

7834 Increased Chop Rate

Modification Kit 178G

P/N 033-0615-00

Chop rate increased from 1 MHz to approximately 4 MHz between Vertical compartments. Rate between Horizontal compartments is unchanged.

For the following Tektronix serial-numbered instruments:

Type 7834 - all serial numbers

Description: This modification kit contains parts and information necessary to install the above-listed modification.

Parts Required:

<u>Qty.</u>	<u>Part Number</u>	<u>Description</u>
1 ea.	033-0615-00	Modification Kit

Installation: Installation and calibration instructions are included in the modification kit.

<u>Qty.</u>	<u>Part Number</u>	<u>Description</u>
1 ea.	037-6336-00	E.C. Board ass'y
1 ea.	108-0215-00	Coil, 1.1 μ H
7 ea.	131-0787-00	Terminal pin, 0.500 lg.
1 ea.	151-1042-00	Transistor, 2N5454
1 ea.	281-0226-00	Capacitor, var. 4-38 pf
1 ea.	283-0641-00	Capacitor, cer. 180 pf
2 ea.	283-0649-00	Capacitor, cer. 105 pf
1 ea.	321-0269-00	Resistor, film, 6.19 k, 1/8 W 1%
1 ea.	Special	Label, adhesive-backed and marked: Kit 178G

Installation Instructions:

Note: please refer to the maintenance section (section 4) of the instrument instruction manual before starting this procedure.

- ()1. Remove the instrument cabinet panels.
- ()2. Remove the 'Logic' E.C. board assembly (A-6) as follows.

Note: Refer to page 4-13 of the instrument instruction manual; 'Power Supply Unit Removal'.

- () 2.1 Temporarily remove the 'Power Supply' unit to gain access to the 'Logic' E.C. board.
- () 2.2 Remove the 'Logic' E.C. board from the 'main interface' E.C. board assembly (refer to page 4-17 of the instrument instruction manual; 'plug-in boards').
- () 3. Modify the 'Logic' board as follows: Refer to 'Assembly A-6' in the instrument instruction manual for component location.
 - ~~()~~ 3.1 Remove C4343, a 33 pf capacitor.
 - ~~()~~ 3.2 Remove LR4338, a 1.1 μ H coil.
 - ~~()~~ 3.3 Remove R4336, a 7.5 k 1/4 W 5% resistor.
 - ~~()~~ 3.4 Remove R4355, a 2.2 k 1/4 W 5% resistor.
 - ~~()~~ 3.5 Remove R4432, a 3.3 k 1/4 W 5% resistor.
 - ~~()~~ 3.6 Replace C4314, a 200 pf 'fixed' capacitor with a 4-38 pf variable from the kit. Mount so that screwdriver adjustment slot faces outer edge of E.C. board.
 - ~~()~~ 3.7 Replace C4346, a 470 pf capacitor with a 105 pf capacitor from the kit.
 - ~~()~~ 3.8 Replace R4314, a 9.1 k 1/4 W 1% resistor with a 6.19 k 1/4 W 1% resistor.
 - ~~()~~ 3.9 Replace Q4456 a 2N4392 transistor with a 2N5454 transistor from kit.
 - () 3.10 Add a 1.1 μ H coil (L4312), from the kit, in series with R4313 on the E.C. board as follows.
 - () 3.10.1 Lift the lead of R4313 that is located closest to U4320, then move R4313 so that it is parallel with U4320 with unsoldered lead bent up over back of resistor. Solder the 1.1 μ H coil (L4312) to this lead and then solder remaining coil lead to the former resistor mounting on the E.C. board. Refer to Fig. 1.

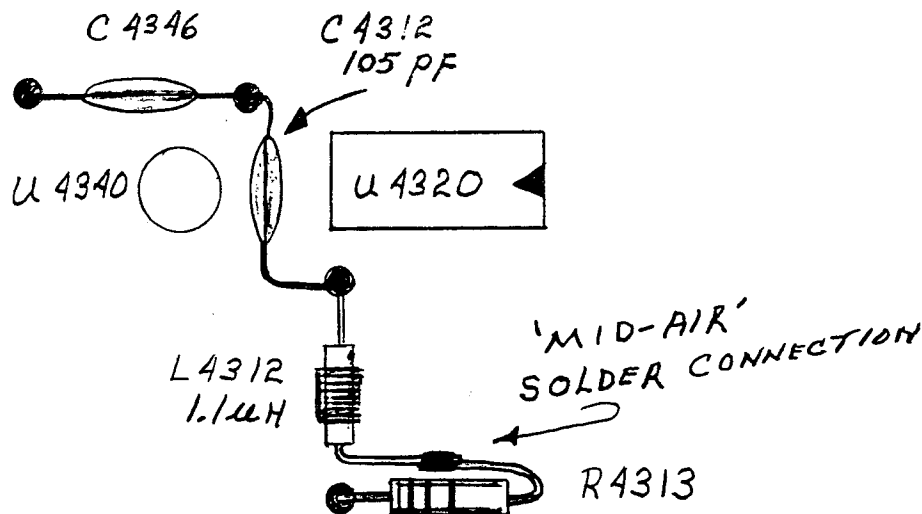


Fig. 1

- () 3.11 Add a 105 pf capacitor (C4312) between the lead of L4312, closest to U4320, and ground at C4346 (lead on right-hand side of capacitor).
- () 3.12 Add a 180 pf capacitor (C4448) between the Emitter of Q4448 and ground at the lower end of the diode CR4486.
- () 4. Solder seven (7) terminal pins, from the kit, to the 'Logic' E.C. board as follows. (Note: these pins will solder into the mounting holes of components removed in step 3 - solder silver end to board).
- () 4.1 Solder a terminal pin in each mounting hole for R4338 (2).
- () 4.2 Solder a terminal pin in each mounting hole for R4355 (2).
- () 4.3 Solder a terminal pin in each mounting hole for R4432 (2).
- () 4.4 Solder a terminal pin in the lower mounting hole only for R4336 (1).
- () 5. Plug the special E.C. board assembly from the kit onto the terminal pin added in step 4.
- () 6. Re-install the 'Logic' E.C. board in the instrument. Refer to removal procedure of step 2.
- () 7. Re-install the 'power supply unit' in the instrument. Refer to step 2.
- () 8. Apply an adhesive-backed label from the kit, marked: Kit 178G, adjacent to the serial number label on the front panel.

This completes the installation.

- () Check the wiring for accuracy.
- () Refer to the manual insert calibration instructions and make any necessary adjustments.
- () Re-install the cabinet panels.
- () Attach the manual insert to the instrument instruction manual for future reference.