

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**CALIBRATION PROCEDURE FOR
RADAR INDICATOR TEST SET GROUP OQ-63A/APS-94D
(NSN 6625-01-058-7874)**

Headquarters, Department of the Army, Washington, DC
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REPORTING OF ERRORS

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*This manual supersedes TB 11-6625-1833-35/1, 30 March 1971.

Section I. IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. a. This technical bulletin provides calibration procedures for Radar Indicator Test Set Group OQ-63A/APS-94D. The OQ-63A/APS-94D is used for bench testing, alignment, calibration, and troubleshooting the following equipment:

(1) Record-Processor-Viewer, Radar Mapping RO-495/U.

(2) Rack, Electrical Equipment MT-4015/-APS-94D.

(3) Generator, Sweep SG-1 127/APS-94E.

(4) Control, Radar Set C-7645/APS-94D.

b. The OQ-63A/APS-94D contains two components which require calibration: Test Set Subassembly MX-8638A/APS-94D and Test Set Subassembly MX-8639A/APS-94D. When interconnected, the MX-8638A/APS-94D and MX-8639A/APS-94D function as a single operating unit. The MX-8638A/APS-94D is comprised of an upper unit (fig. 1) and a lower unit (fig. 2). It simulates the control signals, signal paths, and loads of the RO-495/U (and several of its subassemblies) and of the MT-4015/APS-94D. The MX-8639A/APS-94D (fig. 3) simulates the control signals and loads of the SG-1127/APS-94E and the C-7645/APS-94D. Additional data is listed below.

Nomenclature.....Test Set Group, Indicator, Radar
OQ-63A/APS-94D

Size:

MX-8638A/APS-94D.....19.25 h x 30.38 x 22.25 1 inches

MX-8639A/APS-94D.....19.25 h x 30.38 x 22.25 1 inches

Weight:

MX-8638A/APS-94D.....125 lb

MX-8639A/APS-94D.....190 lb

ReferenceTM 11-6625-1833-12

TM 11-6625-1833-40

TM 11-6625-1833-50

Specifications:

Input power requirements.....Ac: 115 ± 5 vac line-to-neutral, 3 phase, 4 wire, 400 Hz at 690 volt amperes. Dc: 27 ± 0.5 Vdc at 340 watts.

Dc voltage output..... -28 ± 0.5 vdc
 $+20 \pm 0.2$ vdc
 -20 ± 0.2 vdc
 $+6.3 \pm 0.126$ vdc
 $+102 \pm 2.04$ vdc
 $+640 \pm 40$ vdc
 $+531 \pm 5.31$ vdc
 $+15 \pm 0.75$ vdc
 -15 ± 0.75 vdc
 $+28 \pm 0.5$ vdc
..... $+26.00 \pm 0.03$ vdc

Ac voltage output..... 115 ± 5 vac line-to-neutral 400 Hz, 3 phase. Three selectable 400 Hz film speed voltages:

..... 0.825 ± 0.015 vac,
..... 3.300 ± 0.010 vac,
..... 13.2 ± 0.2 vac.

Video output.....2v peak-to-peak.
6v peak.

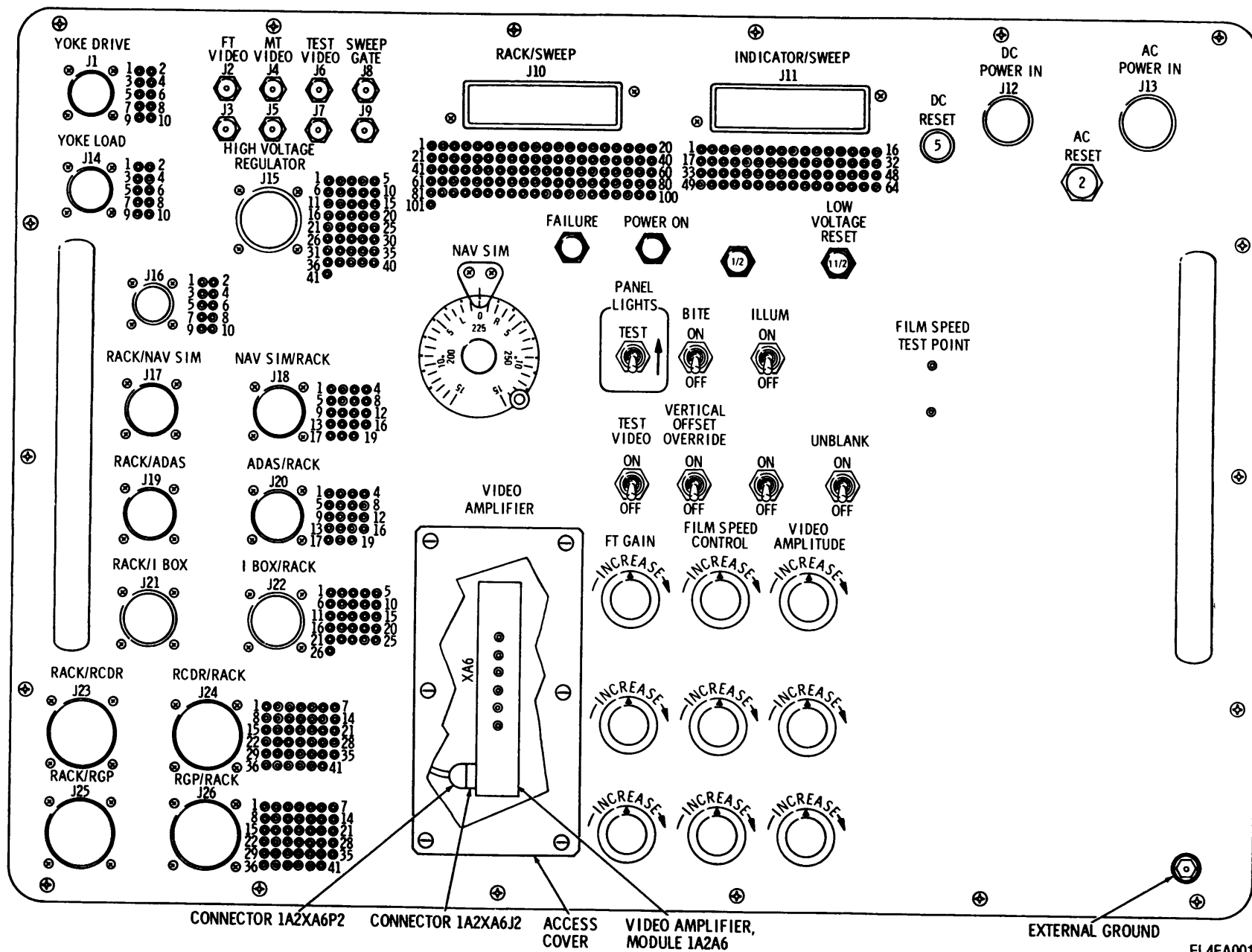
Sawtooth waveform output.....- 10v peak amplitude, 500 : 5 mv duration.

Synchro coarse calibration.....Maximum 14 ± 1 v at 0 ± 4 dial reading.

Synchro fine calibration.....Minimum 130 mv at 0 ± 1 dial reading.

Time required for calibration.....4 hours (approx).

Calibration techniqueDc low frequency.



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Figure 1. Test Set Subassembly MX-8638A/APS-94D, upper panel.