OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL: CALIBRATION SET, SECONDARY TRANSFER STANDARDS AN/GSM-286 (BASIC) AND AN/GSM-287 (AUGMENTED)

HEADQUARTERS, DEPARTMENT OF THE ARMY

14 AUGUST 1987

WARNING
HIGH VOLTAGE
is used in the operation of this equipment

DEATH ON CONTACT
may result if personnel fail to observe safety precautions

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through vital organs of the body.

EXTREMELY DANGEROUS POTENTIALS
exist in the following instruments:

Hewlett-Packard, Model 745 Ac Voltage Standard
Krohn-Hite, Model 7500A Amplifier
Tektronix, Type 5440 Oscilloscope
Tektronix, Type 491 Spectrum Analyzer
Hewlett-Packard, Model 8640 Signal Generator
John Fluke, Model 410B Power Supply
Hewlett-Packard, Model 214B Pulse Generator
NJE, Model CS36CR30-D2 Power Supply
Kepco, Model HB 525M-20480 Power Supply
John Fluke, Model 760A Test Set
MCL 15122 RF Power Generator
Hewlett-Packard, Model 746 High-Voltage Amplifier
John Fluke, Model 332B/AF Dc Voltage Standard
Sorenson, NModel QRE3-300M13 Power Supply

WARNING
Do not be misled by the term "low voltage." Potentials as low as 50 volts may cause death under adverse conditions.

For artificial respiration, refer to FM 21-11.
Water is not an acceptable fluid for use with flowmeter kit FT-AFS-4-CF.

WARNING
EYE PROTECTION

Protective devices should be worn to protect the eyes when working with certain items of equipment in the physical areas. High pressure fluids and gas can cause eye damage and require the use of eye protection devices. Soldering is also dangerous, consequently some type of eye protection devices should be utilized when soldering. Safety glasses can be requisitioned through supply channels and should be in accordance with Federal Specification GGG-S-620.

WARNING
EXCESSIVE NOISE LEVEL

Secondary Transfer Standards Calibration Set AN/GSM-286/287 is sometimes powered by a 30-kW diesel engine generator. Operational noise may damage unprotected ears. Protective ear coverings should be worn at all times when working near the generator.

TECHNICAL MANUAL ***TM 9-6695-274-14**

HEADQUARTERS

TM 9-6695-271-14 **DEPARTMENT OF THE ARMY**

WASHINGTON, DC, 14 AUGUST 1987

SUPERSEDED COPY (SEE BELOW)

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL: CALIBRATION SET, SECONDARY TRANSFER STANDARDS AN/GSM-296 (BASIC) AND AN/GSM-287 (AUGMENTED)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve this publication, please let us know. Mail your letter or DA Form 2028. (Recommended Changes to Publications and Blank Forms) to: Commander, U.S. Army TMDE Support Group, ATTN: AMXTM- LML, Redstone Arsenal, AL 35898-5400.A reply will be furnished directly to you.

*This manual supersedes TM 9-4931-487-14, 27 April 1977, and TM 9-4931-496- 14, 7 October 1977.

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual is published for information and guidance of personnel concerned with the operation and maintenance of Secondary Transfer Standards Calibration Sets, APN 7917000 and 7917001. These sets will be referred to throughout this manual as the AN/GSM-286/287.

b. Refer to manufacturer's commercial manual, technical bulletin, or technical manual for operating procedures of individual instruments supplied with the AN/GS M-286/287.

c. Refer to TM 9-4931-700-34P and other individual Repair Parts and Special Tools List (appendix A) for repair parts.

1-2. Maintenance Allocation and Maintenance Technique. The prescribed maintenance responsibilities will apply as reflected in the maintenance allocation chart (MAC) (appendix B). In all cases where the nature of repair, modification, or adjustment is beyond the scope or facilities of the using personnel, the responsible maintenance unit should be informed in order that trained personnel with suitable tools and equipment may be provided or approximate instructions issued.

NOTE

Daily operational checks should be made on the equipment that is to be used in the measurement setups for that day. The operator will make the determination if additional checks are required to verify the system accuracy of the setups.

1-3. Forms, Records, and Reports

a. General. Responsibility for proper execution of forms, records, and reports rests upon the commander of all units maintaining this equipment. However, the value of accurate records must be fully understood by all persons responsible for their compilation, maintenance, and use. Records, reports, and authorized forms are normally utilized to indicate the type, quantity, and condition of materiel to be inspected, repaired, or used in repair. Properly executed forms convey authorization and serve as records for repair or replacement of materiel, and for delivery of materiel requiring further repair to shops. The forms, records, and reports establish the work required, the progress of the work within the shops, and the status of the materiel upon completion of its repair.

b. Authorized Forms. The forms generally applicable to units operating and maintaining this materiel are listed in appendix A. For a listing of all forms, refer to DA Pam 25-30. For instructions on the use of these forms, refer to DA Pam 738-750 and AR 725-50.

c. Field Reports of Accidents. The reports necessary to comply with the requirements of the Army safety program are prescribed in detail in AR 385-40. These reports are required whenever accidents involving injury to personnel or damage to materiel occur.

d. Equipment Improvement Recommendations. Deficiencies detected in the equipment or materials should be reported using the Quality Deficiency Report, Standard Form 368.

e. Reporting Receipt of Defective Material. All reports will be in accordance with DA Pam 738-750

Section II. DESCRIPTION

1-4. General. This section contains a description of the AN/GSM-286 and the expansible van interior. Functional and operational instructions for the vehicle are contained in TM 9-2320-260-10. Operating and maintenance instructions for the power gate are contained in the manufacturer's manual.

1-5. Expansible Van Description

a. Electrical Description. The expansible van is wired to provide 208 volts ac, 400 Hz 3 phase; 120 volts ac, 400 Hz single phase; and 120 volts ac, 60 Hz (see figures 1-1 and 1-2).

b. Work Bench and Equipment Racks. The work bench top consists of four sections of 1-inch plywood covered with formica. These sections are bolted to a three-section metal frame. The metal frame is bolted to the storage cabinets. The storage cabinets are bolted to the floor of the van. The equipment racks are secured to shock mounts which are bolted to the work bench top.

1-6. AN/GSM-286/287 Description

a. Functional Description. AN/GSM-286 is a mobile laboratory designed and configured to make fundamental measurements in the direct current and low frequency (DCLF), physical, and repair parameters of test, measurement, and diagnostic equipment(TMDE).The AN/GSM-286/287 and subset nomenclatures and part numbers are listed in tables 1-1 and 1-2. The AN/GSM-286 can be mounted in one expansible van. The normal tactical vehicle is the M820A2.This vehicle is authorized as a separate item.

b. Physical Description

(1) TheAN/GSM-287Calibration Set, Secondary Transfer, consists of the AN/GSM-286 Transfer Set with additional equipment for microwave capability and additional physical and electronic standards. Since the AN/GSM-287 is an expanded AN/GSM-286, the AN/GSM-286 is used in this publication for ease of reading. When an item is peculiar to the AN/GSM-287 only, the AN/GSM-287 will be used. The AN/GSM-287 requires two expansible vans in the mobile configuration.

(2) The components of the AN/GSM-286 are secured in shock mounted racks that provide shock isolation (fig. 1-3). The rack-mounted equipment faces the curbside. Nonelectrical equipment is calibrated on the street side of the work bench. Figure 1-4 depicts the mounting plate for torque wrench calibrators.

Table 1-1. AN/GSM-286 Subset 7917000 Identification

Nomenclature	Part number
AN/GSM-286: Electronic	7917002
AN/GSM-286: Physical	7917003
AN/GSM-286: Repair	7917004
AN/GSM-286: Equipment	7915899
Mounting Assembly	

Table 1-2. AN/GSM-287 Subset 7917001 Identification

Nomenclature	Part number
AN/GSM-287: Microwave	7917005
AN/GSM-287: Electronic	7917006
AN/GSM-287: Physical	7917007
AN/GSM-287: Equipment	7915900
Mounting Assembly	

c. AN/GSM-286 Contents. The location and quantity of standards and accessories contained in the AN/GSM-286 are listed in tables 1-3, 1-4, and 1-5, and shown in figures 1-5 and 1-6.

d. AN/GSM-287 Contents. The location and quantity of additional standards and accessories contained in the augmented AN/GSM-287 are listed in tables 1-6, 1-7, 1-8, and shown in figures 1-7 and 1-8

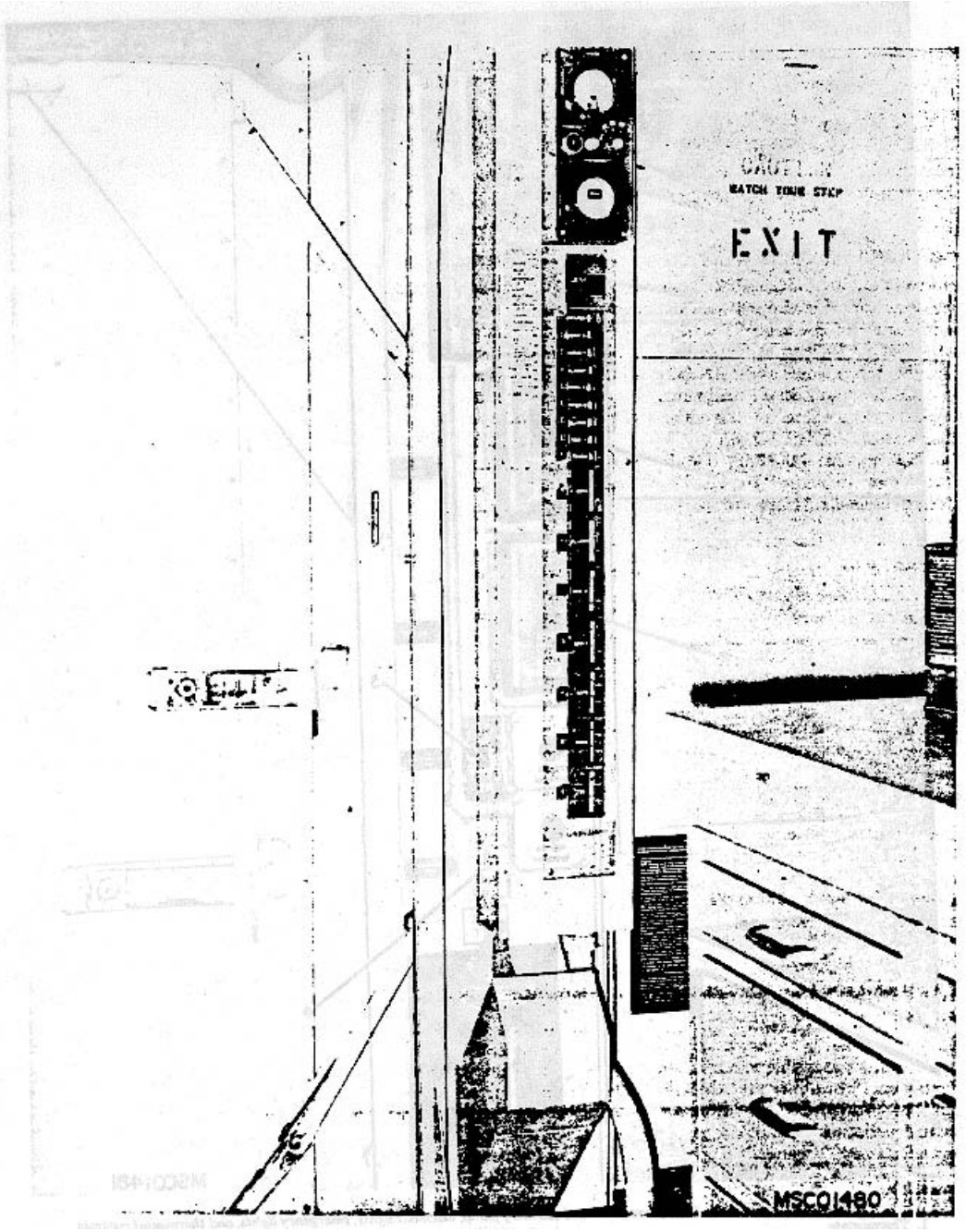


Figure 1-1. Circuit breakers for circuits within the van

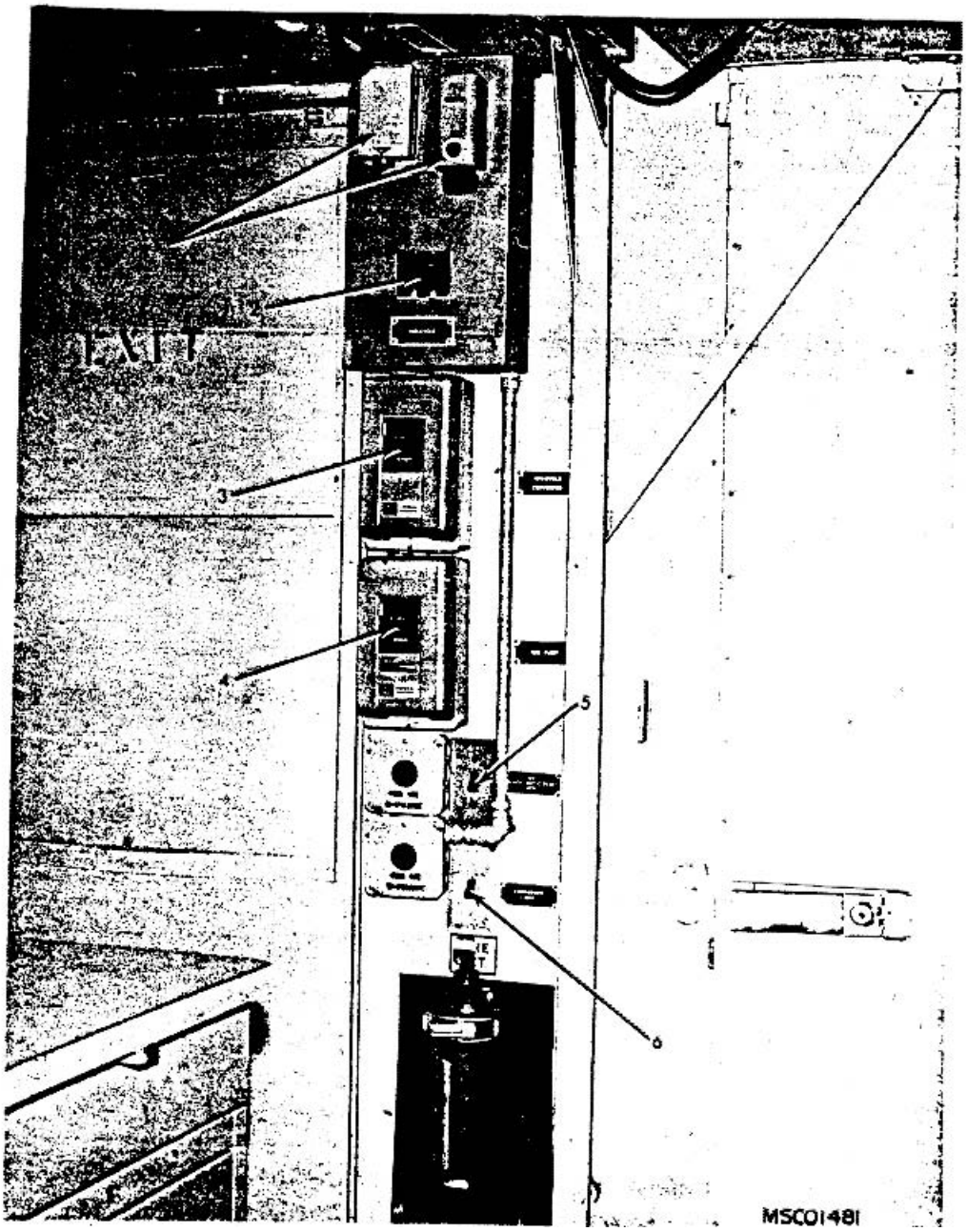


Figure 1-2. Switches for 400-Hz converter and auxiliary pump, blackout lights, emergency lights, and thermostat controls.

