

TECHNICAL BULLETIN
CALIBRATION PROCEDURE
FOR
SWEEP GENERATORS
AN/USM-308(V), AN/USM-308(V)1,
AN/USM-308(V)2, AND AN/USM-308(V)3,
INCLUDING GENERATOR SUBASSEMBLIES
MX-8333(P)/USM-308(V),
MX-8364(P)/USM-308(V), AND MX-8364A(P)/USM-308(V)
WITH ELECTRONIC TEST EQUIPMENT PLUG-IN UNITS
PL-1239/USM-308(V), PL-1239A/USM-308(V), PL-1240/USM-308(V),
PL-1241\USM-308(V), PL-1241A/USM-308(V),
PL-1242/USM-308(V), PL-1243/USM-308(V), AND PL-1304/USM-308(V)
AND
HEWLETT PACKARD SWEEP OSCILLATORS
MODELS 8690A AND 8690B
INCLUDING
H-P RF PLUG-IN UNITS, MODELS 8691A, 8691A OPT 200, 8692A,
8693A, 8693A OPT 200, 8693B, 8694A. H01-8694A(OPTION 100),
H02-8694A(OPT10N 200), 8694B, H02-8694B, 8695A, 8696A,
8697A, 8698A, 8698B, 8699B, AND 87-07A,
AND
CALIBRATORS
K04-8690A AND 11531A

HEADQUARTERS, DEPARTMENT OF THE ARMY
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AN/USM-308(V), AN/USM-308(V)1,
AN/USM-308(V)2, AND AN/USM-308(V)3,
INCLUDING
GENERATOR SUBASSEMBLIES
MX-8333(P)/USM-308(V),
MX-8364(P)/USM-308(V), AND MX-8364A(P)/USM-308(V)
WITH ELECTRONIC TEST EQUIPMENT PLUG-IN UNITS
PL-1239/USM-308 (V), PL-1239A/USM-308(V), PL-1240/USM-308(V) ,
PL-1241/USM-308(V), PL-1241A/USM-308(V), PL-1242/USM-308(V),
PL-1243/USM-308(V), AND PL-1304/USM-308(V)
AND
HEWLETT PACKARD SWEEP OSCILLATORS
MODELS 8690A AND 8690B
INCLUDING
H-P RF PLUG-IN UNITS, MODELS 8691A, 8691A OPT 200, 8692A,
8693A, 8693A OPT 200, 8693B, 8694A, HO1-8694A (OPTION 100),
H2-8694A (OPTION 200), 8694B, H2-8694B, 8695A, 8696A,
8697A, 8698A, 8698B, 8699B, AND 8707A,
AND
CALIBRATORS
K04-8690A AND 11531A**

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SECTION I

INTRODUCTION AND DESCRIPTION

1-1. Purpose and Scope

This bulletin provides information, equipment setups, and adjustment locations for the periodic calibration of Sweep Generator Calibrators PL-1239/USM-308(V), PL-1239A/USM-308(V), Sweep Generators AN/USM408(V), AN/USM-308(V)1, AN/USM-308(V)2, and AN/USM-308(V)3, and the associated plug-in units comprising the (V) variable nomenclature. Since it is to be used by personnel trained and qualified in the use of calibration equipment, detailed instructions pertaining to operation and use of the calibration equipment is not included.

1-2. Report of Technical Bulletin Improvements

The reporting of errors, omissions, and recommendations for improving this bulletin by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-CRA, Fort Monmouth, NJ 07708.

1-3. Descriptive Data

Sweep Generators AN/USM-308(V), AN/USM-308(V)1, AN/USM(V)2, and AN/USM-308(V)3 consist of Generator Subassembly MX-8333(P)/USM-308(V) and Generator Subassembly MX-8364(P)/USM-308(V) or MX-8364A(P)/USM-308 (V) and various plug-in units that govern the frequency range and power output of this broad and narrow band sweep oscillator. Each plug-in unit has a plastic frequency scale that is snapped in the main frame while being used. The RF plug-in units may be used individually by being inserted into main frame MX-8364 (P)/USM-308(V), or collectively as shown in figure 1 with Plug-In Unit PL-1243/USM-308 (V) inserted into the mainframe. Calibrator PL-1239/USM-308(V) or PL-1239A/USM-308 (V) is also with the configuration and enables checking and adjusting by supplying substitute resistive loads and voltage outlets. Additional data is listed in a, b, and c as follows:

a.. *Identification.* The identification and physical description of the sweep generator set is contained in table 1-1.

