

Service Manual

"supplemental information"

Tektronix

067-0587-10

**7612D Calibration Fixture Signal Standardizer
(Supplement to 067-0587-02)**

070-6178-00

Original

Darf nicht verliehen werden.

KST

024

004

Helmut Singer Elektronik

All reference to the 067-0587-02 in the 070-2427-00 manual now apply to the 067-0587-10 - 7612D Calibration Fixture.

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to the Safety Summary prior to performing service.

First Edition: May 1986

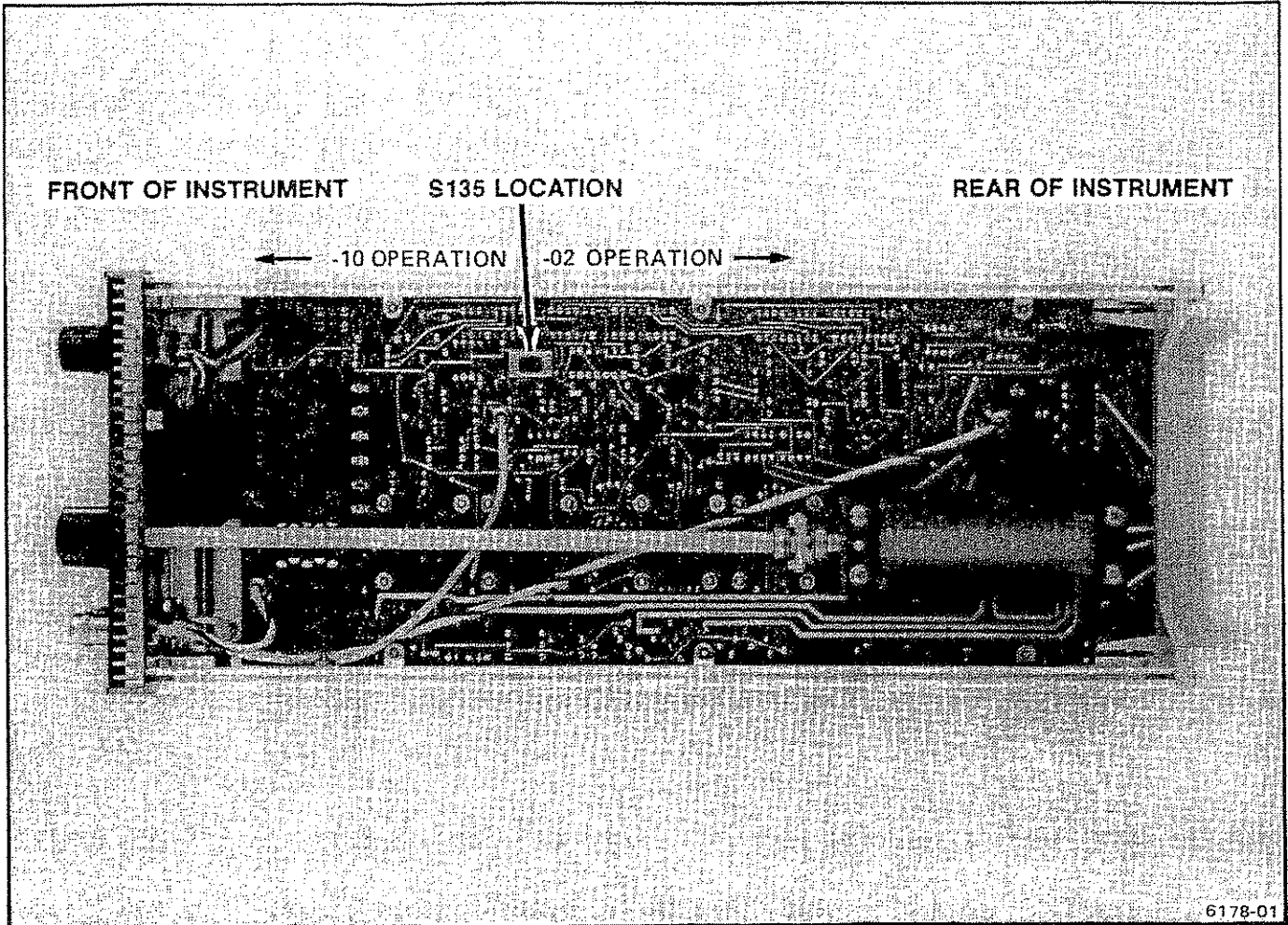
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6178-01

Figure 1-1. 067-0587-10 7612D calibration fixture signal standardizer with right cover removed (S135 location).