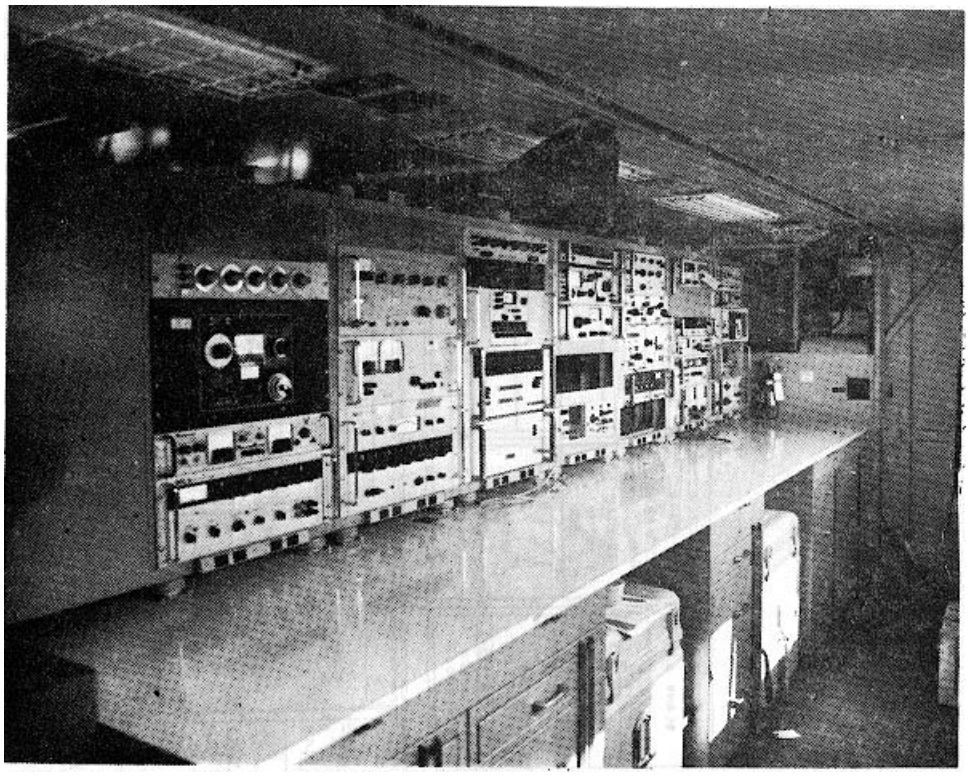


Figure 1-3. Equipment mounted in racks.

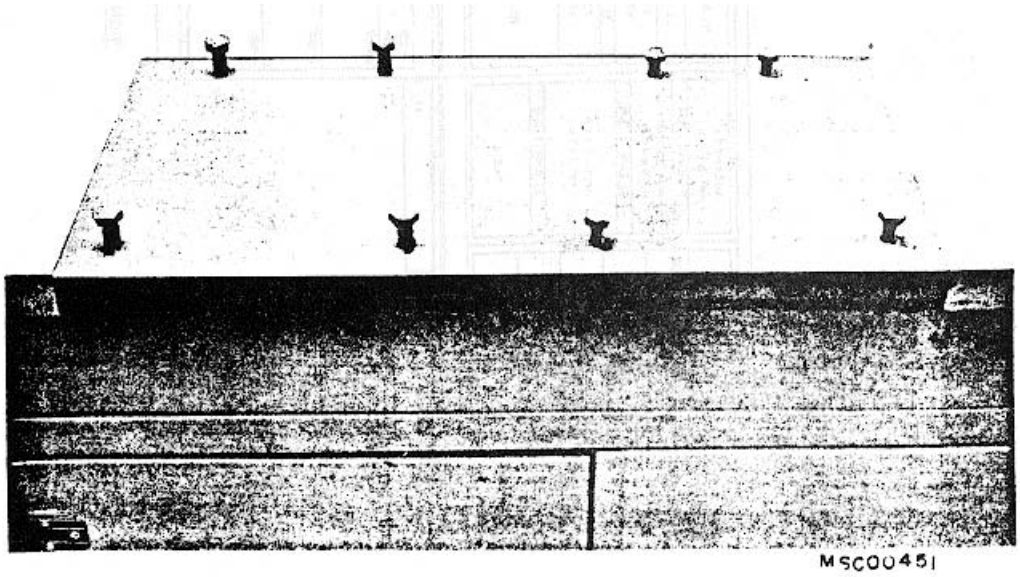
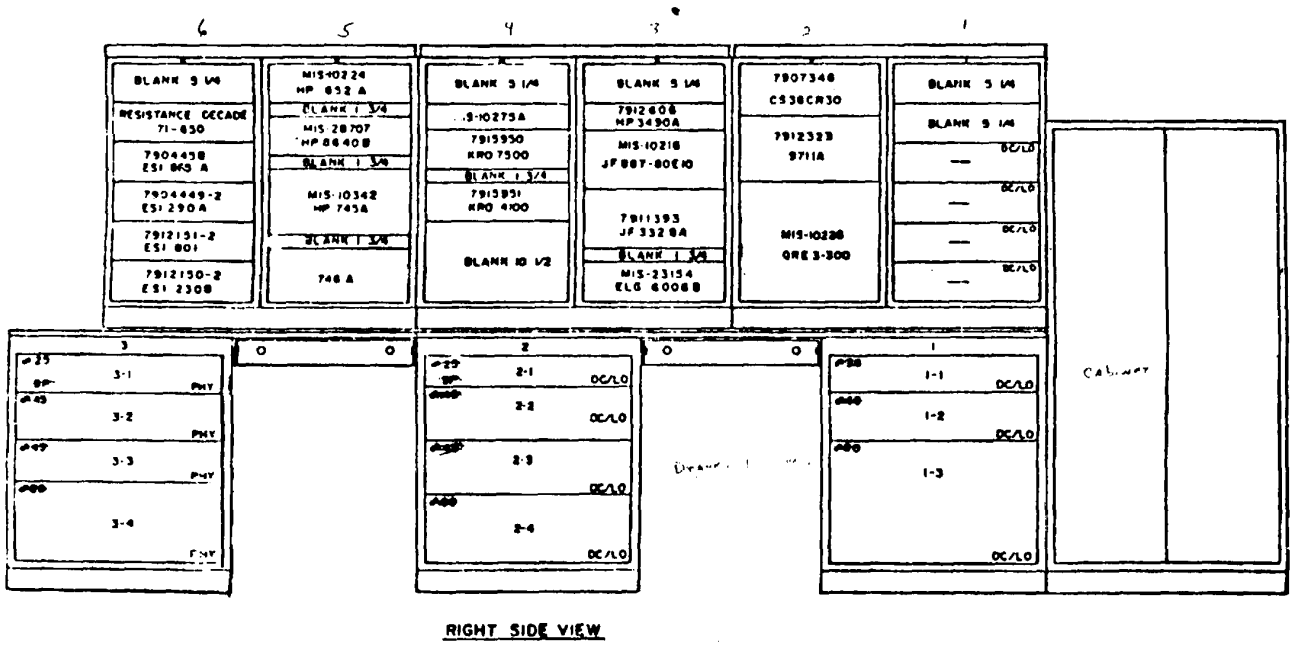


Figure 1-4. Mounting plate for torque wrench calibrators (APN 791586)



RIGHT SIDE VIEW

Figure 1-5. Physical location of standards and accessories

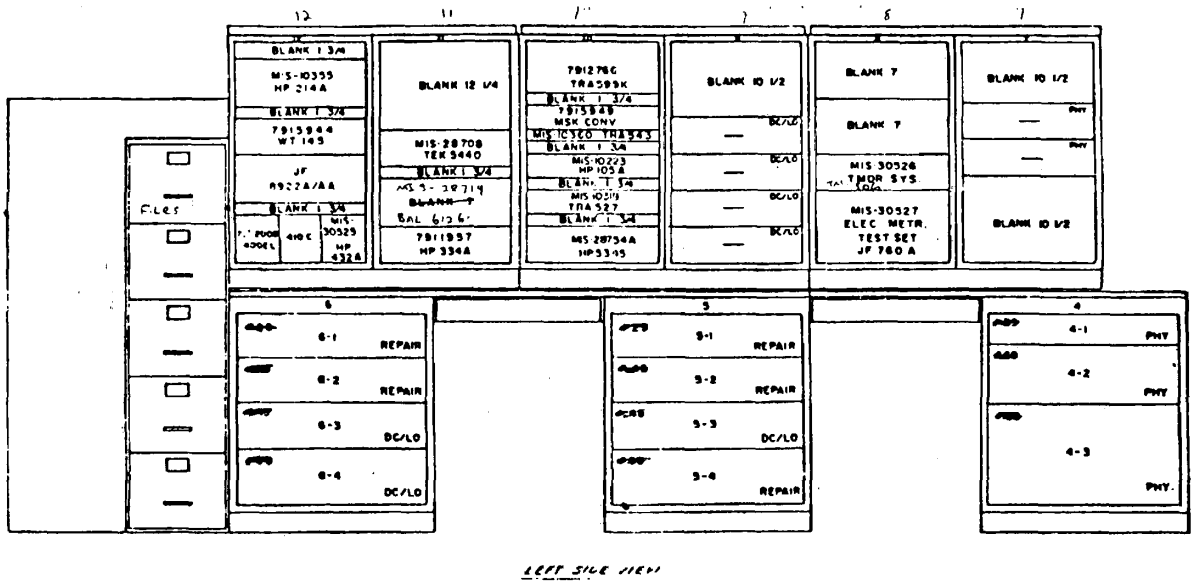


Figure 1-6. Physical location of standards and accessories.

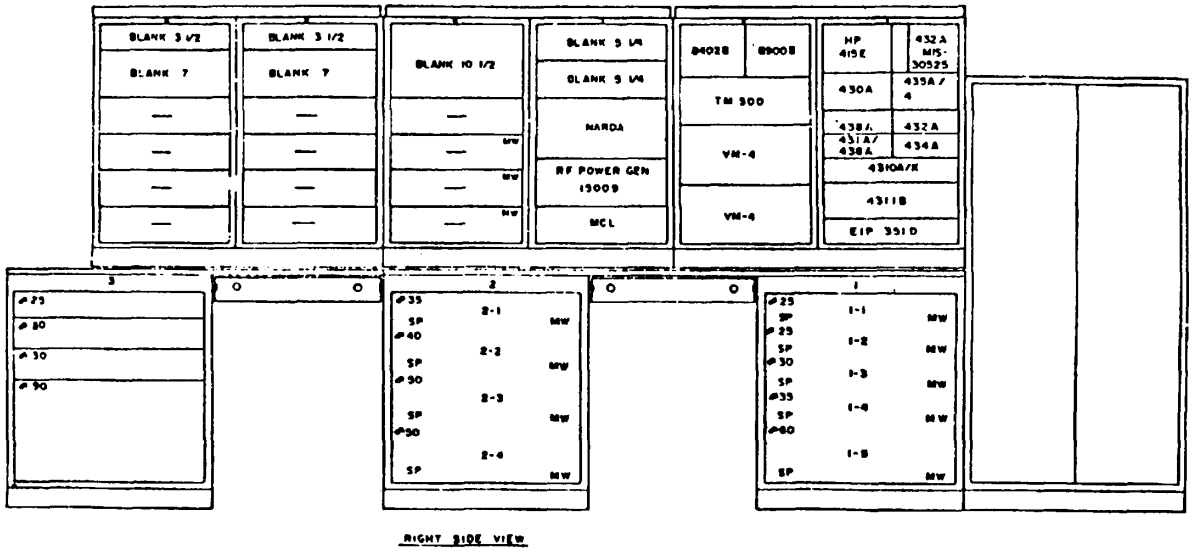


Figure 1-7. Physical location of standards and accessories.

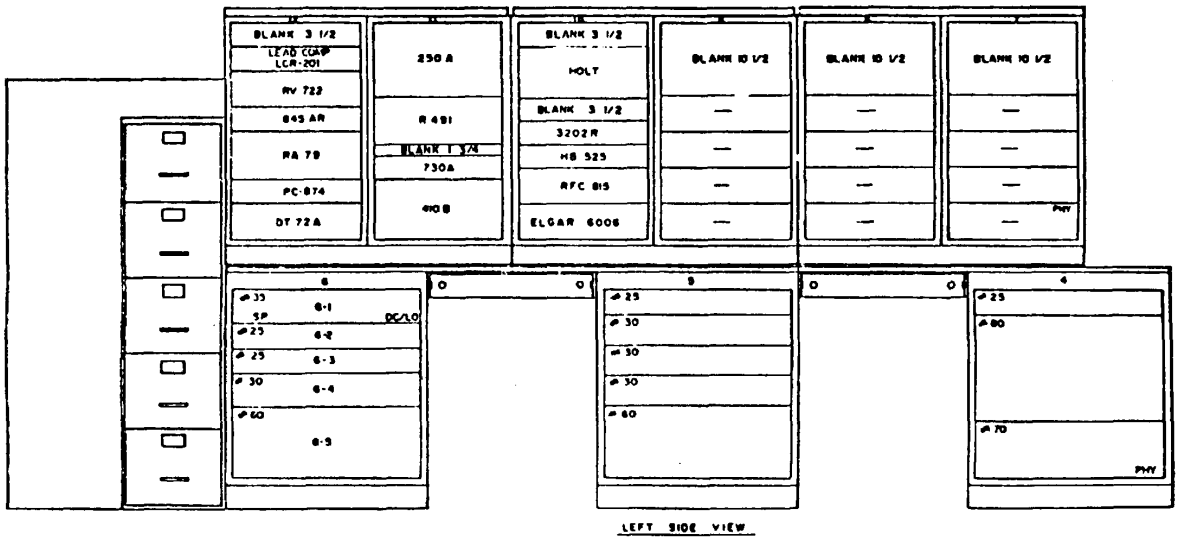


Figure 1-8. Physical location of standards and accessories.

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Standards			
1	Amplifier	7500	88865	7915950-1	6695-01-081-9053	R-4
1	Analyzer, distortion	C41-334A	28480	7911957	4931-00-987-9002	R-11
2	Attenuator	350D	28480	7904453	6625-00-215-4931	D6-4
1	Attenuator	355D	28480	7904453	5985-00-763-7326	D2-2
1	Attenuator, variable	355C	18876	7910807	5985-00-763-7326	D2-2
1	Divider, HV	80E10	89536	---	6625-00-459-3219	R-3
1	Generator, pulse	214B	28480	MIS-10355 Type 1	6625-01-103-9550	R-12
1	Generator, signal	145A OPT S-863	23338	7915944	6625-01-083-1725	R-12
1	Generator, signal, VHF	864OB OPT H66& OPT 001	28480	MIS-28707	4931-01-085-4229	R-5
1	Impedance measuring system Consisting of:	SP2280	11837	7912149-2	4931-00-913-2987	R-6
1	Bridge, guarded resistance	230B	11837	7912150-2	4931-00-913-2993	R-6
1	Bridge, impedance	290B	11837	7904449	6625-01-016-1311	R-6
1	Generator detector, ac	865A	11837	7904456	6625-01-003-4396	R-6
1	Generator detector, dc	801	11837	7912151-2	4931-0913-2994	R-6
2	Shield interconnecting cable	9337	11837	7912152	4931-00-917-9840	D2-1
5	Ground Plug	9333	11837	7912153	5935-00-913-2997	R-6
5	Three hold shielded case	9297	11837	7912154	5940-00-913-2999	R-6
2	Single hold shielded case	9348	11837	7912155	5940-00-913-3000	D2-1

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Standards			
1	Ground lead	9341	11837	7910156	4931-00-913-3003	D2-1
1	Kelvin assembly	1152	11837	7910524	4931-00959-6623	D2-1
2	Shield cover		18876	7913123	4931-00-400-7619	R-6
3	Swing lug	3247	11837	7913124	5940-00-450-6887	R-6
6	Swing lug	3248	11837	7913125	5940-00-450-5806	R-6
2	Double plug assembly	9281	11837	7913130	4931-00-438-7005	D2-1
1	Measurement system: Consisting of:		18876	MIS-28754 Type 1	4931-01-040-0121	R-10
1	Mainframe, frequency converter	H35-5345A	28480	MIS-28754/1 Type 1	4931-01-039-4040	R-10
1	Plug-in, frequency converter	5355A	28480	MIS-28754/2	6625-01-11-1074	R-10
1	Plug in, video amplifier	K87-59992A	28480	MIS-30525	6695-01-129-0246	C4D2
1	Meter, frequency differ	527E	19397	MIS-10318	6625-01-085-7707	R-10
1	Meter, power	E12-432A	28480	MIS-30525	6625-00-148-8069	R-12
1	Meter, volt differential	887AB/AN	89536	MIS-10216	4931-00-407-2642	R-3
1	Meter, volt electronic	400EL	28480	7915906	6625-00-229-0457	R-12
1	Meter, volt electronic, /probe	410C w/ 11036A	28480 28480	7910902	6625-00-969-4105 6625-00-910-5973	R-12
1	Meter, volt electrostatic	ESV	18876	MIS-10276	6625-00-132-0848	D2-4
1	Meter, volt true rms	8922A/AA	89536	---	6695-01-084-1760	R-12
1	Mount, thermistor	H75-478A	28480	7915907	4931-01-005-3865	D6-1
1	Oscillator	4100AR-8	88865	7915951	6615-01-080-6547	R-4

