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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DUAL TRACE DELAYED SWEEP SAMPLER, TEKTRONIX TYPE 5SI4N

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REPORTING OF ERRORS

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SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Dual Trace Delayed Sweep Sampler, Tektronix Type 5S14N. The manufacturer's manual was used as the prime data source in compiling these instructions. The above equipment will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. None.

b. Time and Technique. The time required for this calibration is approximately 4 hours, using the dc (direct current) and low frequency technique.

2. Calibration Data Card, DA Form 2416

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TM 38-750. DA Form 2416 must be annotated in accordance with TM 38-750 for each calibration performed.

b. Adjustments to be reported on DA Form 2416 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	Performance specifications
VERTICAL SYSTEM	
Risetime	350 ps or less, 10 to 90% of step pulse signal
Bandwidth (-3 dB)	Dc to 1 GHz
Input resistance	50Ω within 2%
Deflection factor: Accuracy Variable	2 mV/div to 0.5 V/div in 8 steps of 1, 2, 5 sequence ±3% (with VARIABLE at CAL) At least 2.5:1
Input signal range: Maximum operation	2 V p-p (dc + peak ac) ±2V
Dc offset range	±2 V or more
Displayed noise(tangential)	2 mV or less, LOW NOISE switch "out"
Low noise operation	Displayed noise reduced by at least 5 times
Vertical signal out	0.2 V/div of deflection, ±3%
Dot slash	Less than 0.1 div at 10 Hz and above
Delta t range	Shifts channel 2 at least ±1 ns with respect to channel 1