE:- THIS VALUE FOR RCA KRK2W
TUNER FOR TUNERS USING
PENTODE (GAG5) R.F. TUBE
CHANGE TO 27K.

L-507C

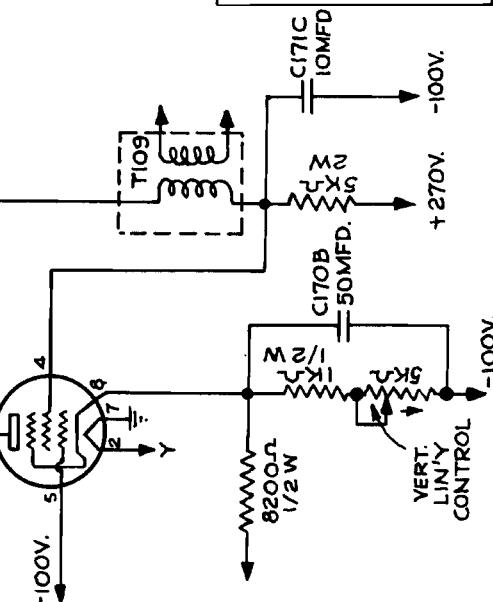
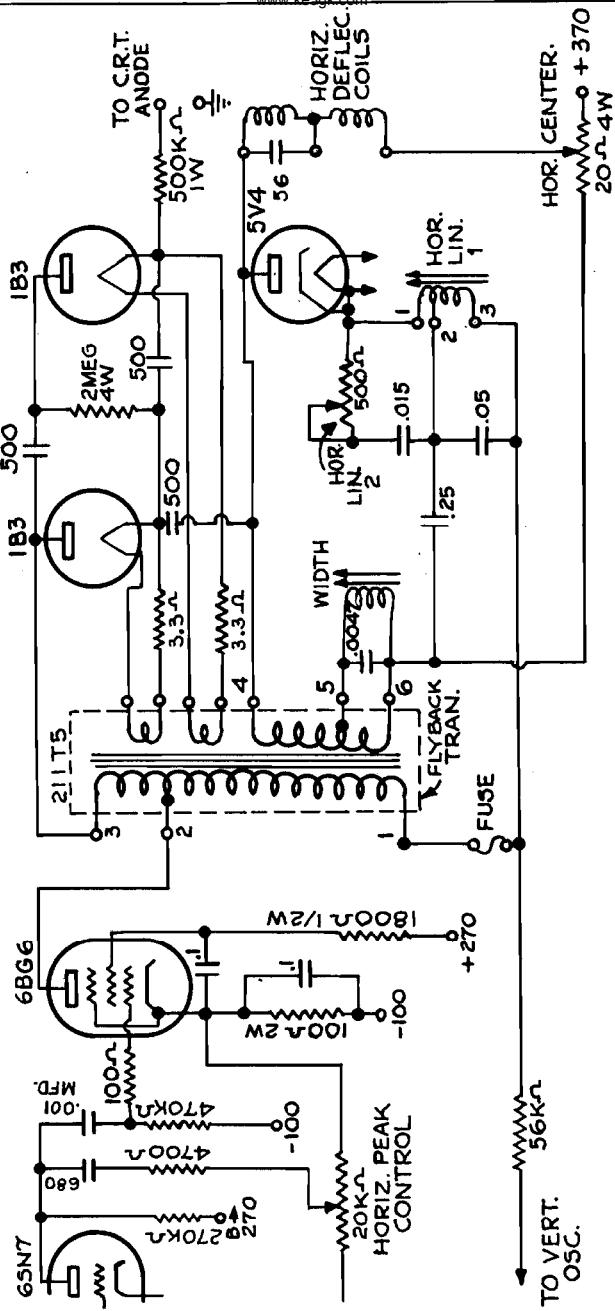
TV MODEL 630 HV

MODIFICATIONS ON 630 FOR IMPROVED
FOCUSING, AND INCREASED IN VERTICAL
OUTPUT CIRCUIT.

DWG. № L-506



VERTICAL OUTPUT CIRCUIT



CHANGE "A" ① 0.05 SCREEN BY - PAIS COND. CHANGED TO 1 MFD. ② 0.0047 MFD. CAPACITOR ACROSS THE WIDTH COIL. ③ REPLACE BOTH SCREEN RES. WITH ONE 1200 Ω $\frac{1}{2}$ W. RES.	T V MODEL 630 - HV CIRCUIT DIAGRAM OF HIGH VOLTAGE SECTION - 630 - HV NOTE:- REMAINDER OF SYSTEM SAME AS MODEL 630
DWG. NO L-505A	

TV MODEL 630-HV
CIRCUIT DIAGRAM OF HIGH VOLTAGE
SECTION - 630-HV

TE:-REMAINDER OF SYSTEM SAME AS
MODEL 630

CHANGE "A"
 ① 05 SCREEN BY-PAIS
 ② COND. CHANGED TO 115
 ③ 0047 MFD CONDENSER
 ACROSS THE WIDTH OF
 ④ REPLACE BOTH SCRIMS
 RES. WITH ONE 1200
 1/2 W. R.E.S.
 DWG. NO. L-505

