TB 9-6625-2345-35

DEPARTMENT OF THE AMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR SPECTRUM ANALYZER AN/USM-620 (TEKTRONIX, MODEL 495P)

Headquarters, Department of the Army, Washington, DC
27 August 2003

Approved for public release; distribution is unlimited.

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our fax number is DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web, use https://amcom2028.redstone.army.mil.

			Paragraph	Page
SECTION	I.	IDENTIFICATION AND DESCRIPTION		
		Test instrument identification	1	2
		Forms, records, and reports	2	2
		Calibration description	3	2
	II.	EQUIPMENT REQUIREMENTS		
		Equipment required	4	4
		Accessories required	5	4
	III.	CALIBRATION PROCESS		
		Preliminary instructions	6	5
		Equipment Setup	7	5
		Calibrator Frequency	8	5
		Calibrator Amplitude	9	7
		Self Calibration	10	8
		Marker Frequency and Counter Accuracy	11	8
		Center Frequency Stability	12	10

	Paragraph	Page
Span/Div Accuracy	13	11
Sweep Time Accuracy	14	15
Resolution BW and Shape Factor	15	18
Noise Sideband Amplitude	16	21
Frequency Response	17	22
Dynamic Range and Accuracy	18	25
RF Attenuator Accuracy	19	29
IF Gain Accuracy	20	30
Gain Variation	21	33
Sensitivity and Residual Response	22	34
Harmonic and Intermodulation Distortion	23	40
Tracking Generator Frequency. Range	24	43
Tracking Generator Output Level	25	43
Tracking Generator Flatness	26	44
Tracking Generator Spurious Signals	27	45
Final Procedure	28	47

SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Spectrum Analyzer, AN/USM-620 (Tektronix, Model 495P). TM 11-6625-3278-40 and TM 11-6625-3278-12 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. None.

b. Time and Technique. The time required for this calibration is approximately 9 hours, using the dc and low frequency and microwave 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.