



# product modification

050-1014-00

M31285

## VERTICAL OUTPUT MICROCIRCUIT REPLACEMENT

For the following TEKTRONIX® Instruments:

7834	Storage Oscilloscopes	SN All
R7903	500MHz Oscilloscopes	SN B180000 & Up
7904	500MHz Oscilloscopes	SN B260000 & Up
7912AD	Programmable Digitizers	SN All

This kit contains parts and instructions to replace the Vertical Output microcircuit, pn 155-0064-00. Due to microcircuit gain characteristic variations, two emitter resistors may need to be changed. The value of these resistors is predetermined by a code printed on the microcircuit case.

PARTS INCLUDED IN PARTS REPLACEMENT KIT:

Ckt. No.	Quantity	Part Number	Description
U745 <sup>1</sup>	1 ea	155-0064-00	Microcircuit, linear Output Ampl
R741 <sup>2</sup> R756 <sup>3</sup>	2 ea	317-XXXX-XX <sup>4</sup>	Resistor, cmprn, sel 5% 0.125W

<sup>1</sup>U1745 in the 7834

<sup>2</sup>R1741 in the 7834

<sup>3</sup>R1756 in the 7834

<sup>4</sup>The value of the emitter resistors, R741 and R756 or R1741 and R1756, is predetermined by a numeric code printed on the microcircuit case as indicated in the following table:

Numeric Code	Resistor Value	Tektronix, Inc. Part Number
1	110Ω	317-0111-00
2	130Ω	317-0131-00
3	160Ω	317-0161-00
4	220Ω	317-0221-00
5	300Ω	317-0301-00
6	510Ω	317-0511-00
7	1000Ω	317-0102-00

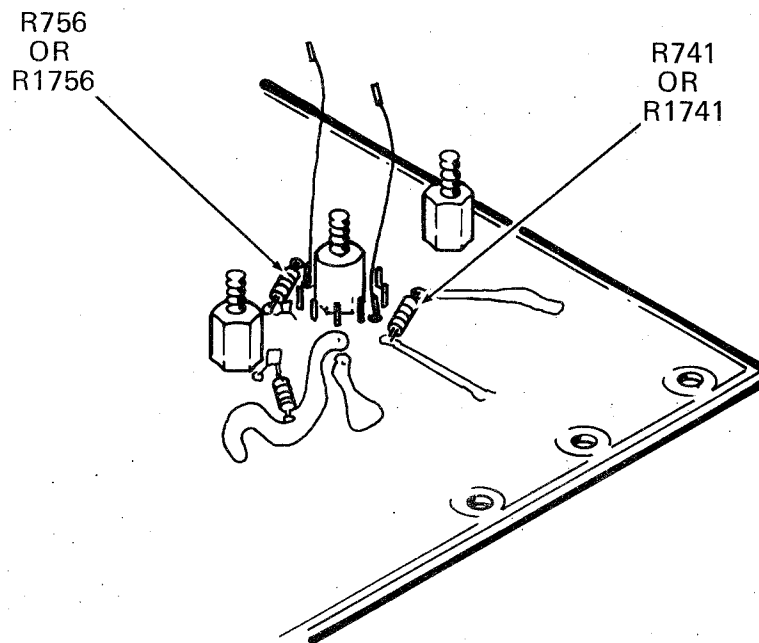


Fig. 1. Location of Emitter Resistors

## INSTRUCTIONS:

## WARNING

Before proceeding, ensure the POWER switch is OFF, then disconnect the power cord from the power source.

## NOTE

The following instructions assume a familiarity with the instrument. If greater detail is required for assembly or disassembly, refer to the appropriate Service Instruction Manual.

- ( ) 1. Remove the necessary oscilloscope cover(s) and side panel/access hole covers to gain access to the Vertical Amplifier circuit board.
- ( ) 2. Remove the cables connecting to the Vertical Amplifier circuit board, noting their locations for later assembly.
- ( ) 3. Disconnect the Vertical Output microcircuit leads from the crt vertical deflection pins.
- ( ) 4. Remove the screws securing the Vertical Amplifier circuit board to the chassis. On the 7912AD, remove the screw securing the Vertical Output microcircuit heat sink to the chassis.
- ( ) 5. Remove the Vertical Amplifier circuit board from the instrument.
- ( ) 6. Unsolder the wires with the crt connectors from the Vertical Output microcircuit leads.
- ( ) 7. Remove the hardware securing the heat sink to the Vertical Amplifier circuit board and remove the heat sink.
- ( ) 8. Replace the Vertical Output microcircuit with the new microcircuit provided in the kit.
- ( ) 9. Check the value of the emitter resistors, R741 and R756 (R1741 and R1756 in the 7834). If different from the value of resistors included in the kit, replace the emitter resistors with the ones provided (refer to Fig. 1).
- ( ) 10. Reinstall the heat sink using the hardware removed in step 7.
- ( ) 11. Solder the wires with the crt connectors to the new microcircuit leads.
- ( ) 12. Reinstall the Vertical Amplifier circuit board by performing the reverse of the procedure in steps 2 through 5.
- ( ) 13. Refer to the Calibration Section of the appropriate Service Instruction Manual and perform any necessary checks and adjustments.
- ( ) 14. Reinstall any side panel/access hole covers and oscilloscope covers removed in step 1.