

***TB 9-6625-2084-35**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR OSCILLOSCOPE, OS-262(P)/U (TEKTRONIX, TYPE 7623A) AND TEKTRONIX, TYPES 7623, 7613/R7613, R7623A, 7633/R7633, AND 7633 OPT 5

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*This bulletin supersedes TB 9-6625-2084-35, dated 10 April 1989, including all changes.

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Oscilloscope, OS-262(P)/U (Tektronix, Type 7623A) and Tektronix, Types 7623, 7613/R7613, R7623A, 7633/R7633, and 7633 Opt 5. The manufacturers' manuals were used as the prime data sources in compiling these instructions. The equipment being calibrated will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. Types 7633/R7633 have reduced span capabilities. Types with Option 5 operate from 50 to 400 Hz line frequency. OS-262(P)/U is military designation for Type 7623A.

b. Time and Technique. The time required for this calibration is approximately 2 hours, using the dc and low frequency technique.

2. Forms, Records, and Reports

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TB 750-25.

b. Adjustments to be reported are designated (R) at the end of the sentence in which they appear. When adjustments are in tables the (R) follows the designated adjustment. Report only those adjustments made and designated with (R).

3. Calibration Description. TI parameters and performance specifications which pertain to this calibration are listed in table 1.

Table 1. Calibration Description

Test instrument parameters	Performance specifications
Input power requirements	115 V $\pm$ 1%, 50 to 60 Hz
Vertical and horizontal linearity	Range: Dc to 1 MHz Accuracy: $\pm$ 0.5 minor division
Calibrated sweep rate	Range: 10 ns to 1 ms Accuracy: $\pm$ 0.5 minor division
Calibrator output	Range: 40 mV, 0.4 and 4.0 V dc Accuracy: $\pm$ 1%
Risetime	3.5 ns or less

SECTION II EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment to be used in this calibration procedure. This equipment is issued with Secondary Transfer Calibration Standards Set AN/GSM-286, AN/GSM-287, or AN/GSM-705. Alternate items may be used by the calibrating activity. The items selected must be verified to perform satisfactorily prior to use and must bear evidence of current calibration. The equipment must meet or exceed the minimum use specifications listed in table 2. The accuracies listed in table 2 provide a four-to-one ratio between the standard and TI.

5. Accessories Required. The accessories required for this calibration are common usage accessories issued as indicated in paragraph 4 above, and are not listed in this calibration procedure.

Table 2. Minimum Specifications of Equipment Required

Common name (official nomenclature)	Minimum use specifications	Manufacturer and model (part number)
CALIBRATION FIXTURE (STANDARDIZER)	Range: 1 kHz to 1 MHz Risettime: 0.875 ns	Tektronix, Type 067-0587-02 (067-0587-02)
OSCILLOSCOPE CALIBRATOR	Voltage output: Range: 50 mV to 5 V at 1 kHz Accuracy: 0.25% Time marker: Range: 5 ns to 1 ms Accuracy: $\pm 3\%$ Voltage input: Range: 1520 to +135 V dc Accuracy: $\pm 0.25\%$	John Fluke, Model 5820A-5C-GHZ (5820A-5C-GHZ)
TIME BASE ¹	Must be compatible w/test instrument and vertical amplifier	Tektronix, Type 7B Series
VERTICAL AMPLIFIER ¹	Must be compatible w/test instrument and time base	Tektronix, Type 7A Series

¹Provided with TI.

SECTION III CALIBRATION PROCESS

6. Preliminary Instructions

a. The instructions outlined in paragraphs 6 and 7 are preparatory to the calibration process. Personnel should become familiar with the entire procedure before beginning the calibration.

b. Items of equipment used in this procedure are referenced within the text by common name as listed in table 2.

c. Unless otherwise specified, verify the result of each test, and whenever the test requirement is not met, take corrective action before continuing with this calibration. Adjustments required to calibrate the TI are included in this procedure. Additional maintenance information is contained in the manufacturers' manuals for this TI.

d. When indications specified in paragraphs 8 through 13 are not within tolerance, perform the power supply check prior to making adjustments. After adjustments are made, repeat paragraphs 8 through 13. Do not perform power supply check if all other parameters are within tolerance.

e. Unless otherwise specified, all controls and control settings refer to the TI.