Table 1-1. Component Identification

Nomenclature	Type Number	Mfg. Part Number	Weight (approx)
Generator subassemblies	MX-8333(P)/USM-308(V)	HP 8707A	18 X 17 X 10
	MX-8364(P)/USM-308(V)	HP 8690A	18 X 17 X 9
	MX-8364A(P)/USM-308(V)	HP 8690B	18 X 17 X 9
Electric test equipment plug-in Units.	PL-1239/USM-308(V)	HP K04-S690A	17 X 7 X 5
	PL-1239A/USM-308(V)	HP 11531A	17 X 7 X 5
	PL-1240/USM-308(V)	HP 8693B	17 X 7 X 5
	PL-1241/USM-308(V)	HP 8698A	17 X 7 X 5
	PL-1241A/USM-308(V)	HP 8698B	17 X 7 X 5
	PL-1242/USM-308(V)	HP 8699B	17 X 7 X 5
	PL-1243/USM-308(V)	HP 8706A	17 X 7 X 5
	PL-1304/USM-308(V)	HP 8694B	17 X 7 X 5
	None applied.	HP 8691A	17 X 7 X 5
		HP 8692A	17 X 7 X 5
		HP 8695A	17 X 7 X 5
		HP 8696A	17 X 7 X 5
		HP 8697A	17 X 7 X 5

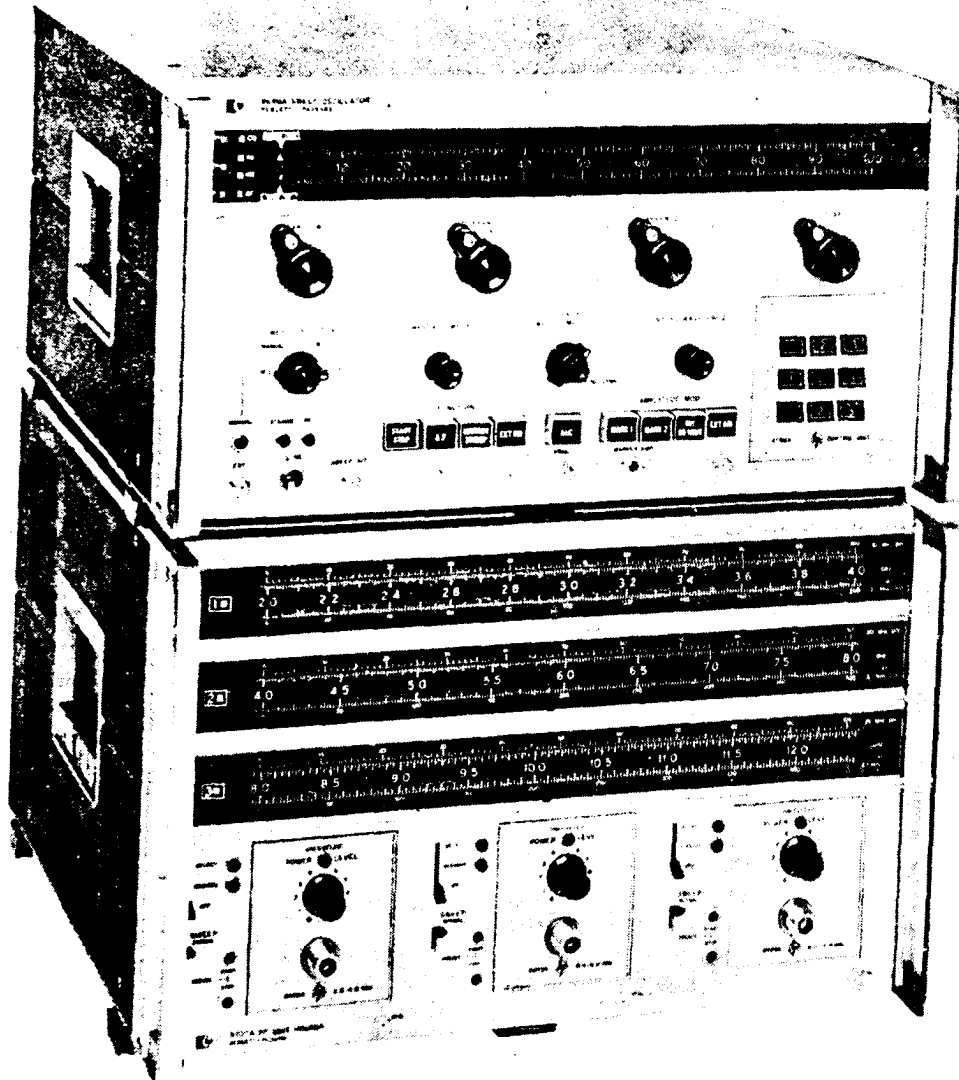


Figure 1-1. Sweep Generator AN/USM-308(V) (top) and RF Unit Holder MX-8333(P)/USM-308(V) (bottom) shown with four various plug-in.

b. *Specification.* MX-8364(P)/USM-308(V) and MX-8364A(P)/USM-308(V) specifications marked with an asterisk are for information only and are not necessarily verified in this procedure.

*Input requirements 115 or 220 vac $\pm 10\%$, 50 to 60 Hz. Approximately 350 watts.

Sweep functions:

Start-stop Sweep . . . Sweeps from "start" to "stop" frequency setting.

Range Both settings continuously and independently adjust-

able over the entire frequency range; can be set to sweep either up or down in frequency.

End-point accuracy . . . Same as RF unit frequency accuracy.

Marker sweep Sweeps from "Marker 1" to "Marker 2" frequency setting.

Range Both settings continuously and independently adjustable over the entire frequency range; can be set to sweep either up or down in frequency.