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002-Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Standards			
1	Oscillator, quartz	105A OPT	28480	MIS-10223	4931-00-020-4514	R-10
1	Oscillator, test	652A	28480	MIS-10224	4931-00-113-2943	R-5
1	Graphical display system Consisting of:	MIS-28706 Type 1	18876	MIS-28706	6625-01-043-2270-	R-11
1	Mainframe	R5440	80009	MIS-28706/1 Type 1	6625-01-046-3712	R-11
1	Plug-in, dual trace	5A48GC	80009	MIS-28706/3	6625-01-008-1480	R-11
1	Time base delay sweep	5B42	80009	MIS-28706/4	6625-01-008-1479	R-11
1	Plug-in, samp unit	5S14N	80009	MIS-28706/5	4931-01-008-1478	R-11
1	Receiver, tracking, VLF	599K	19397	7912766	6625-0-528-6773	R-10
1	Resistor, decade	71-650	07239	MIS-10264	6625-01-132-7657	R-6
2	Resistor, decade	71-631	07239	7910328	6625-00-071-5343	D2-4
1	Set, capacitor lab standard	SS32	84171	7907233	6625-00-778-2199	C2D2
1	Set, thermal converter	1394	50423	MIS-10221	4931-00-113-2944	---
1	Shunt, current, multirange, dc	9711A	35939	7912323	6625-00-917-9834	R-2
1	Ac precision calibration system with:	MIS-34786 Type 1	18876	MIS-34786	6695-01-109-9108	R-5
1	Ac standard, dc voltage	745A Type 1	28480	MIS-34786	6695-01-109-9107	R-5
1	High voltage amplifier	746A Type 1	28480	MIS-34786	6695-01-109-9110	R-5
1	Standard, dc voltage	332B/AF	89536	7911393	6625-00150-6994	R-3
1	Standard, resistance	CR10M	30646	8598965	6625-00-678-9678	D1-4
1	Standard, resistance	CR100M	30646	8598966	6625-00-678-9677	D1-4
1	Standard, resistance	CR1000M	30646	8579478	6625-00-779-9151	D1-4

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002-Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Standards					
1	System, oscilloscope calibration Consisting		18876	MIS-28714 Type 1	6695-01-057-2207	R-11
	Mainframe	6126M	50423		6695-01-054-3085	R-11
	Multimeter, digital	DM501A OPY 02	80009	MIS-28714/4 Type 1	6625-01-191-8755	R-11
	Generator, signal	SG503	80009		6625-00520-5143	R-11
	Pulser, tunnel diode	61252A	50423		6625-01-085-7828	
1	Transformer, variable power	9020F	59796	7916818	6695-01-132-7597	D2-3
1	Unit, omega gating w/ antenna (SD)	543w/ 599-700R	19397 19397	MIS-10360 7912767	4931-01-030-1455 5985-01-033-2083	R-10
	Accessories					
1	Adapter (p/o 10595A)	1250-0831	28480	---	493-01-039-4942	
2	Adapter	2866-1	95712	7645952	5935-00-781-6255	D2-1
1	Adapter	214 black	05276	8898486	5935-00-201-2458	C2D1
2	Adapter	1770	18876	7907488	5935-00-201-2458	D6-1
2	Adapter	1796	18876	7907489	4931-00-739-4414	D2-1
50	Adapter	7907502-2 1614-2 red	18876	7907502	5935-00-789-6078	D2-1
50	Adapter	7907502-2 1614-0 black	18876	7907502	5935-00-789-6078	D2-1
2	Adapter	1285	05276	7907566	6625-00-950-7918	D2-1
1	Adapter, noise generator	---	18876	7913145	4931-00-220-1962	D2-1
1	Adapter, cable (plug-in calbr)	---	18876	7913235	4931-00-443-9772	D9-2

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
3	Adapter, between series	UG-273-U	18876	10519439	5935-00-149-3534	D2-1
2	Adapter, coaxial	1500	18876	10519455	5935-00-739-2245	D2-1
5	Adapter, coaxial	M555339-20-00201	81349	10519457	5935-00-739-2245	D2-1
2	Adapter, coaxial	UG-349A/U	18876	10519458	5935-00-739-2242	D2-1
1	Adapter, connector	7913349-15 874QAP7L	18876	7913349	5935-00-420-3645	D2-1
1	Adapter, connector	015-1018-00	80009	---	5935-00-257-2640	---
1	Adapter, connector	ESI 928	11837	8157655	4931-00-608-5731	---
1	Adapter, connector	11043A	28480	8898488	5935-00-628-6513	D2-1
5	Adapter, connector (BNC UG-274 B/U)	UG-274B	81349	MIL-A-55339	5935-00-926-7523	D2-1
2	Adapter, connector	UG-914/U	81349	MIL-A-55339	5935-01-037-3476	D2-1
4	Adapter, connector	7907517-1 215 red	83330	7907517	4931-00-739-4418	D2-1
4	Adapter, connector	215 black	83330	7907528	4931-00-894-9588	D2-1
6	Adapter, connector	301 red	83330	7907556-1	5999-00-894-9588	D2-1
6	Adapter, connector	7907556-2 301 black	83330	7907556	5999-00-245-7231	D2-1
2	Adapter, connector	1B-1269	05276	7907592	5935-00-053-9454	D2-1
2	Adapter, connector	1270	05276	7909400	6625-00-987-5911	D2-1
2	Adapter, connector	1296	05276	7909401	5935-00-410-1399	D2-1
2	Adapter, connector	GR 274-QBJ	24655	7909402	5935-00-910-9194	D2-1
2	Adapter, connector	GR 874-T	24655	7904736	5935-00-864-9988	D2-1

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Adapter, connector	1186	05276	7909413	6625-00890-2589	D2-1
1	Adapter, connector (SMA MALE to GR)	015-1007-00	80009	---	5935-00-243-2864	D2-1
1	Adapter, connector	214 red	83330	7909439-1	5935-00630-1974	D2-1
1	Adapter, connector	UG-255AU	80058	10054847	5935-00-823-0639	D2-1
1	Adapter connector	UG-146U	18876	8631615	5935-00-781-0806	D2-1
5	Adapter, power 3-wire to 2-wire	T210	18876	7912356	5935-00-929-8396	D2-1
1	Adapter, gain adjust	013-0005-00	80009	7910390	6625-00-676-1305	D2-1
2	Adapter, tee	82-102	02660	7907472	5935-00149-3304	D2-1
1	Adapter, assembly, test	---	18876	7920784	4931-00-072-0759	D5-3
1	Adapter	1656-1	05276	7912056-1	5935-00-110-7453	D2-1
1	Adapter	7912056-2 1656-2	05276	7912056	5985-00-234-6073	D2-1
1	Attenuator, fixed	011-032	80009	7910384	5905-00-226-0420	---
1	Attenuator, fixed	1100C	77327	8520731	5985-00-583-6307	---
1	Box, adapter (high voltage terminal connections)	SKD 4850-3	18876	7916113	4931-00-134-4930	C2D1
1	Cable, BNC male to BSM female 19 inches	012-0203-00	80009	---	4031-01-039-4862	D2-1
1	Cable, BNC male to BSM female 19 in.	012-0127-00	80009	---	6625-00-495-3483	---
1	Cable, 36 inches	---	18876	7907551	4931-00-739-4425	---
1	Cable, SMA connectors	015-1023-00	80009	---	4931-01-037-5128	D2-1
1	Cable, SMA connectors	012-1023-00	80009	8145139	4931-00-039-4862	D2-1

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Cable assembly	2256-C-36	05276	7907468	4931-00-739-2254	---
2	Cable assembly	B4B	05276	7907492	4931-00-739-4427	
1	Cable assembly	B8 red	05276	7907493	6625-00-764-2938	---
2	Cable assembly	B4 red	05276	7907493	6625-00-764-2936	---
2	Cable assembly	B8 black	05276	7907494	6625-00-764-2937	---
4	Cable assembly	B12 red	05276	7907495	6625-00-883-9735	---
4	Cable assembly	B12 black	05276	7907496	4931-00-739-4431	---
1	Cable assembly (BNC PL-BNC JK)	2223-C-36	05276	7907544	4931-00-843-2794	---
1	Cable assembly	10506C	28480	7913217	6625-00-487-1488	D1-4
1	Cable assembly (thermal converters)	---	---	7913259	4931-00-132-4805	D2-3
1	Cable assembly	2031-24-0	05276	7911292-13	4931-00-921-7411	---
1	Cable assembly	2031-24-2	05276	7911292-14	4931-00-921-7412	---
1	Cable assembly	524D16Q	28480	8579418	4931-00-589-8475	---
1	Cable assembly	RG9AU	77327	10519072	4931-00-844-3259	---
2	Cable assembly	RG58AU	77327	10519140	4931-00-842-9273	---
2	Cable assembly, probe	1569-C-30	05276	7911305	6625-00-913-3089	---
8	Cable assembly, RF	BNC-C-30	05276	7907487-3	4931-00-196-0051	---
1	Cable assembly, RF	UHF-C-36	05276	7907469	4931-00-739-2255	---
4	Cable assembly, RF	2BC-30	05276	6907470	4931-00-846-0010	---
3	Cable assembly, RF	2BC-CAL-36	05276	7907471	6625-00-900-4276	---
2	Cable assembly, RF	BNC-C-6	05276	7907487-1	4931-00-2793	---
1	Cable assembly	067-0616-00	80009	---	6625-00-577-1842	D2-2

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Cable assembly, single banana	B24 red	05276	7907497-1 and	6625-00-957-9299	---
2	plug to single banana plug	B24 black	05276	7907497-2	6625-00-957-9300	---
1	Cable assembly, ac plug to single banana plug	---	---	7907551	4931-00-739-4425	---
1	Cable assembly, RF	2BC-PH-30 red	05276	7907407	4931-00-071-5375	---
1	Cable assembly, RF	AL-C-UHF-36	05276	7909409	4931-00-071-5376	---
2	Cable assembly, RF	AL-C-BNC-36	05276	7909410	4931-00-072-0780	
1	Cable assembly, special purpose	161-0004-00	80009	7909441	4931-00-072-0750	D6-3
2	Cable assembly, high current (spade lug to spade lug)	7911541-1	19200	7911541	4931-00-929-8397	D1-3
2	Cable assembly, high current (spade lug to spade lug)	7911541-2	18876	7911541	4931-00-464-1052D1-3	
2	Cable assembly, high current (spade lug to spade lug)	7911541-3	18876	7911541	4931-00-464-1053D1-3	
1	Cable assembly, high current (spade lug to spade lug)	7911541-10	19200	7911541	4931-00-939-7192	
4	Cable, test E-Z hook	1020XM	08505	7915942-1	6625-01-085-3129	
2	Cable, test E-Z hook	1020XH-36	08505	7915942-2	6625-01-085-3130	
1	Cable assembly, special purpose	7920778	14200	7920778	4931-00-071-5334	---
1	Cable, test assembly	035-5029-00	80009		4931-01-014-0949	---
1	Calculator	---	18876	MIS-10552	4931-00-108-1741	D1-4
1	Capacitance standard, input 20 pF	067-0533-00	80009	7910380	6625-00-785-5777	D2-1
1	Capacitance standard, input	SKD 4850-44	18876	7916146	6625-00-160-1325	D2-1
2	Case, combination, for 19 inch rack	1052A	28480	7910822	4931-00-913-3092	R-12
1	Case, carrying coaxial	SKA 4850-11	18876	7916119	4931-00-409-0791	D2-3

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
	500-ft conductor, wire (HW-C14(1)U0)	MIL-W-76	18876	HWC 14 IU0	6145-00-442-3326	---
	500-ft conductor, wire (HW-C14(1)U2)	MIL-W-76	18876	HWC 14 IU2	6145-00-463-0635	---
1	Circuit, stepping	035-5034-00	80009		6695-01-058-2186	D1-4
1	Connector (51 ohms)	MX 554/U	18876	7622749	4931-00-546-6347	D2-1
1	Connector (75 ohms)	MX 554/U	18876	7622751	4931-00-692-1550	D2-1
1	Connector, adapter	UG-57B/U	81349	MS-15507-57B	5935-00-539-0851	D2-1
2	Connector, adapter	874QNJA	24655	10054663	5935-00-833-7247	---
1	Connector. coaxial	874QNP	24655	10528710	5935-00-919-5915	---
1	Connector, plug	237 black	83330	7910591-2	5935-00-990-7119	D2-1
1	Connector, plug	237 red	83330	1 7910591-1	5935-00-975-0954	D2-1
1	Connector, T, coaxial	11042A	28480	8899531	5985-00-772-0262	D2-1
1	Connector, tee, tHF	83-1T	74868	9975738	5935-00-149-3562	D2-1
1	Detector, crystal	423A	28480	7923182	5820-00-877-7148	D2-1
1	Divider, output voltage	11047A	28480	7911560	5625-00-759-7436	D2-1
2	Double plug assembly (20")	9281	11837	7913130	4931-00-438-7005	---
1	Doubler, frequency	11690A	28480	---	6625-00-528-8593	D2-1
1	Dummy load, elec	35725-240kl-2W	74868	7920782	5985-00-779-1711	D2-1
1	Dummy load, elec (600 ohms)	5548D	08718	8898497	5985-00-617-0915	D2-1
1	Extension, flexible	012-0066-00	80009	7911755	4931-00-916-5922	D1-4
1	Extension, plug-in	013-0055-00	80009	---	6625-00-771-8821	D2-1
1	Extender, board (p/o 10595A)	05345-60200	28480	---	4931-01-068-2000	DI-1
1	Extender, board (p/o 10595A)	05345-60201	28480	---	4931-01-039-4041	DI-1

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Extender, board (p/o 10595A)	05345-60202	28480	---	4931-01-039-4039	Dl-1
1	Extender, board (p/o 10595A)	05345-60203	28480	---	4931-01-070-5766	Dl-1
1	Extender, cable (p/o 10595A)	05345-60205	28480	---	4931-01-068-2002	Dl-1
1	Extender, plug-in	10407B	28480	---	4931-00-586-6100	D1-2
1	Extender	5060-0256	28480	---	6625-00-004-9601	D2-1
2	Extender	067-0616-00	80009	---	6625-00-577-1842	D1-2
1	Fixture, calibration	067-0680-00	80009	---	6625-01-014-6673	D1-2
1	Fixture, calibration	067-0525-02	80009	---	6695-01-058-2187	D1-2
1	Fixture. calibration	067-0645-03	80009	---	6695-01-058-2185	D1-2
1	Fixture, calibration	067-0589-00	80009	---	6625-01-092-8915	D1-2
5	Ground plug	9333	11837	7912153	5935-00-913-2997	---
1	Ground lead	9341	11837	7912156	4931-00-913-3003	---
1	Headset	MIL-H-13109	81349	7907655	5965-00-504-6370	D6-3
1	Holder, test lead	1508	05276	---	4931-00-150-7908	---
1	Holder, test lead	2708	05276	---	4931-00-150-7908	---
1	Kelvin assembly	CA1152	11837	7910524	4931-00-959-6623	---
	Kit, tool (issued 1/technician)	JTK-17LAL	52346	7915943	4931-01-073-3845	---
25	Lead, electrical	B24 red	05276	7907497-1	6625-00-957-9299	---
25	Lead, electrical	B24 black	05276	7907497-2	6625-00-957-9300	---
4	Lead, electrical	2031-8R	05276	7911292-2	4931-00-731-3112	---
4	Lead, electrical	2031-18B	05276	7911292-9	4931-00-731-3120	---
1	Lead, electrical	7909965-1	18876	7909965-1	4931-00-442-5967	---

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Lead, electrical	1743-36B	05276	7909965	4931-00-134-4833	---
4	Lead, electrical	2031-18R	05276	7911292	4931-00-731-3117	--
1	Lead, test	8131277	---	---	6625-00-678-9837	---
1	Load 200 ohms	---	---	7916706	6695-01-164-9145	D2-2
3	Multimeter, digital	AN/PSM45	55026	MIS-28709	6625-01-139-2512	---
1	Multimeter, service	260-7	55026	7904729	6625-01-092-1198	D5-3
1	Pickoff, signal	067-0655-00	80009	---	6625-00-595-8762	---
1	Plug, termination. resistor	MX 554/U	19200	7910420-1	4931-00-932-7623	D2-1
	(100 ohms)					
1	Plug, termination. Resistor	MX 554/U	19200	7910420-4	4931-00-921-7395	D2-1
	(10 k ohms)					
1	Plug, termination. Resistor	MX 554/U	18876	7910420-7	4931-00-932-7628	D2-1
	(500 ohms)					
1	Plug, termination (dummy load)	4700-200	30684	7907461	4931-00-830-7873	D2-1
	(200 ohms)					
1	Power supply	1101	80009	---	6695-01-057-4649	D1-3
1	Power supply	---	18876	7916707	6695-01-142-4682	---
1	Probe	010-0133-00	80009	---	4931-00-449-7346	---
1	Probe	P6028	80009	7913288	6625-00-964-9267	D6-3
2	Probe	010-0185-00	80009	---	6625-00-477-1383	---
1	Probe	6201	80009	---	6625-00-516-8387	---
4	Probe test	BX-lW-orange	08505	7916122	6625-00-470-4236	---
1	Prod, test	622B	16663	10394564-010	6625-00-678-0657	---

