

SECTION 11

CORRECTION CONTROL UNIT UN3/511

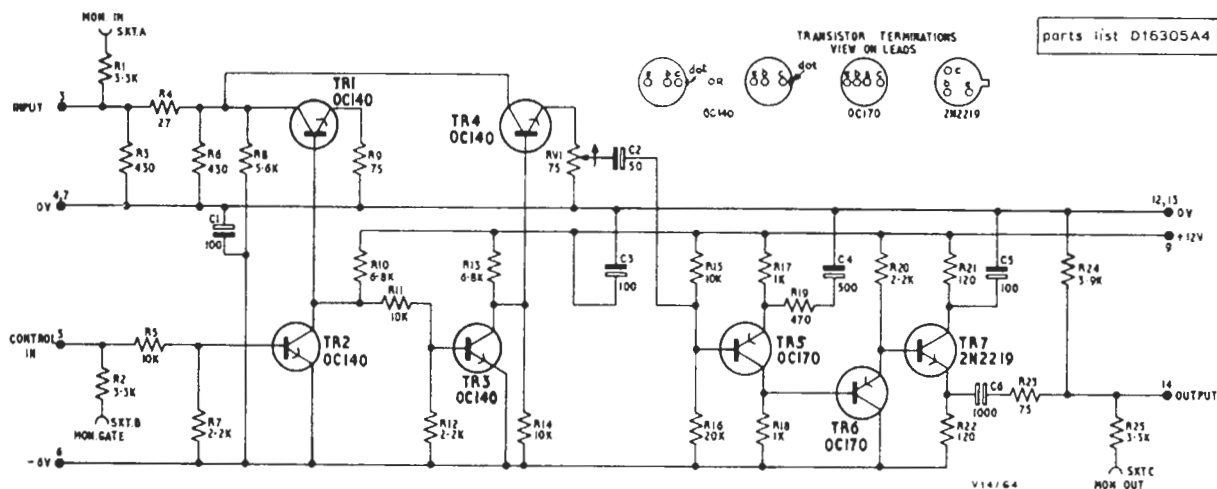


Fig. 11.1 Circuit of the UN3/511

Introduction

The UN3/511 is a variable gain inverting amplifier with an electronic on-off switch.

The UN3/511 is constructed on a CH1/12A chassis with index peg positions 17 and 20.

General Specification

<i>Input</i>	1 volt p-p.
<i>Input impedance</i>	75 ohms \pm 4%.
<i>Maximum standing voltage on input</i>	\pm 1 volt.
<i>Maximum gain</i>	0 dB.
<i>Pulse and bar response (625-line K_T)</i>	less than 1%
<i>Non-linearity distortion</i>	1% approximately.
<i>Low frequency response</i>	5% sag on 50-Hz square wave.
<i>Control voltage on</i>	0 volts
<i>off</i>	-6 volts to -12 volts.
<i>Attenuation with control Off</i>	60 dB approximately.

Circuit Description

In the circuit of the UN3/511, given in Fig. 11.1, the video input signal is fed to the collectors of the two switching transistors TR1 and TR4 via a 3-dB attenuator pad. The circuit of transistors TR1 to TR4 form an electronic one-pole two-way switch.

Transistors TR5 to TR7 form part of an inverting amplifier with a gain of 3 dB.

Test Schedule

Apparatus Required

- Tektronix oscilloscope Type 533A with Type H plug-in unit.
- Pulse and Bar Generator GE4/504B.
- 12-volt and 6-volt power supplies.

Test Procedure

1. Connect the power supplies as shown in Fig. 11.1. Connect the input of the oscilloscope, terminated in 75 ohms, to pin 13. Connect pin 5 to pin 7. Connect the output of the GE4/504B to pin 4.
 2. Check that the output signal is inverted. Check that the maximum gain is unity \pm 10 per cent. Check that the pulse-to-bar ratio is not less than 96 per cent. Check that the *Correction Gain* control enables the output signal to be reduced to zero.
 3. Remove the connection to pin 5 and turn the *Correction Gain* control fully clockwise. Check that the amplitude of the output signal does not exceed 1 mV p-p.