GENERAL INFORMATION

INTRODUCTION

This 067-0587-10 Instruction Manual contains supplemental information and a partial diagram for the Signal Standardizer, 067-0587-02 Calibration Fixture Manual.

The information in the 067-0587-02 manual is the same needed for the 067-0587-10 except as noted below. When combined together the 067-0587-02 Instruction Manual provides operating and servicing information for the 067-0587-10. Insert the 10 version before Section 1 of the 02 manual.

067-0587-02 VERSUS 067-0587-10

The 067-0587-10 is a test instrument used as a calibration aid for optimum adjustment of Tektronix 7612D Programmable Digitizers. The difference between the 067-0587-02 Signal Standardizer used in the calibration of 7000 Series oscilloscope mainframes and the 067-0587-10 is the signal coming from the PRETRIG OUT connector on the front of the instrument.

In the GAIN position the signal out will not be a pretrigger signal instead, the 067-0587-10 will generate one trigger per

staircase signal. The 02 version generates one pretrigger pulse for each step in the staircase signal.

Since, the 7612D calibration software requires one trigger per staircase when checking GAIN the 067-0587-10 will primarily be used in the calibration of 7612D's.

OPERATION

The switch (S135) is mounted on the back side of the Main Interface circuit board. When the switch is pushed to the forward position the instrument is functioning as an 067-0587-10 and when the switch is pushed toward the rear of the instrument it functions as an unmodified 067-0587-02. Switch locations are illustrated in figure 1-1.

The 067-0587-10 provides one trigger for each staircase generated and the trigger occurs at the beginning of the staircase.

The verification procedure is the only additional Performance Check required. After completing the calibration procedure contained in Section 5 of the Instruction Manual for the 067-0587-02 perform the 067-0587-10 staircase trigger verification check.

F. 067-0587-10 STAIRCASE TRIGGER PERFORMANCE VERIFICATION

Equipment Required: (Numbers correspond to those listed in Table 5-3, Test Equipment in the 067-0587-02 manual.)

| | |
|------------------------------------|-------------|
| 1. Tektronix 7000-series mainframe | 7904A |
| 3. Tektronix Timebase | 7B80 |
| 5. Tektronix Vertical Amplifier | 7A16A |
| 19. Bnc 42 inch cable | 012-0057-01 |

BEFORE YOU BEGIN:

1. Turn off power to the mainframe oscilloscope.
 2. Install the timebase in the right most compartment and the vertical amplifier in the left most compartment of the mainframe.
 3. Remove the right side cover (with the front-panel forward). See figure 1-1.
 4. Install the 067-0587-10 in the inside vertical compartment of the oscilloscope mainframe.
 5. Turn oscilloscope power switch on.
- b. Set the Vertical mode for an alternate vertical display.
 - c. Set the 7B80 controls for a stable display of one or two cycles of the staircase.
 - d. Slide the calibration fixture mode switch from the 10 position to the 02 position.
 - e. **CHECK**—That the staircase/trigger signals displayed on your test oscilloscope changes from one trigger per staircase to one trigger per each staircase step. See figures 1-2 and 1-3.
 - f. Return the switch to the 10 position.
 - g. Replace the right side cover of the Signal Standardizer.

F1. CHECK STAIRCASE TRIGGER SIGNAL

- a. Connect the PRETRIG OUT of the 067-0587-10 to the vertical amplifier input with the bnc cable.

This concludes the performance verification check.

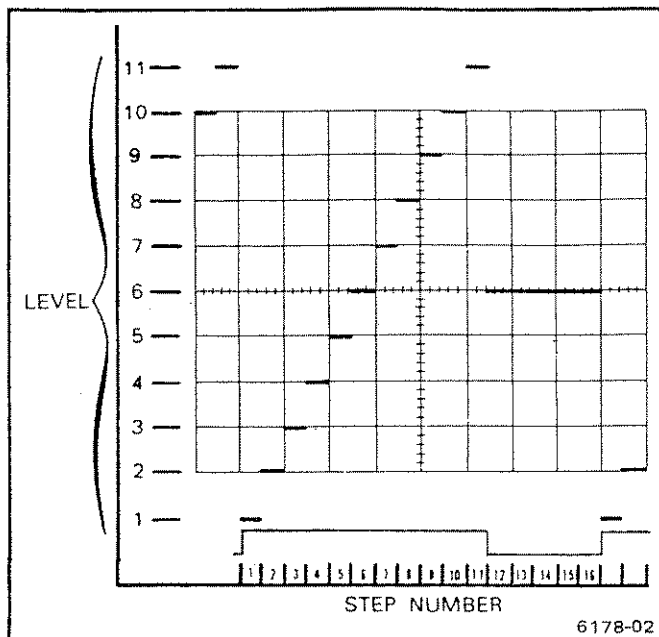


Figure 1-2. Staircase & trigger signals with 067-0587-10.