Table 1-3. AN/GSM-286 Standards and Accessories: Electronic 7917002 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Regulator, voltage	6006B-106	25965	MIS-23154 Type 1	6110-00-309-2898	R3
2	Resistor, decade	336	66150	7907234	6625-00-585-4915	D1-4
2	Resistor, variable (1 k)	T-10-AR1K	73138	7907244	6625-00-752-8667	D6-3
1	Resistor, variable (50 k)	T-10-AR50KL01	73138	7913164	6625-00-982-6202	D6-3
2	Rheostat	411K160CS	07239	7907281	5905-00-777-9520	D1-3
2	Rheostat carbon pile	BDE20	07239	7909982	4931-00-695-5483	D7-3
2	Shield cover	7287	11837	7913123	4931-00-400-7619	---
1	Simulator, ignition	SKD-4850-15	18876	7916123	4931-00-150-7836	D6-4
3	Switch, pinch type	3294	31422	7907120	5930-00-636-4797	D5-3
3	Swing lug	3247	11837	7913124	5940-00-450-6887	---
6	Swing lug	3248	11837	7913125	5940-00-450-5806	---
1	Termination, Coaxial	374BNM	99899	---	5985-00-111-6260	D2-1
1	Test, measurement and diagnostic repair system	TM515	80009	MIS-30526 TYPE 3	6695-01-074-7953	---
5	Three hole shielded case	9297	11837	7912154	5940-00-913-2999	---
1	Timer, test fixture assembly	---	18876	7920752	4931-00-072-0753	D6-3
1	Tool set, special	---	18876	7659911	4935-00-670-7123	---
1	Transformer, high voltage	TP 1290	91196	MIS-10275	6120-00-130-5372	R4
1	Transformer	ST 200A	88869	7913165	5950-00-715-8591	D5-3
1	Unit, test load	035-5039-00	80009	---	6695-01-082-5446	D6-4

Table 1-4. AN/GSM-286 Standards and Accessories: Physical 7917003

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Accessories					
1	Adapter (p/o 7913310)	---	19200	7921038	4931-00-962-2190	D-3-1
1	Adapter multiple, torque	73-606	87461	8598969	5120-00-699-8987	D-3-1
1	Adapter ratchet, 1/4in.	--	---	GGG-W-641 Type IV	5120-00-277-1207	D-3-1
1	Adapter ratchet 3/8 in.	F67B	55719	GGG-W-641 Type IV	5120-00-227-1829	D-3-1
1	Adapter , ratchet 1/2 in.	41A30-223	95683	GGG-W-641 Type IV	5120-00-243-7322	D-3-1
1	Adapter ratchet, 3/4 in.	L672	55719	GGG-W-641 Type IV	5120-00-243-7323	D-3-1
1	Adapter socket wrench (1/4 in. Male sq. x 3/8 in. Female sq.)	41A19-948	81337	GGG-W-641 Type IV	5120-00-227-8095	D-3-1
1	Adapter socket wrench (1/4 in. Male sq. x 3/8 in. female sq.)	---	81348	GGG-W-641 Type IV	5120-00-892-8703	D-3-1
1	Adapter, socket (3/4 in. female sq. x 1 in. male sq.)	---	80244	GGG-W-660 Type III	5130-00-892-2103	D-3-1
1	Adapter, test gage (p/o 7913310)	---	18876	7921026	4931-00-962-2193	D-3-3

Table 1-4. AN/GSM-286 Standards and Accessories: Physical 7917003 -Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Adapter,	---	18876	7912074	4931-00-916-5930	---
1	Adapter	---	18876	7912362	4931-00-929-8401	D-3-3
2	Adapter	---	18876	7916127	4931-00-159-8950	D-3-1
1	Assembly	SKC4850-22	18876	7912127	4931-00-916-5934	D-3-1
1	Beaker	2-548B	99480	818567	6640-00-545-8512	D-3-4
1	Bottle	4218T18	39428	MIL-B-26701	8125-00-819-6085	D-3-4
2	Clamp	---	---	7912269	4931-00-987-8913	D-3-1
1	Controller	BCN-1-100	20890	MIS-10324	4931-00-421-1630	D-4-3
1	Flask	6213-0025	2082	---	6640-00-406-7303	D-4-3
1	Gage	T-720N	27596	7902239	5210-00-274-2857	D-3-1
1	Handle	M42	65814	GGG-W-641 Type III Class I	5210-00-221-7960	D-3-1
1	Handle	B40	65814	GGG-W-641 Type III Class I	5210-00-240-5396	D-3-1
1	Handle	11655786	19207	GGG-W-641 Type III Class I	5210-00-236-7590	D-3-1

Table 1-4. N/GSM-286 Standards and Accessories: Physical 7917003 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Accessories					
1	Holding fixture, I bracket, torque cell, welded assembly	---	---	7915871	6660-01-060-1053	
4	Hose assembly (p/o 7913310)	1660-6-4-48	01276	8491146	4720-00-585-6548	D-3-2
1	Kit, cable tensiometer, testing	---	18876	7915893	4931-01-083-3405	D-3-4
1	Kit, pressure accessory hoses	---	18876	7913310	4931-00-443-4943	D-3-1 and 4
1	Kit, torque loading	---	18876	7915894	4931-00-082-3434	---
1	Level, bench	98-8	57162	7902565	5210-00-241-3623	D-3-1
1	Loader mechanical part with crank	7047	87641	---	4931-00-107-0031	D-7-1
1	Nipple	AN 816-6	06581	AN816-6	4730-00-194-1121	D-3-1
1	Nipple	AN 816-4-4	06581	7347982	4730-00-542-3284	D-3-1
1	Pipe assembly	---	18876	8021953	4710-00-395-2336	D-3-1
1	Plate, mounting, high capacity torque cell 3000 ft-lb	---	---	7915876	4931-01-042-4940	----
1	Pulley	---	18876	7911301	4931-00-962-2205	D-3-1
1	Pulley	---	18876	7911302	4931-00-962-2206	D-3-1
1	Pump hand held vacuum/pressure	6513-00	05668	---	4931-00-625-2325	
1	Reducer (p/o 7913310)	BM16504-06	19422	BM16504-06	4730-00-231-5646	D-3-1
1	Reducer (p/o 7913310)	2027-6-4S	01276	MS-24399-7	4730-00-805-5097	D-3-1
1	Extension, socket wrench 1-in.	---	18876	7916680-1	5120-01-147-3351	D-3-1

Table 1-4. AN/GSM-286 Standards and Accessories: Physical 7917003 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Spare parts kit, flow accessories	---	18876		4931-00-134-4608	D-1-2
1	Separator, fluid	534-2	13589		6695-00-415-9277	D-4-3
1	Stone, Arkansas	HF-13	06565		5345-00-243-6087	D-3-1
1	Tape, steel, metric & English	W22ME	37163		4931-00-987-8937	D-3-3
1	Motional tranducer	506	28480		4931-00-802-6923	D-3-3
1	Vacuum cleaner	---	18876		7910-00-205-3400	---
1	Vacuum pump	WV1400BG	---		4931-00-929-8403	---
1	Watch, stop	28260	98429		6645-00-126-0286	D-4-1
1	Wrench set, socket	---	---		5120-00-203-9573	D-7-1
1	Wrench set, socket	8527062	18876		5120-00-322-6231	DR-7-1
1	Block gage, 8 pieces, GGG-G-15 Style 2, Grade 3, Class I, Set 17	HOKE 8	18876		5210-01-083-3710	D-4-1
1	Block gage, 81 pieces, GGG-G-15 Style 2, Grade 3, Class I, Set 11 and accessories	---	18876		5210-00-273-9753	D-4-1
1	Calibrator, dial indicator	400B1	21938		4931-00-421-1629	D-4-3
1	Calibrator, tachometer	650	98738		4931-00-071-5351	D-4-2
1	Cell. torque, 0-60 in-lb	2153-124-5	22092		6670-01-082-3435	D-4-2
1	Cell, torque, 0-20 ft-lb	2133-124-20	22092		6670-00-082-3436	D-4-2
1	Cell, torque 0-100 ft-lb	2133-125	22092		6670-01-082-3437	D-4-2
1	Cell, torque 0-500 ft-lb	2133-126	22092		6670-01-082-3438	D-4-2

Table 1-4. AN/GSM-286 Standards and Accessories: Physical 7917003 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Cell, torque 0-1000 ft-lb	2133-127	22092	MIS-16485	6670-01-082-3439	D-4-2
1	Indicator. load cell	8200B	03089	MIS-23155	4931-00-285-5026	D-4-2
1	Cell, torque. 0-300 ft-lb	---	22098	MIS-26485	---	D-3-4
1	Test set. pressure gauge	---	92456	7907754	4931-00-072-0778	D-3-4
1	Tester. pressure gauge	10-10525	24942	8598963	6685-00-677-5331	---
2	Thermometer, bimetal dial, 50-150°F	2284	65092	MIS-10320	6685-00-462-8489	D-3-3
1	Thermometer. indicating, resistance	4101-10x	21713	7915890	6685-01-084-4319	D-4-2
1	Weight set. avoir. class C, 1/128-8 oz	---	18876	7910419	1 6670-00-072-0767	D-3-3
1	Weight set, class C, 1-500 g	2-301-5	22527	7907394	6605-00-952-4497	D-3-3
1	Weight set. class T, 1-40 lbs	1990T	87641	7909056	6685-00-873-1910	---
1	Weight set, class T, 5-150 lbs	---	18876	7910346	6670-00-071-5344	---
1	Extension, 3/4 drive	PD1220-19-2	92059	7915933	5120-01-064-3319	D-4-2
1	Extension, 1 drive	PD1220-19-3	92059	7915934-1	5120-01-079-7816	D-4-2
1	STE/ICE calibration set consisting of	---	18876	7916737	6695-01-156-0134	---
	Extender board 100 pin	2386761-501	49671	---	6695-01-171-6220	
	Extender board 80 pin	2386761-502	49671	---	6695-01-171-6219	
	Adapter, TACH drive	---	18876	7916732	6680-01-168-0135	

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Test, measurement and diagnostic repair system, consisting of:	---	18876	MIS-30526 Type I	6695-01-082-5446	D-6-4
1	Mainframe	RTM506	80009	MIS-30526/1	6695-01-048-8920	R-8
1	Dual trace oscilloscope	SC504	80009	MIS-30526/2	6695-01-074-7954	R-8
1	Digital counter	DC508AOPT1	80009	MIS-30526/3	6695-01-074-7955	R-8
1	Digital multimeter	DM501A	80009	MIS-30526/5	6625-01-075-8583	R-8
1	Function generator	FG502	80009	MIS-30526/4	6695-01-074-7956	R-8
1	Power supply	PS503A	80009	MIS-30526/6	6695-01-076-8966	R-8
1	High voltage probe	010-0277-00	80009	MIS-30526/7	6695-01-074-6072	D-5-2
1	Diskette tray	52-90507	63090	---	4931-01-225-8374	S
1	Test set, electrical meter	760A	89536	MIS-30527	6625-01-081-4902	R-8
1	Voltmeter, electronic w/probe 11036A	410C	28480	7910902	6625-00-969-4105	D-5-4
1	Test, measurement and diagnostic repair system	TM515	80009	MIS-30526/1 TYPE III	6695-01-074-7953	S

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Accessories					
1	Power supply	PS503A	80009	MIS-30526/6	6695-01-076-8966	D-2-2
1	High voltage probe	010-0227-00	80009	MIS-30526/7	6695-01-074-6072	D-5-2
1	Troubleshooting kit, logic circuit	5023A	28480	7915953	6625-01-072-5084	DR-9-3
1	Tester, tube	TV-7D/U	81349	MIL-T-12424A	6625-00-820-0064	D-5-4
1	Tester, semiconductor	520B	18110	7915952	6625-01-095-9344	D-5-4
1	Transformer, variable power	W10OMT3A	24655	7910809	6120-00-168-3705	D-5-4
1	Cable assembly, N plug to N plug 36-in.	2256-C-36	05276	7907468	4931-00-739-2254	S
2	Cable assembly, double banana plug to double banana plug, 30-in.	---	18876	7907470	4931-00-846-0010	S
2	Cable assembly, double banana plug to double banana plug, 36-in.	2BCBNC36	05276	7907471	6625-00-900-4276	S
3	Adapter, N female "T"	1250-0559	28480	7907472	5935-00-149-3304	D-6-1
4	Cable assembly, BNC male to BNC male, 30-in.	BNC-C-30	05276	7907487-3	4931-00-196-0051	S
1	Adapter, N male to double banana plug	1770	05276	7907488	5935-00-739-4413	D-6-1
2	Cable assembly, single banana plug to single banana plug	B24 red	05276	7907497-1	6625-00-957-9299	S
1	Adapter, single banana jack to Spade lug	1614 black	05276	7907502-1	5935-00-789-6078	D-6-1
1	Adapter, single banana jack to spade lug	1614 red	05276	7907499	5935-00-789-6077	D-6-1
1	Cable assembly, ac plug to single banana plugs	---	---	7907551	4931-00-739-4425	S

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Accessories					
1	Adapter, single banana jack to alligator clip	301 red	83330	7907556-1	5999-00-504-3095	D-6-1
1	Adapter, single banana jack to alligator clip	301 black	83330	7907556-2	5999-00-245-7231	D-6-1
1	Adapter, BNC female to double banana plugs	1251-2277	28480	7907592	5935-00-053-9454	D-6-1
1	Adapter, BNC male to binding posts	---	---	7907401	5935-00-412-1399	D-6-1
1	Adapter, BNC jack to double banana plug, shielded	GR274QB5	24655	7909402	5935-00-910-9194	D-6-1
1	Cable assembly, BNC male to alligator clips	AL-C-BNC36	05276	7909410	4931-00-072-0780	DR-6-2
1	Adapter, GR 874 "T"	874T	24655	7904736	5935-00-864-9988	D-6-1
1	Cable assembly, spade lug to space lug. 18-in.	2031-18B	05276	7911292-9	4931-00-731-3120	S
1	Cable assembly, spade lug to space lug. 18-in.	2031- 8R	05276	7911292-10	4931-00-731-3117	S
1	Adapter matching pad, 600 ohm to 50 ohm banana plug to BNC jack	1656-1	05276	7912056-1	5935-00-110-7453	D-6-1
1	Adapter, BNC male to GR	874-QBPA	24655	9113372	5935-00-984-5563	D-6-1
1	Adapter, BNC jack to UHF plug	UG273U	80058	10519439	5935-00-149-3534	D-6-1
1	Adapter, BNC female to N male	UG201A	81349	10519457	5935-00-739-2243	D-6-1
1	Adapter, N female to BNC male	UG-349A/U	80058	10519458	5935-00-739-2242	D-6-1
1	Adapter, BNC jack to GR-874	GR874QBJA	24655	MS75093	5935-00-765-5481	D-6-1
1	Adapter, N male to GR-874	GR874QNP	24655	10528710	5935-00-919-5915	D-6-1
1	Adapter, BNC plug to D BNC jacks "T"	UG-274CU	80058	MS35173-274C	5935-00-926-7523	D-6-1
1	Adapter, BNC plug to BNC plug	UG491BU	80058	MS35176-491B	5935-00-681-5013	D-6-1

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
	Accessories					
3	Adapter, BNC jack to BNC jack	UG914U	81349	MS35184-914	5935-01-037-3476	D-6-1
1	Adapter, single banana plug to point red and black	215 red	83330	7907517-1	4931-00-739-4418	D-6-1
1	Adapter, BNC male to double banana plugs	2B1270	05276	7909400	6625-00-987-5911	D-6-1
1	Adapter, power, 3-wire to 2-wire	---	18876	7912356	5935-00-929-8396	D-6-1
1	Load, BRD, 500 ohm, 0-4 GHz, and 5 W	80M	70998	7907280	5985-00-840-7104	D-6-1
1	Coaxial "T" Connector probe	11042A	28480	8579426	5935-00-713-4356	D-6-1
24	Lead, Test E-Z hook	201XM	08505	7915941-1	6625-01-085-3126	D-6-1
12	Lead, Test E-Z hook	201W-red	08505	7915941-2	6625-01-085-3127	D-6-1
6	Lead, Test E-Z hook	201XL1	08505	7915941-3	6625-01-085-3128	D-6-1
4	Cable, Test E-Z hook	1020XM	08505	7915942-1	6625-01-085-3129	S
2	Cable, Test E-Z hook	1030XH-36	08505	7915942-2	6625-01-085-3130	S
3	Kit, tool	JTK17LAL	52346	7915943	4931-01-073-3845	S
3	Multimeter, digital	467	55026	AN/PSM-45	6625-01-139-2512	S
2	Magnifier	52B717	52346	---	6625-01-101-8431	D-6-2
2	Vice, Vacu swival	39B148	52346	---	5120-01-083-6731	D-5-2
2	Positioner, electron (Holder, circuit card)	62L5	08292	---	5120-00-117-3417	D-6-4
1	Drill, electric	SP6039	40684	---	5130-00-935-7354	D-5-2
1	Soldering gun	W-S-564	81348	10106117-7	3439-00-618-6623	D-5-2

