

***TB 9-6625-1493-35**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIFFERENTIAL VOLTMETER JOHN FLUKE, MODELS 887A, 887AB, AND 887AB/AN, VOLTAGE DIVIDER JOHN FLUKE, MODELS 80E-10 AND 80E-10AN AND MICROVOLT POTENTIOMETER JOHN FLUKE, MODEL 831AR/AN

Headquarters, Department of the Army, Washington, DC
19 October 2003

Distribution Statement A: 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 3
		Calibration description	3 3
	II.	EQUIPMENT REQUIREMENTS	
		Equipment required.....	4 4
		Accessories required.....	5 4
	III	CALIBRATION PROCESS FOR DIFFERENTIAL VOLTMETER, JOHN FLUKE, MODELS 887A, 887AB, AND 887AB/AN	
		Preliminary instructions	6 5
		Equipment setup	7 5
		Conventional voltmeter accuracy.....	8 6
		Differential voltmeter dc voltage accuracy (transfer level)	9 7

*This bulletin supersedes TB 9-6625-1493-35, dated 5 January 1993, including all changes.

		Paragraph	Page
	Differential voltmeter dc voltage accuracy and stability (reference level).....	10	9
	Null detector	11	12
SECTION	III. CALIBRATION PROCESS FOR DIFFERENTIAL VOLTMETER, JOHN FLUKE, MODELS 887A, 887AB, AND 887AB/AN - CONTINUED		
	Differential voltmeter ac voltage accuracy (transfer level)	12	13
	Differential voltmeter ac voltage accuracy (reference level)	13	15
	Supply voltage	14	18
	Final procedure	15	18
	IV. CALIBRATION PROCESS FOR VOLTAGE DIVIDER, JOHN FLUKE, MODELS 80E-10 AND 80E-10AN		
	Preliminary instructions	16	18
	Equipment setup	17	19
	Meter accuracy	18	19
	Divider accuracy.....	19	20
	Final procedure	20	21
	V. CALIBRATION PROCESS FOR MICROVOLT POTENTIOMETER, JOHN FLUKE, MODEL 831AR/AN		
	Preliminary instructions	21	21
	Equipment setup	22	21
	Meter tracking.....	23	22
	Range accuracy.....	24	23
	Final procedure	25	25

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Differential Voltmeter, John Fluke, Models 887A, 887AB, and 887AB/AN, Voltage Divider, John Fluke, Models 80E-10 and 80E-10AN, and Microvolt Potentiometer, John Fluke, Model 831AR/AN. 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. Variations among models are described in text.

b. Time and Technique. The time required for this calibration is approximately 4 hours for section III, 1 hour for section IV, and 2 hours for section V, using the dc and low frequency technique.