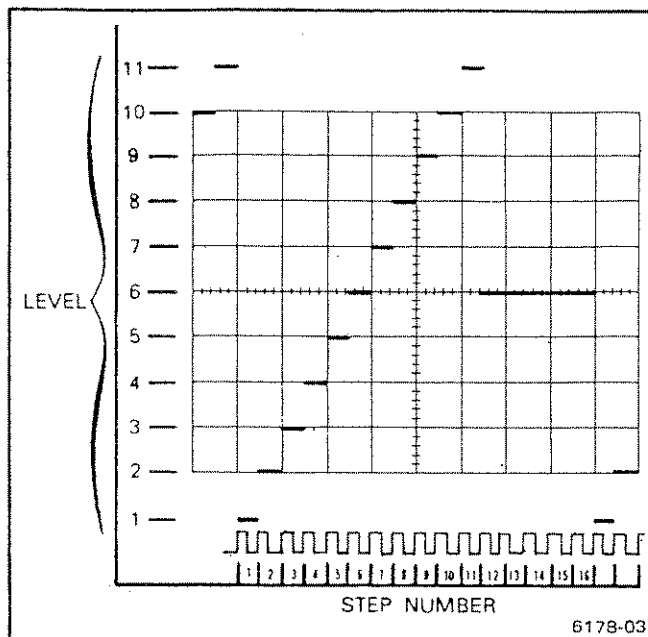


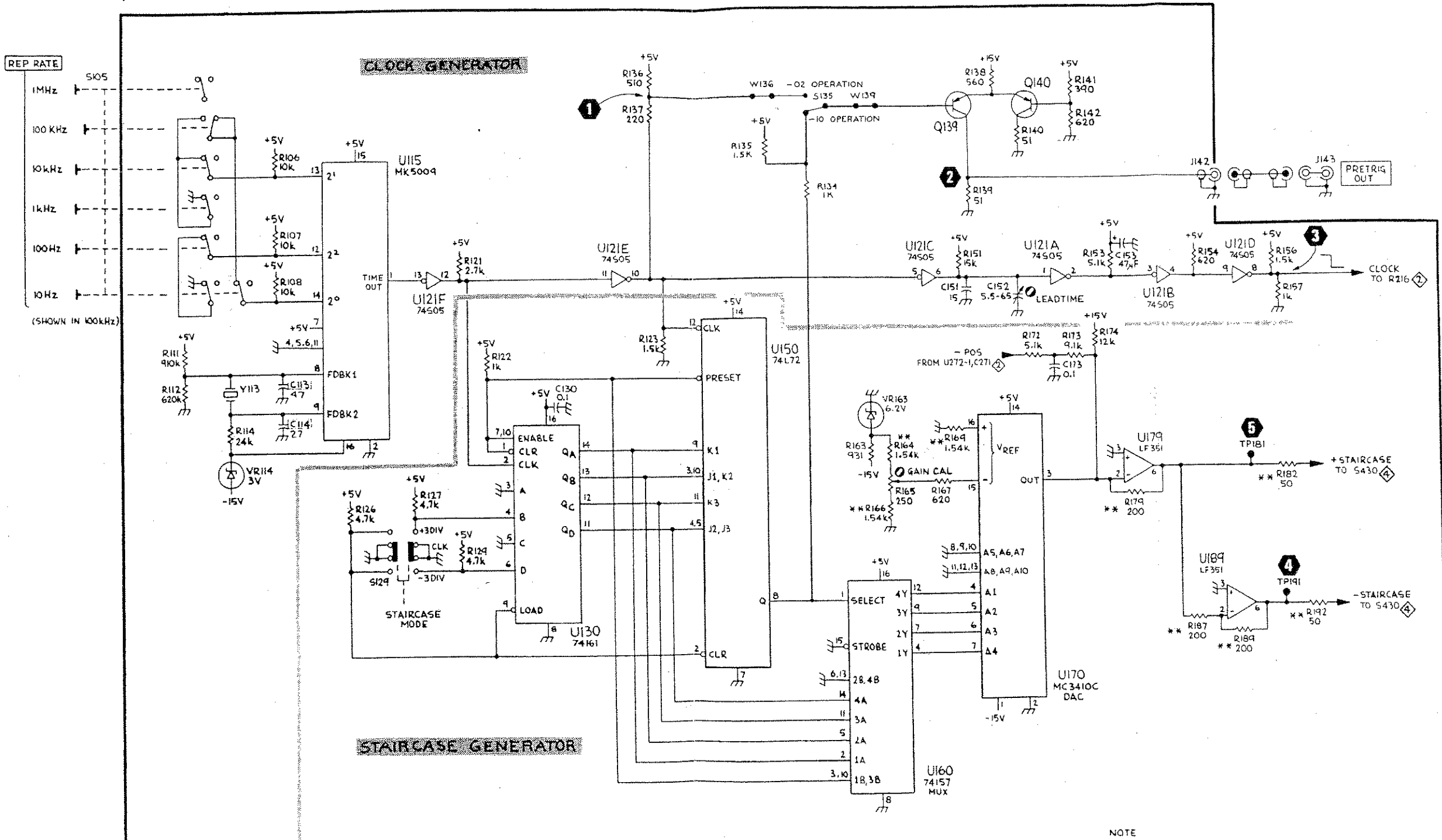
Figure 1-3. Staircase & trigger signals with 067-0587-02.