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Heater gun, electrical	500A	06090	8031088	4940-00-561-1002	D-5-2
1	Hacksaw frame	HS8	55719	GGG-F-671	5100-00-289-9657	D-5-1
3	Hacksaw blade	F632	78735	GGG-B-45 /Type I	5110-00-228-3190	D-5-1
3	Blower tool	161B200	52346	---	4940-01-104-8799	---
3	Magnetic tool	69B019	52346	---	5120-01-089-2457	---
3	Tool, burnishing	63B101	52346	---	5120-01-083-6730	S
3	Wrench, spline	79B055	52346	---	5120-01-083-6729	S
3	Solder, silver 3%	15B170	52346	---	3439-00-766-4711	S
3	Solder, lead .032"	16B206	52346	---	3439-01-046-4850	S
3	Holder, suture needle	NO REF	---	---	6515-00-299-8736	S
6	Sink, heat	30A	28493	---	5999-00-076-1279	S
6	Sink, heat	34-C	28493	---	3439-00-973-1542	S
3	Set, file, hand	GGG-F-331	81348	---	5110-00-595-8316	S
3	Screwdriver. posidrive	64-131	78525	---	5120-01-014-7672	S
3	Screwdriver, posidrive	SSDZ42	55719	---	5120-01-113-7149	S
3	Solder, bismuth 1580	QQF838	81348	---	9650-00-224-8471	S
3	Iron, soldering	23A TL-C	28493	---	3439-01-041-3525	S
6	Tip, soldering	HT325X	28493	---	3439-01-041-3527	S
6	Tip, soldering	HT313D	28493	---	3439-01-041-3526	S
6	Tip, 1C desoldering	R916	28493	---	3439-01-041-3466	S
6	Tip, IC desoldering	R910	28493	---	3439-01-041-3467	S
6	Tip, IC desoldering	R914	28493	---	3439-01-041-3468	S
3	Soldapullt	DS017	21325	113B6223P1	3439-00-132-1331	S
3	Hammer, ball peen (24 oz)	H3	03306	MIL-H-18745	5120-00-187-1033	S

Table 1-5. AN/GSM-286 Standards and Accessories: Repair 7917004 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
3	File, flat, bastard cut	FAC 01017	34871	---	5110-00-234-6539	S
3	File, half-round, bastard	41F932	95683	GGG-F-325	5110-00-241-9153	S
3	File, round, bastard cut	10OR	55719	GGG-F-325 TY 9 STA	5110-00-234-6554	S
3	Handle, file	890	73792	---	5110-00-595-8325	S
3	Tool, DIP/IC insertion w/	INS-1416	08666	---	5120-01-095-8091	S
3	Screwdriver, 3" x 3/16"	9962	93389	GGG-S-121-TY6CL2	5120-00-596-0866	S
3	Screwdriver, 4" x 1/4"	9963	93389	GGG-S-121-TY6CL2	5120-00-237-8173	S
1	Wrench Allen set	AW035	55719	---	5120-00-198-5400	S
4	Cable assembly	BNC-C-18	05276	7907487-4	6625-00-764-2288	S
2	Kit, Sw. repair. cam type	040-0541-00	80009	---	6625-01-080-6437	DR-9-1
1	Kit, pin replacement	040-0542-00	80009	---	6695-01-081-8392	DR-9-1
1	50 ohm termination	011-0049-01	80009	---	5985-00-087-4954	D-5-1
2	Extender cables	067-0645-02	80009	---	6625-00-577-1843	DR-9-3
1	5 ohm, 5 W, 5% resistor	308-0179-00	80009	---	5905-00-434-5335	D-5-1
2	10 ohm, 10W, 5% resistor	308-0175-00	80009	---	5905-00-995-8481	D-5-1
2	4.99 k, 1/2 W, 1% resistor	323-0260-00	80009	---	5905-00-901-8919	D-5-1
1	Extender board	067-0819-00	80009	---	4931-01-164-9974	DR-9-3
1	Adjustment tool	003-0489-00	80009	---	6695-01-164-4653	DR-9-3
2	Adapter (p/o 7913310)	---	18876	7921037	4931-00-962-2189	D-3-1
2	Adapter	AN816-6-6	22995	8161447	4730-00-187-0844	D-3-1

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Attenuator	0880-3100	18876	7913358-1-2	4931-00-491-0254	D-1-3
1	Attenuator	0880-3110	18876	7913358-2-2	4931-00-491-0255	D-1-3
1	Attenuator set	9634	93459	---	4931-01-069-4237	D-2-1
1	Attenuator set	118A/4	99899	---	4931-01-070-3419	D-1-3
1	Attenuator	X175A-10	00929	7913122-1-3	5985-01-080-5121	D-2-2
1	Attenuator	X175A-20	00929	7913122-1-4	5985-00-729-7929	D-2-2
1	Attenuator	Y175A-10	00929	7913122-2-3	5985-01-080-5122	D-2-1
1	Attenuator	Y175A-20	00929	7913122-2-4	6625-00-688-7815	D-2-1
1	Calibrator, attenuator	VM4A	93459	---	4931-01-041-1564	R-2-6
1	Counter, frequency	351D	34257	---	4931-01-095-5457	R-1-5
1	Coupler, directional	---	18876	7913359-Z-2	5985-00-438-1609	D-2-2
1	Coupler, directional	408S4	77327	7923188	5985-00-813-8826	D-9-2
1	Coupler, directional	U901	28976	MIS-10409-6133	5985-01-021-6051	D-1-4
1	Coupler, directional	P8901	28976	MIS-10409-1133	5985-01-020-4596	D-1-4
1	Coupler, directional	L901E	28976	MIS-10409-2133	5985-00-168-7816	D-1-4
1	Coupler, directional	S901E	28976	MIS-10409-3133	5985-00-168-7815	D-1-4
1	Coupler, directional	C901E	28976	MIS-10409-4133	5985-00-168-7814	D-1-4
1	Coupler, directional	3095	99899	---	5985-00-436-7090	D-1-4
4	Coupler, directional	413S1	77327	7923187	5905-00-226-6846	D-2-1
1	Coupler, directional	778D	28480	MIL-C-15370/11	5985-00-239-3215	D-1-4
1	Coupler, directional	11691D	28480	---	5985-01-080-5532	D-1-4
1	Coupler, sample	1586A	93459	---	4931-01-060-0519	D-1-4
1	Detector set, VSWR	TRB146497	04423	7913376	4931-00-438-1612	D-1-3

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
4	Detector	423A	28480	7923182	6625-00-139-3328	D-1-2
3	Detector	P424A	28480	7923241	5961-00-779-1916	D-2-1
1	Gage, connector coaxial	---	---	MIS-10411	4931-00-152-1844	D-1-3
2	Isolator	1203B	77327	7923167	5985-00-929-2798	D-2-4
2	Isolator	1208B	77327	7923168	5985-00-929-2799	D-2-4
1	Meter, power	432A	28480	MIS-30525	6625-00-148-8069	R-1
1	Filter, low pass	TLC14-2EF	04423	---	5915-01-012-9002	D-l-1
1	Filter, low pass	TLC20-3EF1	04423	---	5915-01-410-1717	D-l-1
1	Filter, low pass	TLC30-4EF7	04423	---	5915-01-408-5467	D-1-l
1	Filter, low pass	TLC45-4EF	04423	---	5915-01-015-8317	D-1-1
1	Filter, low pass	TLC75-6EF1	04423	---	5915-01-408-5496	D-1-1
1	Filter, low pass	TLC125-6EF1	04423	---	5915-01-481-1902	D-1-1
1	Filter, low pass	TLC200-6EF	04423	---	5915-01-010-1140	D-l-1
1	Filter, low pass	TLC316-6EF1	04423	---	5915-01-410-1719	D-l-l
1	Filter, low pass	TLC450-6EF	04423	---	5915-01-010-1141	D-l-1
1	Filter, low pass	TLC700-6EF1	04423	---	5915-01-408-5490	D-l-l
1	Filter, low pass	TLC1225-5EF1	04423	---	5915-01-462-2878	D-l-1
1	Generator, audio frequency power	447	98278	MIS-10240	4931-00-128-1443	R-3
1	Power standard assembly	---	18876	7913995	4931-01-030-1458	D-1-4
1	Termination	161A-50D	54778	---	4931-01-030-1454	D-2-4
1	Power standard assembly	---	18876	7916259	6695-01-088-2146	D-1-4
1	Attenuator, variable	2936	49899	7913175	5985-00-228-8021	D-1-4
1	Calibrator, peak power	8900B	28480	MIS-10243	4931-00-130-5386	R-2
1	Generator, signal	18500B	18876	MIS-10255	6625-00-250-1330	R-3
1	Filter, low pass	360B	28480	7913173-1	5915-00-686-8922	D-l-1

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Filter, low pass	360C	28480	7913173-2	5915-00-503-0533	D-1-1
1	Mismatch	900WR150	24655	7923172	4931-00-774-6011	D-1-3
1	Mismatch	1402B	77327	7913200-1-2	4931-00-420-9040	D-2-2
1	Mismatch	X320E	13047	7913200-1-5	4931-01-070-3421	D-2-2
1	Cable	8120-1082	28480	---	5995-00-484-1104	DR-4-2
1	Mismatch	14053B	77527	7913200-2-2	4931-00-420-9039	D-2-1
1	Mismatch	P320E	13047	7913200-2-5	4931-01-070-3422	D-2-1
1	Mount, thermistor	478A	28480	9975991	6625-00-886-1955	D-1-3
1	Mount, thermistor	8478B	28480	---	6625-00-811-2435	D-1-3
1	Mount, thermistor	P486A	28480	7910709	5985-00-404-0409	D-2-1
1	Mount, thermistor	X486A	28480	7910460	5985-00-442-6083	D-2-2
2	Mount, crystal	6010	77327	7923159	4931-00-770-9886	D- -2
1	Phase lock unit, frequency	4311B	93459	---	4931-00-040-7278	R-1
1	Power splitter, broadband	1872A	93459	---	4931-00-040-7277	D-3
1	Recorder, coordinate data	7035B	28480	MIS-10404	4931-00-168-9813	D-2-3
1	Meter, frequency, coaxial	526A	28480	7910718	6625-00-966-6728	D-3-3
1	Meter, frequency, coaxial	537A	28480	7910718-2	6625-00-930-9687	D-3-3
1	Meter, frequency, coaxial	P532A	28480	7910310-3	6625-00-691-6598	D-3-3
1	Reflection standard set	1415	93459	---	1355-01-033-4664	D-1-3
1	Resistor, decade box	240C	12697	7907234	6625-00-585-4915	D-1-5
1	RF sweep generator adapter for RF sweep generator	SW503	80009	---	4931-01-070-3476	R-2
1	Short, coaxial	11511A	28480	---	5935-00-937-6255	D-1-3
1	Short, coaxial	11512A	28480	---	5935-00-799-9381	D-1-3
1	Short, coaxial	11565A	28480	---	5935-00-938-0411	D-1-3

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Short, fixed	X344A	13047	---	4931-01-071-0142	D-2-2
1	Short, coaxial	900-WN	24655	---	4931-01-019-7889	D-1-3
1	Short, fixed	P344A	13047	---	---	D-2-1
1	Short-sliding coaxial	107-S1	22424	7923151	4931-00-763-0761	D-1-1
1	Short-sliding WG	DBG-969-1	06811	---	4931-01-071-0723	D-2-1
1	Short-sliding WG	DBF-969-1	06811	---	4931-01-070-9326	D-2-1
1	Short, tunable	901NM	99899	---	4931-01-070-4969	D-1-1
1	Sweeper, multiband	4310-AK-16P	93459	---	4931-01-040-7279	R-1-3
1	Termination	PTA 10	00929	7913356-2	5935-00-134-5708	D-1-2
1	Termination	PTA 11	00929	7913356-3	5935-00-134-5707	D-1-3
2	Termination	M140B	93459	---	5985-00-931-1728	D-1-3
2	Termination	F140B	93459	---	5985-01-064-8483	D-1-3
1	Termination	3876W179	22852	7923224	4931-00-781-6264	D-1-3
1	Termination	905A	28480	---	6625-01-037-7044	D-1-3
1	Termination	1404GPA	93459	---	5985-00-439-3916	D-1-3
2	Termination	374BNM	99899	---	5985-00-111-6260	D-1-3
1	Termination	DBG 456-1	06811	---	4931-01-071-0556	D-2-1
1	Termination	DBF 456-1	06811	---	4931-01-071-0554	D-2-1
2	Termination	M1404N	93459	---	5985-00-529-0060	D-1-3
2	Termination	F1404N	93459	---	5940-01-028-9634	D-1-3
1	Termination	2543AX	07180	7913128	4931-00-770-9887	D-1-3
1	Termination feed-through	011-0049-01	80009	---	5985-00-087-4954	D-2-4
1	Termination, WG	X910B	28480	---	5985-00-705-4356	D-2-2
1	Transformer, variable	W10MT3AS3	24655	7910908	6120-00-168-3705	D-1-5

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Transformer, matching	TP-75 BNC	21912	7913106-1	5950-00-233-5317	D-1-2
1	Termination, WG	P910A	28480	---	5985-00-445-6924	D-2-4
2	Transformer, matching	TP-93	21912	---	6625-00-410-9729	D-1-2
1	Tuner, RF, stub	D5109	19200	7910074	4931-00-871-8500	D-l-1
1	Tuner, RF, 5 screw	GR335	71327	7923115	4931-00-774-6005	D-l-1
2	Tuner, five screw	U335	77327	7923206-2	4931-00-763-0760	D-"-l
2	Tuner, five screw	X335	77327	7923206-1	4931-00-781-6176	D-2-2
2	Adapter, red	301 red	83330	7907556	5999-00-504-3095	D-1-2
2	Adapter, black	301 black	83330	7907560	5999-00-245-7231	D-1-2
2	Adapter, connector	UG-107/BU	80058	7907472	5935-00-149-3304	D-1-2
1	Adapter, connector	131-1027	74868	7913349-1	5935-00-450-8553	DR-5-4
1	Adapter, connector	131-1037	74868	7913349-2	5935-00-450-8556	DR-5-4
1	Adapter, connector	131-1025	74868	7913349-5	5935-00-450-8551	DR-5-4
1	Adapter, connector	131-1035	74868	7913349-6	5935-00-450-8554	DR-5-4
1	Adapter, connector	131-1026	74868	7913349-7	5935-00-450-8552	DR-5-4
1	Adapter, connector	131-1036	74868	7913349-8	5935-00-450-8555	DR-5-4
1	Adapter, connector	131-1022	78468	7913349-15	5935-00-420-3645	D-1-2
5	Adapter, connector	F1567	93459	---	5935-00-161-8757	D-1-2
3	Adapter, connector, coaxial	M1567	93459	---	5935-01-024-7583	D-1-2
2	Adapter, connector	F1566	93459	---	5935-01-088-6123	D-1-2
2	Adapter, connector	M1566	93459	---	6625-01-087-3958	D-1-2
2	Adapter, connector	1584-13	93459	---	5935-01-088-6124	D-1-2
4	Adapter, connector	1584-14	93459	---	5935-01-088-6125	D-1-2
2	Adapter, connector	1584-23	93459	---	5935-01-088-6126	D-1-2

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
2	Adapter, connector	1584-24	93459	---	5935-01-088-6127	D-1-4
2	Adapter, connector	UG564U	80058	MS35321-1	5935-00-258-9891	D-1-2
2	Adapter, connector	LG565AU	80058	7923323	5935-00-665-6543	D-1-2
2	Adapter, connector	16050	02660	7923325	5935-00-950-9679	D-1-2
2	Adapter, connector	16075	02660	7923324	5935-00-702-4846	D-1-2
2	Adapter, connector	1360A	95077	7923321	5935-00-950-1650	D-1-2
2	Adapter, connector	1361A	95077	7923320	5935-01-072-2226	D-1-2
2	Adapter, connector	874QNJA	24655	10054663	5935-00-833-7247	D-1-2
2	Adapter, connector	874QNP	24655	10528710	5935-00-919-5915	D-1-2
5	Adapter, connector	900QNJ	24655	79113129-5	5935-00-838-2722	D-1-2
4	Adapter, connector	900QNP	24655	7913129-6	5935-00-838-2723	D-1-2
4	Adapter, connector	1285	05276	7907566	6625-00-950-7968	D-1-2
2	Adapter, connector, coaxial	---	18876	7913129-16	4931-00-228-1319	D-1-2
2	Adapter, connector, plug	900QAP7	82316	7913129-15	5935-00-466-1172	D-1-2
1	Adapter, connector	874-T	24655	7904736	5935-00-864-9988	D-1-2
1	Adapter, connector	8801-1	13047	MIS-10408-1	4931-00-159-9953	D-5-4
1	Adapter, connector	8801-2	13047	MIS-10408-2	4931-00-159-9952	D-5-4
3	Adapter, connector	8803-1	13047	MIS-10408-3	4931-00-159-9951	D-5-4
9	Adapter, connector	8803-2	13047	MIS-10408-4	4931-00-159-9942	D-5-4
2	Adapter, connector	103-0045-00	80009	10519457	5935-00-739-2243	D-1-2
2	Adapter, connector	It-274B/U	80058	MS35173-274C	5935-00-926-7523	D-1-2
2	Adapter, connector	UG-349A/U	80058	10519458	5935-00-739-2242	D-1-2
2	Adapter, connector	UG-491B/T	80058	MS35176-491B	5935-00-681-5013	D-1-2
2	Adapter, connector	UG-914U	80058	MS35184-914	5935-00-280-1454	D-1-2
1	Adapter, radio frequency	390	77327	8899714	5935-00-583-2898	D-1-2

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Adapter, radio frequency	391	77327	10528698	5935-00-656-5062	D-1-2
1	Adapter, waveguide	1600B	00929	7910029	5985-00-013-9511	D-1-5
2	Adapter, waveguide	365A	77327	10519427	4931-00-739-2238	D-2-4
2	Adapter, waveguide	357	77327	10519426	4931-00-739-2237	D-2-4
2	Adapter, waveguide	356A	77327	10519425	5985-00-694-5320	D-2-4
2	Adapter, waveguide	H213D2	13047	MIL-A-22641/16	4931-01-071-4667	D-2-2
1	Adapter, waveguide	354C	77327	10519423	4931-00-739-2234	D-2-2
3	Adapter, waveguide	P281B	28480	---	5985-00-004-0105	D-2-1
2	Adapter, waveguide	3363	77327	7923137	5985-00-778-5158	D-2-1
2	Adapter, waveguide	GH018	01220	8579411	4931-00-722-0820	D-2-2
2	Cable assembly, BNC to alligator clip	AL-C-BNC-36	05276	7909410	4931-00-072-0780	D-4-3
2	Cable assembly	2BC BNC-36	05276	7907471	6625-00-900-4276	D-4-3
1	Cable assembly	2 BCPH30 red	’05276	7909407	4931-00-071-5375	D-4-3
2	Cable assembly, BNC to BNC	1948-C-36	05276	7923244	4931-00-815-6264	D-4-3
1	Cable, extender- RF	B139-502	93459	---	4931-01-067-1584	D-4-4
5	Cable, RG9, N-18"	RG9AU	77327	10519072	4931-00-844-3259	D-4-2
2	Cable, RG9, N-36"	---	19200	10519061	4931-00-844-3260	D-4-2
2	Cable, RG9, N-72"	---	19200	10519060	4931-00-846-4787	D-4-2
4	Cable, RG58, BNC-24"	---	19200	10519141	4931-00-842-9271	D-4-2
2	Cable RG58, BNC-48"	RG58AU	77327	10519140	4931-00-842-9273	D-4-3
2	Cable RG58, BNC-72"	---	18876	10519139	4931-00-842-9272	D-4-3
3	Cable, RF, 30"	1585-1000	93459	---	4931-01-070-3388	D-4-4
1	Cable, RF (8")	1585-1001	93459	---	4931-01-082-5402	D-4-4
1	Cable, SHLD, TNC	---	188756	7923237	4931-00-815-6265	D-4-2

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Cable, RF (1 ft)	1585-1003	93459	---	4931-01-082-5403	D-4-4
2	Cable, 9"	---	19200	7921028	4931-00-956-5836	D-4-3
1	Cable, RF (1 ft)	1585-1004	93459	W-E-1585-1004	4931-01-082-5404	D-4-4
2	Cable	---	19200	10519226	4931-00-737-6369	D-4-3
6	Lead, electrical	---	18876	7921031	4931-00-956-5736	D-4-3
6	Lead, electrical	---	19200	7921032	4931-00-956-5831	D-6-4
2	Lead, electrical	---	18876	7907498	4931-00-739-4433	S
2	Lead, electrical	B24 red	05276	7907497	6625-00-957-9299	D
2	Case (nuts & bolts)	HU740-1	02875	10526715	4931-00-781-0785	D-5-4
1	Case, combining	Y10-1051A	28480	7923183	5985-00-929-2812	R-1
1	Case, storage	1562-0430	24655	GR-0880-0400	4931-00-152-2164	D-1-3
6	Clamp, K band	2KU	99899	7923222-4	5985-00-888-5518	D-2-3
6	Clamp, X band	2X	99899	7923222-4	5985-00-888-5516	D-2-3
6	Clamp, waveguide	4	99899	7923223	4931-00-815-6232	D-2-3
1	Clamp pliers	8710-0013	28480	---	4931-01-070-4573	D-5-4
10	Flange pin	5020-3236	28480	---	5985-00-581-7758	D-5-4
10	Flange pin	5020-3237	28480	---	5315-01-012-7214	D-5-4
12	Nut and bolt assembly	369A	77327	8579395	5410-00-021-4677	D-5-4
12	Nut and bolt assembly	369B	77327	10519456	5985-00-795-8351	D-5-4
2	Cover (nuts & bolts cover)	---	---	10528716	4931-00-781-0784	D-5-4
60	Nut & bolt assembly	369D	77327	8579403	5410-00-021-4678	D-5-4
12	Nut & bolt assembly	---	---	7923248	5305-00-097-8951	D-5-4
60	Nut & bolt assembly	369E	77327	10519459	4931-00-738-8071	D-5-4
1	Rack, cable	1508	05276	---	4931-00-150-7908	S

Table 1-6. AN/GSM-287 Standards and Accessories: Microwave 7917005 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Rack, cable	2708	05276	---	4931-00-150-7905	S
8	Screw 16-32, rNC, 1/4 LG #6	---	96906	MS51957-26	5305-00-054-6650	D-5-4
8	Screw 16-32, TNC, 3/8 LG	---	96906	MS51957-28	5305-00-054-6652	D-5-4
8	Screw 18-32, 5/16 LG #8	---	96906	MS51957-33	5305-00-054-6667	D-5-4
8	Screw, thumb (ISC 6-32, 3/4)	---	18876	7923247-1	5305-00-900-2893	D-5-4
6	Screw, thumb (ISC 6-32, 1/2)	---	18876	7923247-2	5305-00-922-2466	D-5-4
6	Stand	22533	77327	7923221	4931-00-763-0759	D-5-3
1	Tool kit, WPC-7	1916	93453	---	4931-01-019-7878	D-1-3
1	Tool kit, APC-7	11591A	28480	---	4931-01-019-7879	D-1-3
1	Tool kit, GR 900	900-TOK	24655	7923211-1	5180-01-044-4741	D-5-4
2	Wrench, open end, 1/4"	PROTO 3216	47805	7923211-2	5120-00-277-8309	D-5-4
2	Wrench, open end, 5/16"	A-A-1355	58536	---	5120-00-277-8312	D-5-4
30	Waveguide flange clamp	8770-0001	28480	---	5120-00-197-5344	D-5-4
1	Comb generator consisting of:	067-0885-00	80009	MIS-30526/9	6695-01-197-8023	---
1	Signal source	067-0885-00	80009	---	6695-01-197-8023	
1	Generator assembly	015-1054-00	80009	---	---	---
1	Attenuator 3 dB-	015-1053-00	80009	---	5985-01-214-8406	
1	Cable assembly 28.5 inch, 50 ohms	012-0649-00	80009	---	6625-01-152-6818	---
1	SWR bridge	87A50-1-SC3522	20944	7916685	6695-01-136-8850	---
1	SWR bridge	60N 50-SC3522	20944	7916686	6695-01-138-6977	---

Table 1-7. AN/GSM-287 Standards and Accessories: Electronic 7917006

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Airline, adjustable	874-LK20L	24655	---	5985-00-185-4492	D-3-2
1	Analyzer, spectrum	R491	80009	MIS-10218	6625-00-228-7839	R11
1	Calibrator, ammeter	250	09435	7912648	4931-00-019-4671	R11
1	Divider, voltage	RV722	24655	MIS-10274A	6625-00-071-6219	R12
1	Filter	3202R	88865	MIS-10329	4931-00-178-1051	R10
1	Generator, quadrature	RA79	11837	7915948	6625-00-992-2994	R12
1	Indicator, standing wave	415E	28480	7910160-2	6625-00-916-5928	R1
1	Power supply, dc high voltage	410B	89536	MIS-10230	4931-00-115-0567	R11
1	Ratio transformer	DT72A	11837	7915908	6625-00-714-4216	R12
1	Thermal transfer voltmeter	540B	89536	MIS-10217	6625-00-115-2582	R10
1	Voltage reference	730A	89536	MIS-10358	4931-00-438-1616	R11
1	Amplifier	RF815	14304	MIS-10267	4931-00-128-1444	R10
1	Adapter	TPS-39X1	04423	---	4931-00-456-5878	---
1	Lead, electrical 100 amp	84541-1	09435	7913068-1	4931-00-420-9033	DR-9-4
1	Lead, electrical 100 amp	84541-2	09435	7913068-2	4931-00-420-9032	DR-9-4
1	Lead, electrical 100 amp	84541-3	09435	7913068-3	4931-00-420-9031	DR-9-4
1	Lead, electrical	84541-5	09435	7913068-5	4931-00-136-2175	DR-9-4
1	Lead, electrical	84541-6	09435	7913068-6	4931-00-135-2395	DR-9-4
1	Cable assembly, test adapter	---	---	7909418	4931-00-071-5381	S
1	Compensator, lead	LCR-201	11837	7910539-2	4931-01-914-5183	R12
1	Cable assembly, HV	---	18876	7915980	4931-01-062-0727	D-3-1
1	Compensator, lead	PC 874	11837	MIS-10242	4931-00-128-1442	R12
1	Galvanometer	845A	89536	7915945	6625-00-257-7561	R12
1	Line, delay	017-0502-00	80009	---	6625-00-834-2729	D-3-2
1	Plug, adapter	84538	09435	7913067	4931-00-435-7663	DR-9-4

Table 1-7. AN/GSM-287 Standards and Accessories: Electronic 7917006 - Continued

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Power supply	HB525M20480	85604	7915935	6130-01-033-3936	R10
1	Range, extender, 500 amp	90254	09435	7913069	4931-00-435-7662	DR-9-4
1	Regulator, voltage	6006B-106	25965	MIS-23154	6110-00-309-2898	R10
1	Extender, time base	013-0013-00	80009	---	6625-00-801-1333	---
1	Capacitor, std, var	1422-D	24655	8579475	6625-00-987-9060	D-5-5
1	Fixture, oscilloscope calibrator	035-5001-00	80009	MIS-10345	4931-00-438-1613	D-5-5
1	Fixture, oscilloscope calibrator	067-0521-00	80009	MIS-10258	4931-00-238-5609	D-5-5
1	Fixture, oscilloscope calibrator	067-0523-00	80009	MIS-10323	4931-00-443-4942	D-5-5
1	Tool, tuning insert	003-0310-00	80009	---	4931-00-539-2691	D-3-2
1	Pulse generator	1105A	28480	MIS-10215/2	6625-00-150-6501	D-6-4
1	Mount, tunnel diode	1106A	28480	MIS-10215/1	6625-00-441-2029	D-6-4
1	Resistance standard (1 G@)	9A-5120-102	25805	MIS-10412-3	6625-00-160-1259	D-6-4
1	Resistance standard (10 G@)	9A-5120-103	25805	MIS-10412-4	6625-00-160-1260	D-6-4
1	Thermal converters	B7842-1	13327	7913198-1	4931-00-130-5379	D-6-4
1	Thermal converters	B7842-2	13327	7913198-2	4931-00-130-5381	D-6-4
1	Thermal converters	7842-3	13327	7913198-3	4931-00-130-5382	D-6-4
2	Multimeter, digital	467	55026	AN/PSM-45	6625-01-139-2512	S

Table 1-8. AN/GSM-287 Standards and Accessories: Physical 7917007

Qty	Name of Item	Army or mfg part No.	FSCM No.	Army or mfg Dwg No.	Stock No.	Location
			Accessories			
1	Calibrator/potentiometer	72-311JA	07239	7915891	4931-00-545-2341	D-6-1
1	Manometer, pressure D.f.	PVS-2	23582	7915892	6685-01-107-6875	S
1	Viscometer set	ASTM 25-600	18876	7913076	6630-00-150-6509	D-8-3
1	Adapter, torque wrench	13/16	18876	7916249	5120-01-071-0120	D-3-4
1	Adapter, torque wrench	5/16	18876	7916250	5120-01-071-4695	D-3-4
1	Bath, thermoelectric temperature	4200	17466	MIS-10322	4931-00-420-9036	S
1	Flowmeter, positive display	OPM-M-3	18316	MIS-10418	6680-00-165-5761	S
1	Kit, flow transfer	FT-AFS-4-CF	18316	MIS-10391	4931-00-8-9879	S
1	Radiometer	302	30595	MIS-10347	4931-00-438-1610	S
1	Cable assembly, test adapter	---	19200	7909418	4931-00-071-5389	S
1	Case combination	447	98278	MIS-10240	4931-00-128-1443	S
1	Lead, electrical	---	18876	7907498	4931-00-739-4433	S
1	Lead, electrical	B24 red	05276	7907497	6625-00-957-9299	S
1	Rack, cable	1508	05276	---	4931-00-150-7905	---
1	Rack, cable	2708	05276	---	4931-00-150-7908	---
1	Synthesizer/function generator	3325A	28480	MIS-35932	6625-01-158-2607	---
1	Synthesizer/level generator	3335A	28480	MIS-35938	6625-01-183-8314	---
2	Connector SMC (female) to BNC	1250-1236	28480	---	5935-01-194-9248	---

1-7. Equipment Description. This portion of the manual contains a functional description of the various instruments contained in the AN/GSM-286/287. Refer to commercial manuals and TM's supplied with this set for accuracies, limitations, operations and maintenance instructions, etc., of individual instruments. Descriptive use of accessories is not included since the calibration procedures identify the type and quantity of accessories required for each operation.

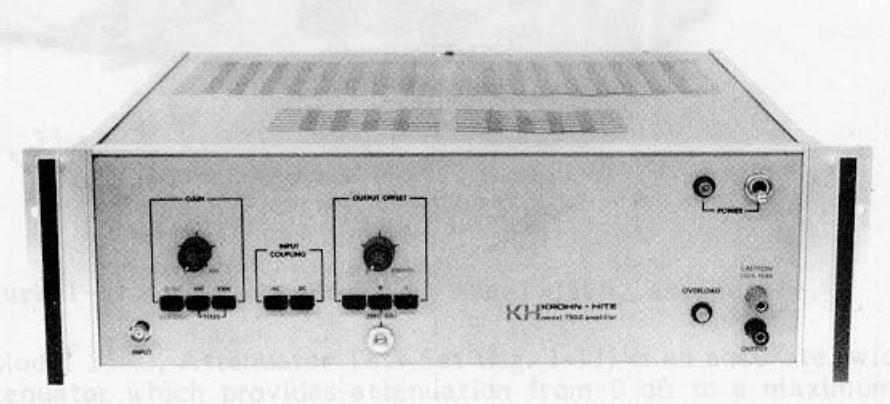


Figure 1-9. Krohn-Hite, Model 7500, Wideband Amplifier.

The Krohn-Hite, Model 7500, Wideband Amplifier (fig. 1-9) is a solid state, direct coupled amplifier that provides 75 watts of continuous power. The frequency range is from dc to I MHz with less than 0.1 percent harmonic distortion from dc to 10 kHz. Front panel controls provide for fixed gains of 20 or 40 dB or continuously variable gain from zero to 40 dB. The amplifier is capable of driving any load within its voltage and current limitations. The maximum output current is obtained with a 100-ohm load. The maximum output voltage of the amplifier is approximately 140 V rms, open circuit.