| Component No. | Tektronix Part No. | Serial/Assembly No. Effective Dscont | Name & Description | Mfr. Code | Mfr. Part No. |
|----------------------|--------------------|--------------------------------------|--|-----------|---------------|
| R134 | 315-0102-00 | | RES,FXD,FILM:1K OHM,5%,0.25M | 57668 | NTR25JE01K0 |
| R135 | 315-0152-00 | | RES,FXD,FILM:1.5K OHM,5%,0.25M | 57668 | NTR25J-E01K5 |
| S135 | 260-1641-00 | | SWITCH,SLIDE:DPDT,0.5A,125VAC | 10389 | 23-021-114 |
| M136 | ----- | | WIRE,ELECTRICAL:20 AWG,BARE | | |
| M139 | ----- | | WIRE,ELECTRICAL:20 AWG,BARE (REPLACEABLE PARTS FOR THE STANDARD 067-0587-02 CAN BE FOUND IN THE OPTIONAL ACCESSORIES MANUAL LISTED BELOW) | | |
| STANDARD ACCESSORIES | | | | | |
| | 070-6178-00 | | MANUAL,TECH:SUPPLEMENT,76120 | 80009 | 070-6178-00 |
| OPTIONAL ACCESSORIES | | | | | |
| | 070-2427-00 | | MANUAL,TECH:INSTRUCTION | 80009 | 070-2427-00 |

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

| Mfr. Code | Manufacturer | Address | City, State, Zip Code |
|-----------|-------------------------|-------------------------------------|-----------------------|
| 10389 | ILLINOIS TOOL WORKS INC | 1714 N DAMEN AVE | CHICAGO IL 60647 |
| 57668 | ROHM CORP | 16931 MILLIKEN AVE | IRVINE CA 92713 |
| 80009 | TEKTRONIX INC | 4900 S W GRIFFITH DR P O BOX 500 | BEAVERTON OR 97077 |

VOLTAGE & WAVEFORM CONDITIONS



| TYPE | +5V | GND | +15V | -15V |
|-------|-----|-----|------|------|
| 74505 | 14 | 7 | 7 | 4 |
| LF351 | | | 7 | 4 |

NOTE
** 0.1% RESISTORS

PARTIAL AI MAIN BOARD



product modification

040-1204-00

7612D CALIBRATION COMPATIBILITY

For TEKTRONIX® 067-0587-02 Signal Standardizers

Serial Numbers B010100 - Up

This kit contains parts and instructions to modify a 067-0587-02 Signal Standardizer Calibration Fixture to a 067-0587-10 7612D Signal Standardizer Calibration Fixture.

The new standardizer includes a switch, S135, which allows one to switch between 067-0587-10 and 067-0587-02 operation. In the -10 position, the signal coming from PRETRIG OUT generates one trigger for each staircase signal when used with the TEST switch in the GAIN position. In the -02 position, a pretrigger signal is produced instead.

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KIT PARTS LIST:

| Ckt. Number | Quantity | Part Number | Description |
|----------------|----------|-------------|---|
| | 1 ea | 070-6178-00 | Manual, tech supp. 7612D cal fixture |
| W 136 W 139 | 1 ft | ----- | Wire, elec. 20AWG, bare |
| S135 | 1 ea | 260-1641-00 | Switch, slide, DPDT, 0.5A, 125V ac |
| R134 | 1 ea | 315-0102-00 | Resistor, film, 1k Ω , 5%, 0.25W |
| R135 | 1 ea | 315-0152-00 | Resistor, film, 1.5k Ω , 5%, 0.25W |
| | 1 ea | ----- | Marker, ident, mkd 067-0587-10 |

INSTRUCTIONS:

WARNING

Before proceeding, ensure the instrument power switch is in the off position, then remove the cal fixture from the mainframe.