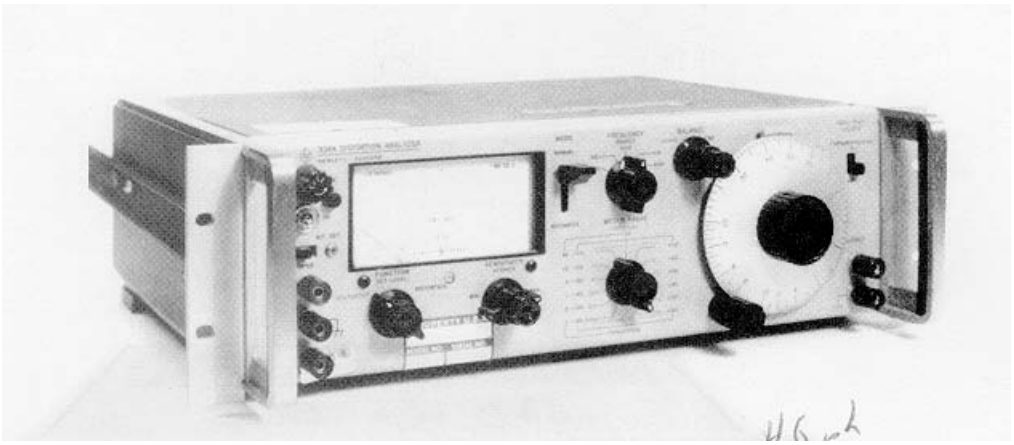


Figure 1-10. Hewlett-Packard, Model C41-334A, Spectrum Analyzer

Hewlett-Packard, Model C41-334A, Spectrum Analyzer (fig. 1-10) is a solid-state instrument for measuring distortion of ac voltages. Model 334A measures distortion levels of 0.1 percent to 100 percent full-scale in seven ranges for any fundamental frequency of 5 Hz to 500 kHz. High sensitivity requires only 0.3 V rms for the 100 percent set level reference.

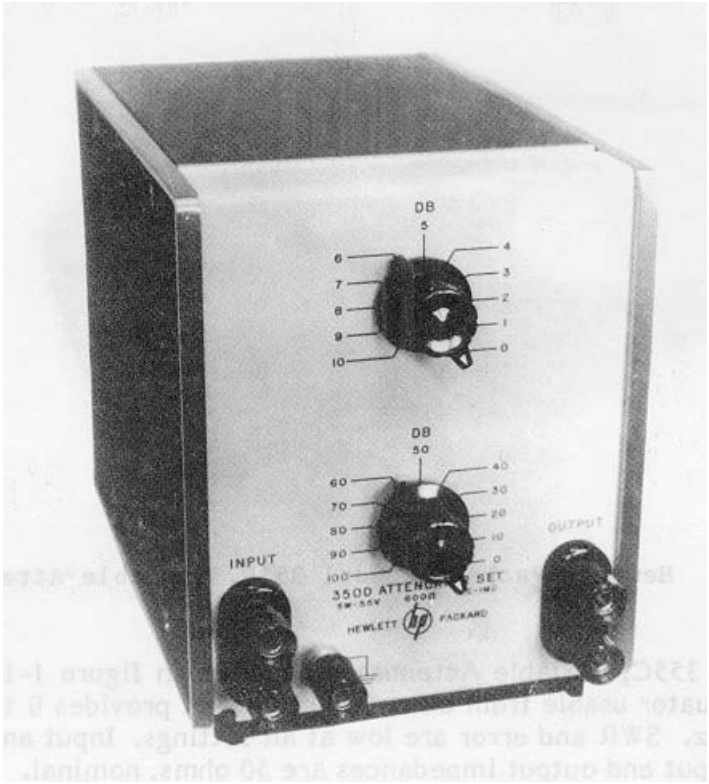


Figure 1-11. Hewlett-Packard, Model 350D, Attenuator

Hewlett-Packard, Model 350D, Attenuator Test Set (fig. 1-11) is an accurate, wide-frequency range 600 ohms attenuator which provides attenuation from 0 dB to a maximum of 110 dB. Model 350D will dissipate a maximum of 5 watts in continuous use with good accuracy from dc to I MHz.

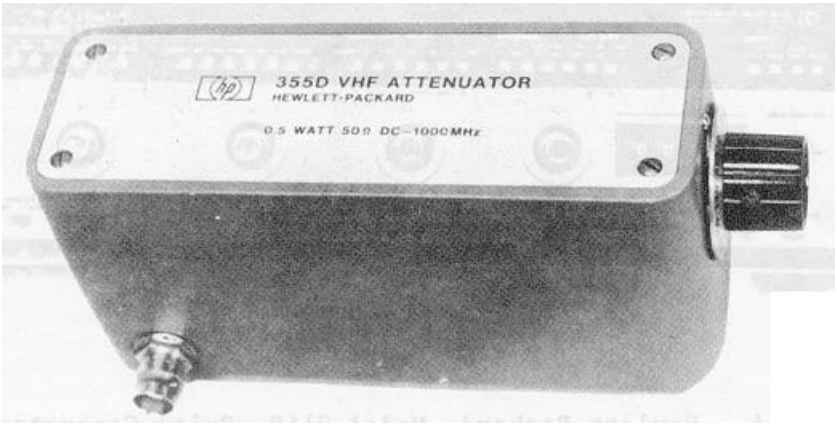


Figure 1-12. Hewlett-Packard, Model 355D, Variable Attenuator.

Hewlett-Packard, Model 355D, Variable Attenuator (fig. 1-12) provides 0 to 120 dB in 10 dB steps, SWR, error, and residual attenuation are low at all settings. Input and output connectors are female type BNC. Input and output impedances are 50 ohms nominal.

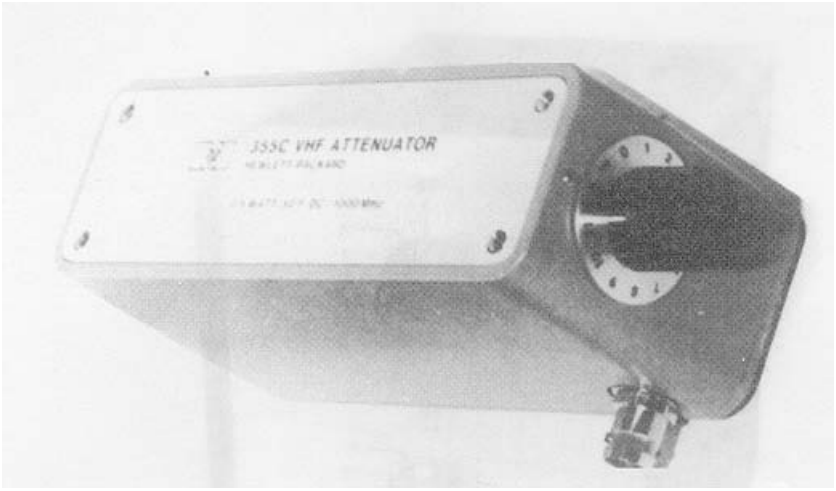


Figure 1-13. Hewlett-Packard, Model 355C, Variable Attenuator.

Hewlett-Packard, Model 355C, Variable Attenuator is shown in figure 1-13. Model 355C is a direct reading step attenuator usable from dc to 1000 MHz. It provides 0 to 12 dB attenuation in l-dB steps up to I GHz. SWR and error are low at all settings. Input and output connectors are female type BNC. Input and output impedances are 50 ohms, nominal.

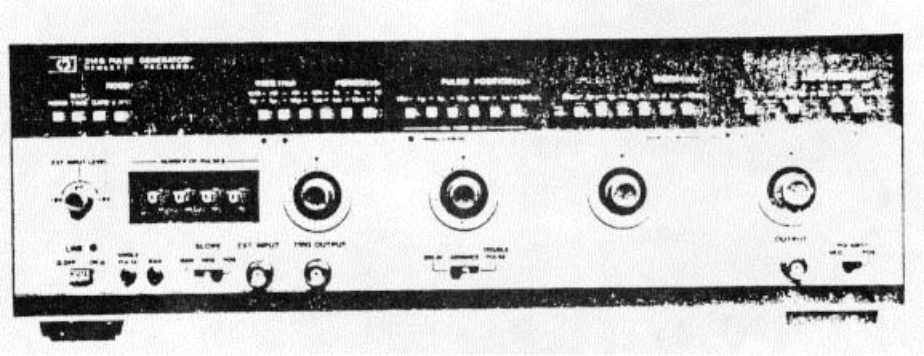


Figure 1-14. Hewlett-Packard, Model 214B, Pulse Generator.

Hewlett-Packard, Model 214B, Pulse Generator (fig. 1-14) is a versatile instrument providing variable repetition rate, variable width, variable amplitude, and positive or negative pulses with a rise and fall time of less than 15 nanoseconds.

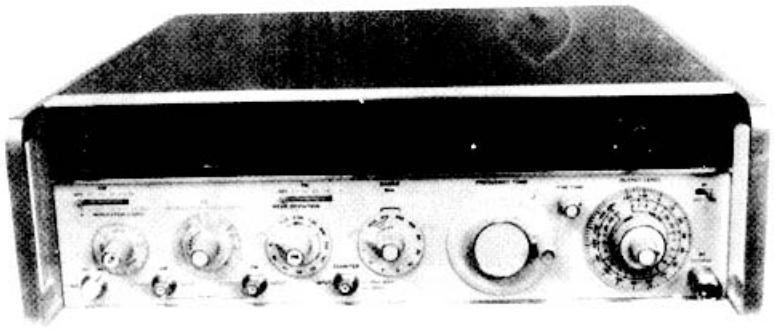


Figure 1-15. Hewlett-Packard, Model 8640B, VHF Signal Generator.

Hewlett-Packard, Model 8640B, Signal Generator (fig. 1-15) covers the frequency range from 500 kHz to 512 MHz (450 kHz to 550 MHz with band overlap) and can be extended to 1100 MHz with an external doubler, Hewlett-Packard, Model 11690A. This solid state generator has an output level range of +19 to -145 dBm (2 V to 0.013 microvolts) and is calibrated, metered, and leveled across the full frequency range of the instrument.

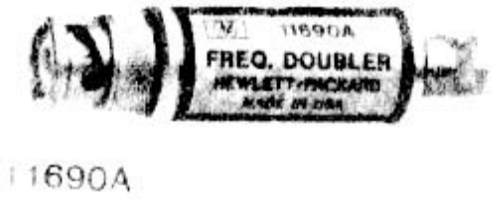


Figure 1-16. Hewlett-Packard, Model 11690A, Frequency Doubler.

Hewlett-Packard, Model I 1690A, Frequency Doubler (fig. 1-16) extends the frequency range of all Hewlett-Packard, Model 8640 Series Signal Generators by doubling the 256-512 MHz frequency band up to 1024 MHz. All model 8640's indicate the correct doubled output frequency on a dial or counter when the 512-1024 MHz range is selected. The Model 11690A will also perform well with any source meeting the input requirements of 200-550 MHz at +10 to +19 dBm.

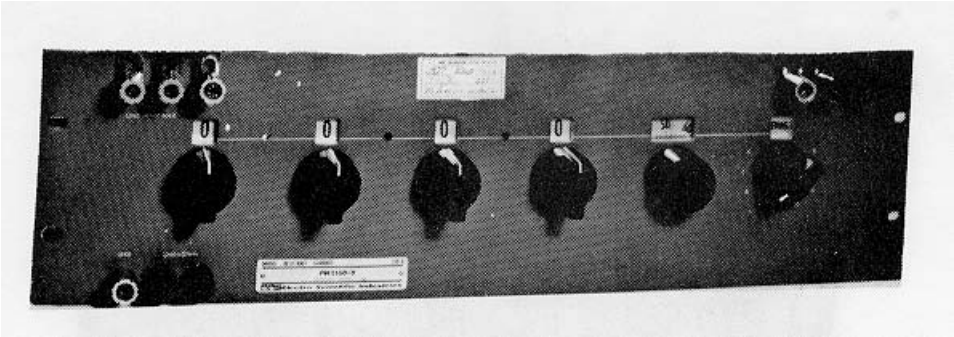


Figure 1-17. ESI, Model 230B MOD, Resistance Bridge.

ESI, Model 230B MOD, Resistance Bridge (fig. 1-17) is an extremely accurate, high resolution, guarded Wheatstone bridge. The bridge will measure a continuous range of resistance values between 0 and 12 gigaohms (12,000 megohms) with a resolution of 10 microhms per dial division on the lowest range. A five-place direct readout combined with eleven ranges enables the operator to make leakage resistance measurements in thousands of megohms or contact resistance measurements in millohrns with equal ease. The internal switching and interconnection circuit is arranged to eliminate sources of error found in many conventional Wheatstone bridge circuits. A dc power source and a dc detector for observing a null balance are necessary to operate the bridge.

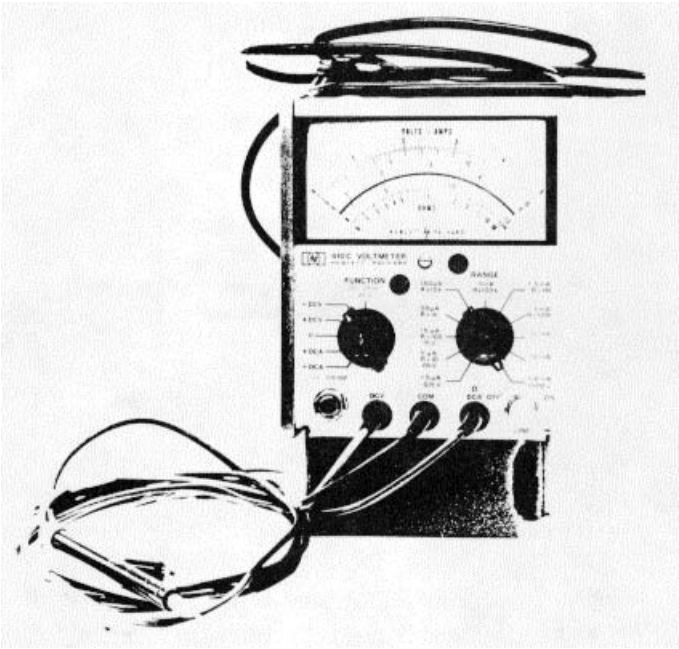


Figure 1-18. Hewlett-Packard, Model 410C, Voltmeter.

Hewlett-Packard, Model 410C, Voltmeter (fig. 1-18) can be used to measure dc voltage and dc current; ac voltage and resistance. Positive and negative dc voltages from 15 mV to 1500 V _ Y full scale and positive and negative dc currents from 1.5 microamperes to 150 milliamperes full-scale can be measured. Resistance from 0.2 to 500 megohms midscale can be measured.

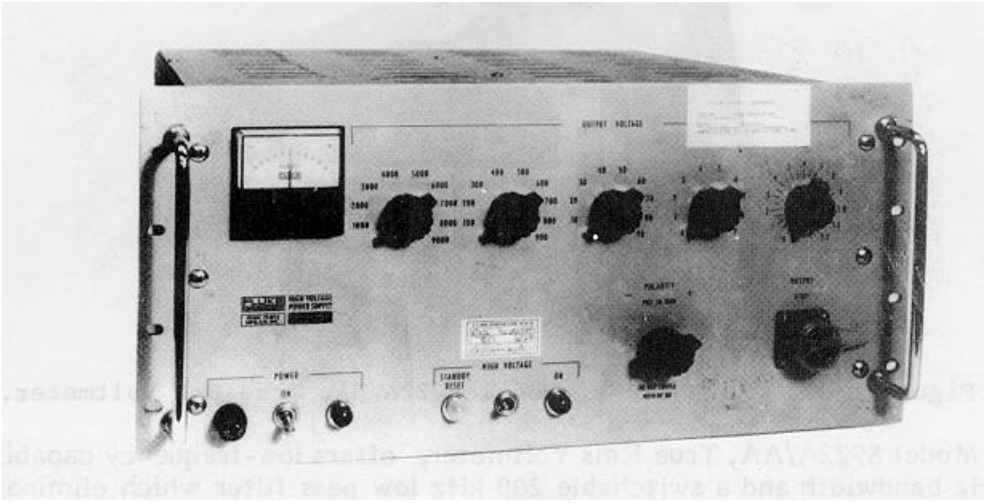


Figure 1-19. John Fluke, Model 410B-AT, Power Supply.

John Fluke, Model 410B-AT, Power Supply (fig. 1-19) is capable of providing an output of 0 to 10,000 V dc at 0 to 10 milliamperes. The output voltage is selected by four decade switches and a vernier potentiometer. The instrument may be operated with either positive or negative output terminal grounded, as selected by a front-panel switch. Over-current protection is provided to return the supply to standby operation in the event of excessive load current.