- () 1. Remove the right side cover from the plug-in test fixture.
- () 2. Cut the circuit board run (which will be beneath S135 when installed) as shown in Fig. 1.
- () 3. Install S135, R134 and R135 with the included bare wire as shown in Fig. 1 (as an aid to the rough location of the switch, see figure 1-1 in the included, supplementary Service Manual).
- () 4. Affix the included identification marker directly to the plug-in front panel, over the nomenclature "067-0587-02."
- () 5. Verify performance of the newly modified test fixture with the procedure on page 1-2 of the included, supplementary Service Manual.

RH: rh

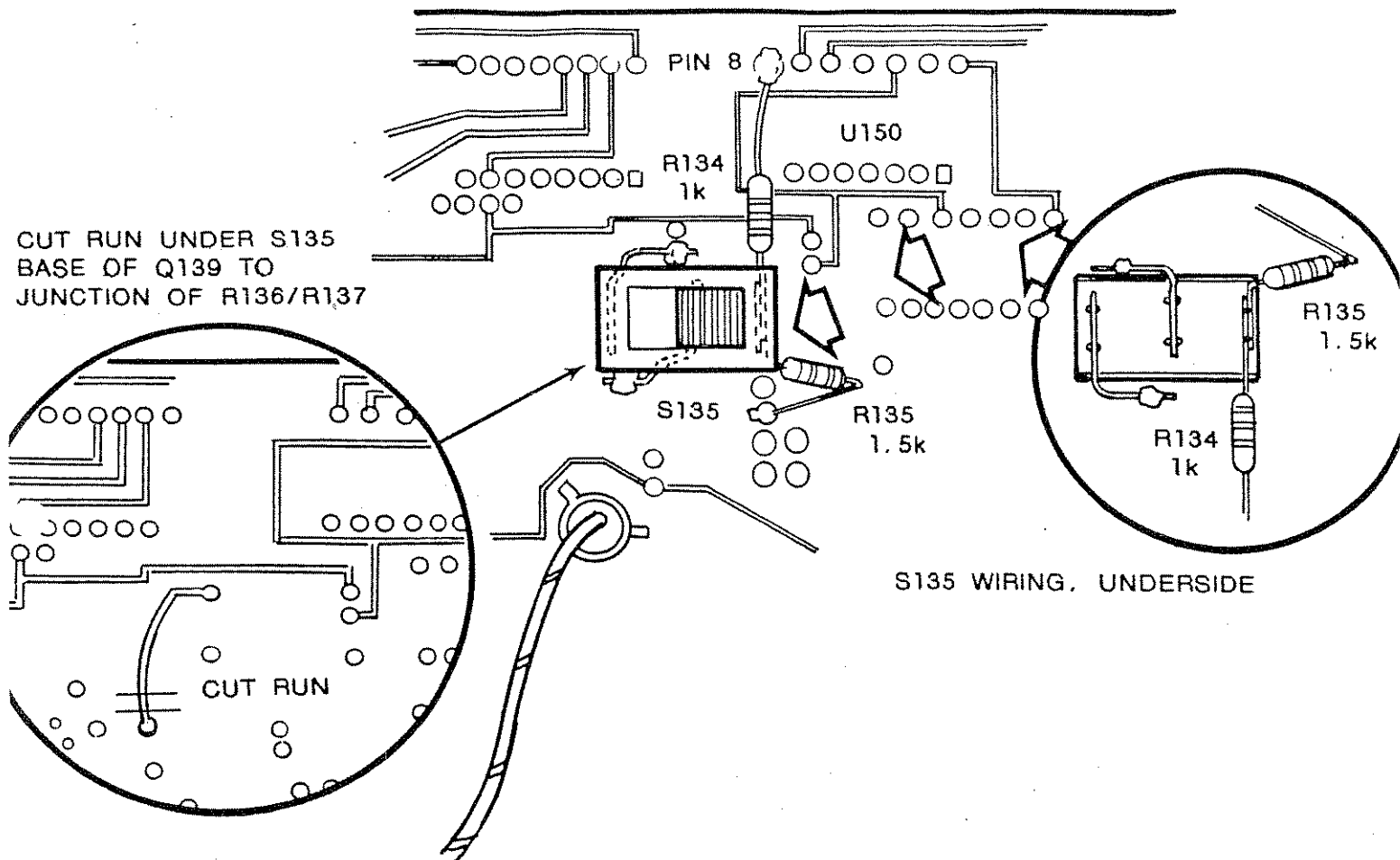


Fig. 1 - S135 Installation



product modification

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