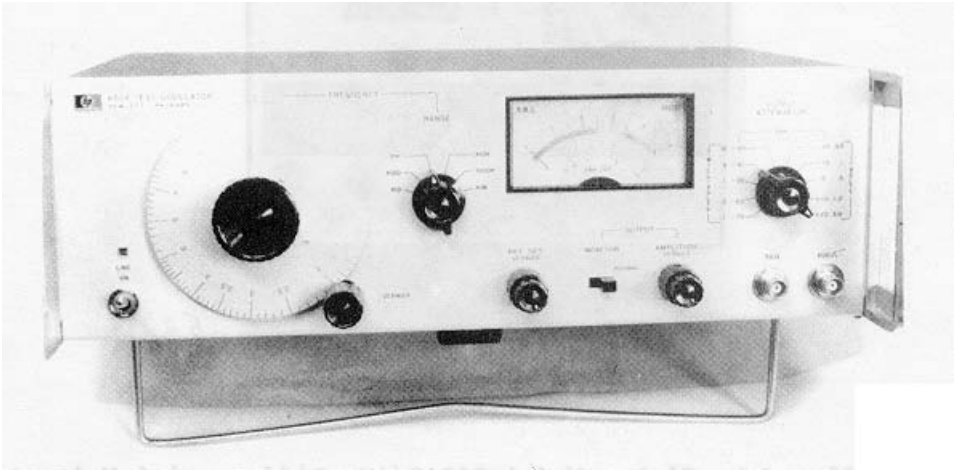


Figure 1 -20. Hewlett-Packard, Model 652A, Audio-Radio Frequency Oscillator.

Figure 1-20. Hewlett-Packard, Model 652A, Audio-Radio Frequency Oscillator. Hewlett-Packard, Model 652A, Audio-Radio Frequency Oscillator (fig. 1-20) is a stable, capacitance-tuned oscillator that has a frequency range of 10 Hz to 10 MHz. The oscillator has a sine-wave output that is adjustable from 10 microvolts to 3.16 volts into 50 or 600 ohms.

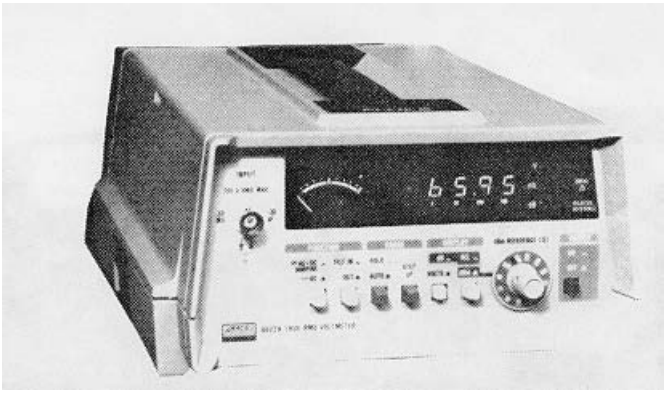


Figure 1-21. John Fluke, Model 8922A/AA, True Rms Voltmeter.

John Fluke, Model 8922A/AA, True Rms Voltmeter, offers low-frequency capabilities in the 2 Hz to 11 MHz bandwidth and a switchable 200 kHz low pass filter which eliminates unwanted high-frequency noise from the measured signal.

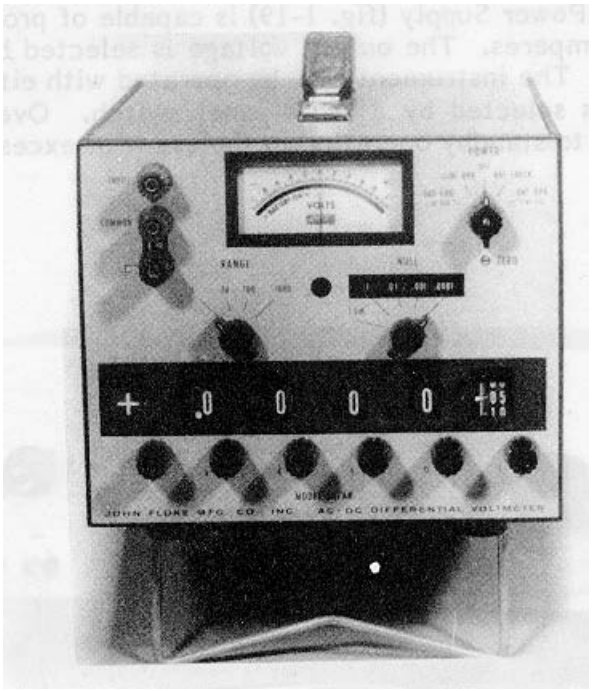


Figure 1-22. John Fluke, Model 887AB/AN, Differential Voltmeter.

John Fluke, Model 887AB/AN, Differential Voltmeter (fig. 1-22) is capable of being used as a conventional voltmeter for rapid determination of voltages from 0 to 1100 V dc and from 0.001 to 1100 V ac; as a differential voltmeter for precise measurement of dc voltages from 0 to 1100 V; as an accurate ac voltmeter for measurement of ac voltages from 0.001 to 1100 V, ¾2, between 5 Hz and 100 kHz; and a megohmmeter for measurements of resistance from 10 megohms to 11,000 megohms. It is rack-mounted in the standard 19-inch rack by means of rack adapter kit 881A-102.

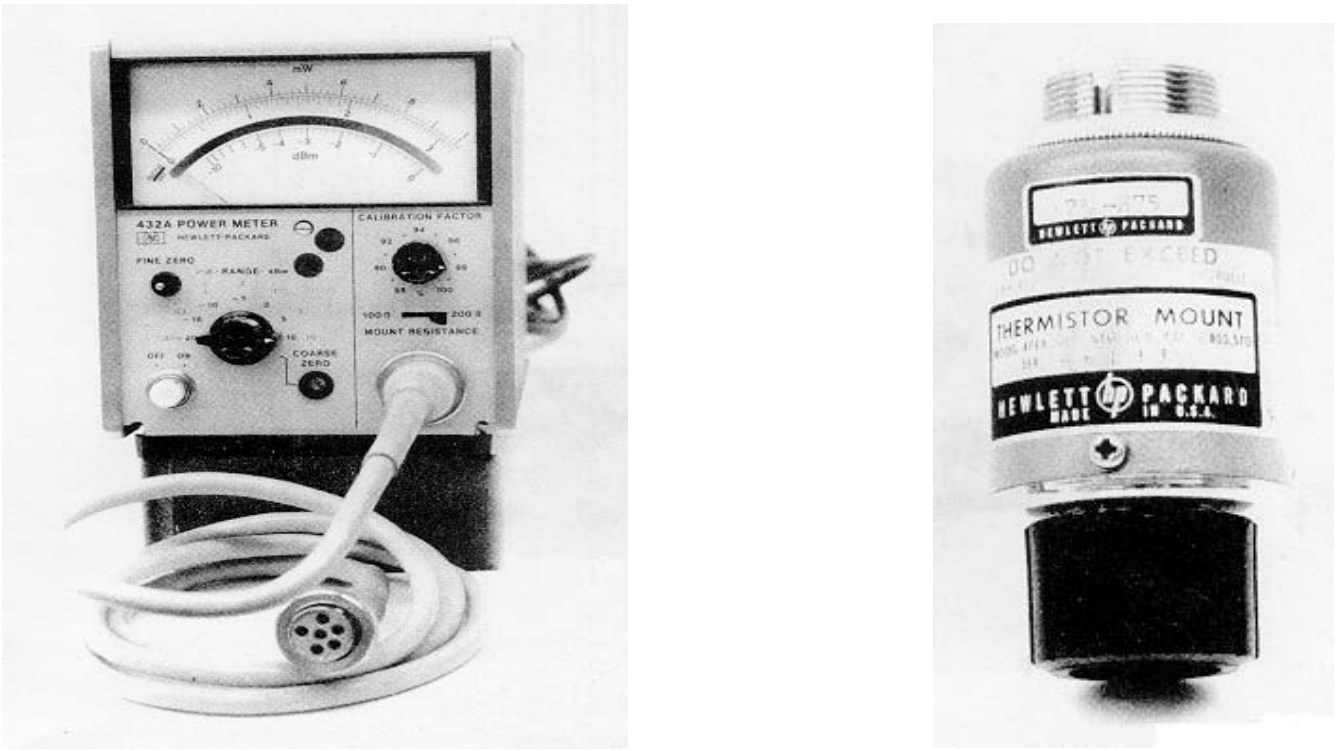


Figure 1-23. Hewlett-Packard, Model 432A, Power Meter with Hewlett-Packard,

Hewlett-Packard, Model 432A, Power Meter (fig. 1-23) with temperature-compensated thermistor mounts, measures RF power from 10 microwatts (-20 dBm) to 10 milliwatts (+10 dBm) full scale. Hewlett-Packard, Model 478A, Coaxial Thermistor Mount (fig. 1-23) is designed for use w ith model 32A power meters to measure microwave power from 1 microwatt to 10 milliwatt.

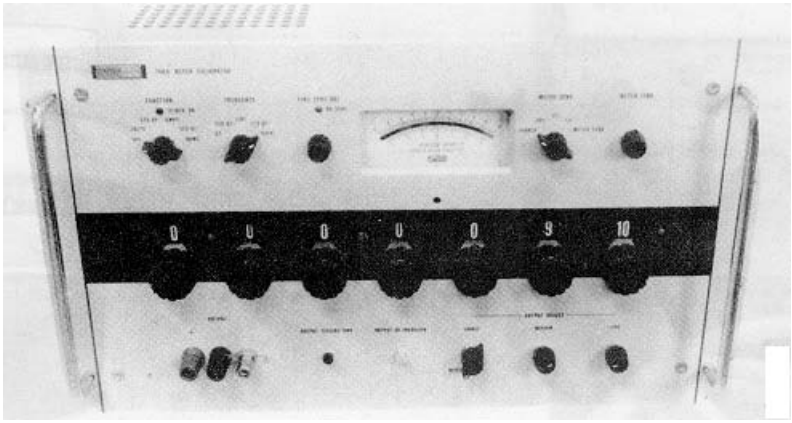


Figure 1-24. John Fluke, Model 760A, Electronic Meter Test Set.

John Fluke, Model 760A, Electronic Meter Test Set (fig. 1-24) is designed for the calibration of voltage, resistance, or current measuring instruments or meters having an accuracy of (or in many instances better than) 1 percent. Model 760A will provide a precision voltage (1 millivolt to 1000 volts) or current (1 microampere td 10 amperes) for calibration purposes. Resistance measuring devices can be checked or calibrated by comparison with model 760A's resistance decade (O to 10 megohms in l-ohm steps).

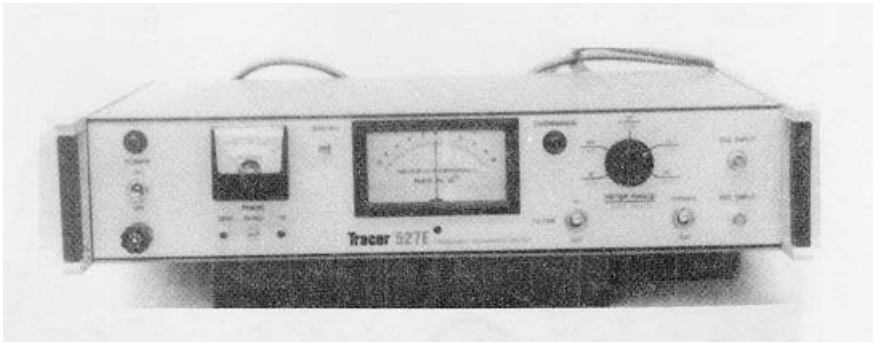


Figure 1-25. Tracor, Model 527E, Frequency Meter.

Tracor, Model 527E, Frequency Meter (fig. 1-25) is used to determine the fractional frequency difference between two stable oscillators, to adjust two oscillators to the same frequency, to offset one oscillator from another by a specified frequency, and to analyze short and long term frequency stability at nominal frequencies of 100 kHz, I MHz, 2.5 MHz, and 5 MHz.

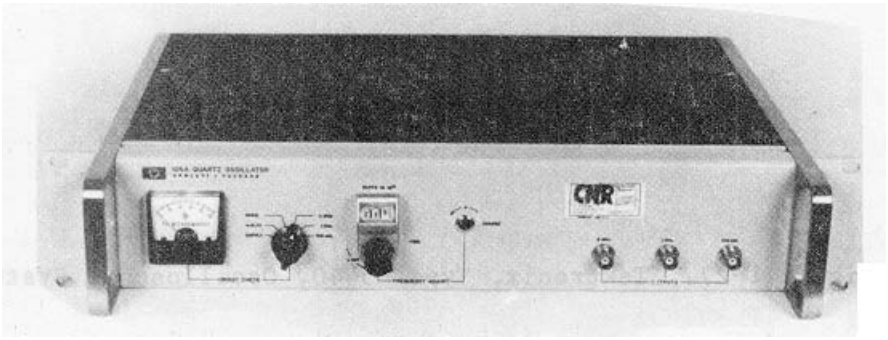


Figure 1-26. Hewlett-Packard, Model 105A OPTION 908, Quartz Oscillator.

Hewlett-Packard, Model 105A OPTION 908, Quartz Oscillator (fig. 1-26) is a light and compact precision'quartz oscillator for frequency and time standards. This oscillator may be operated from 115 V or 230 V ac power or from an external 22 to 30 V dc source.

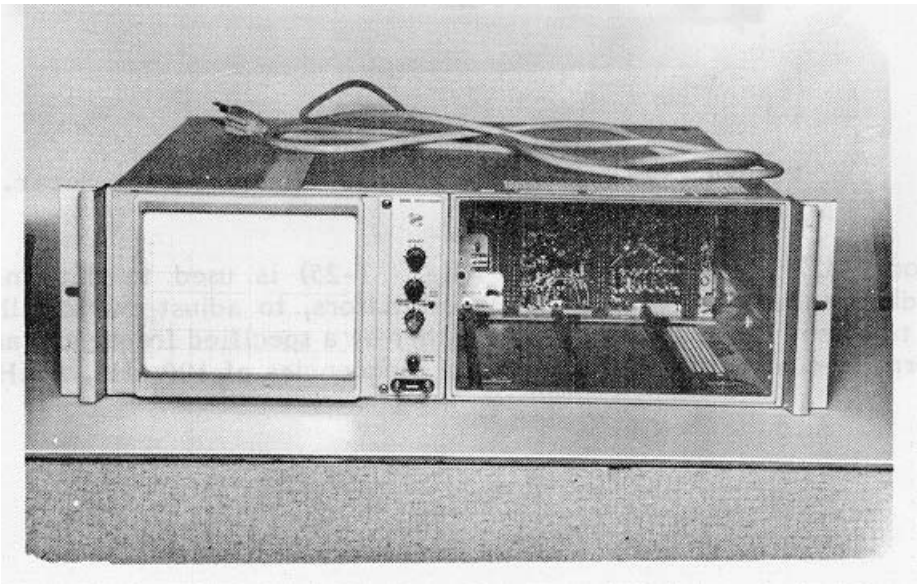
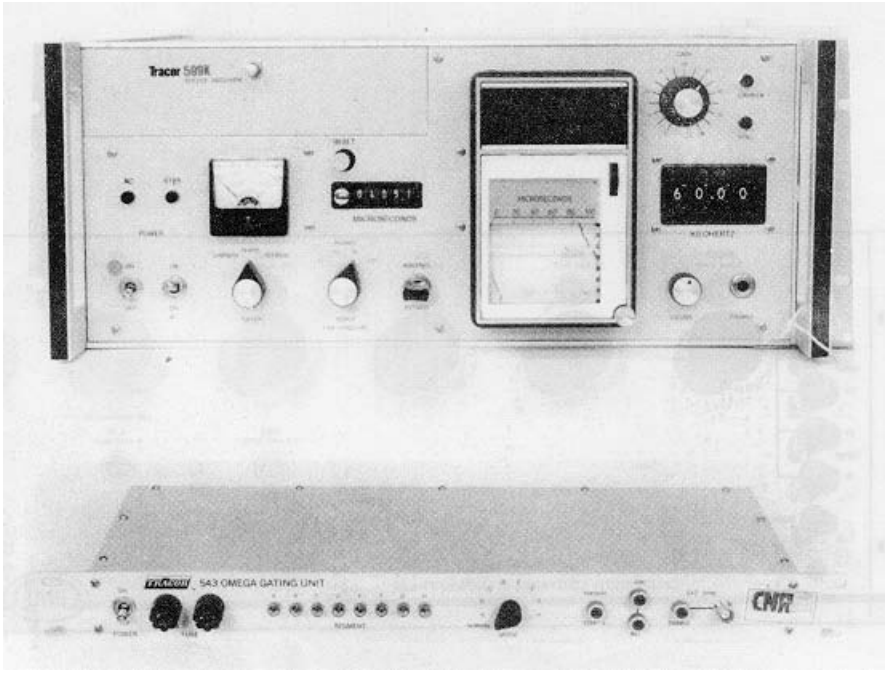


Figure 1-27. Tektronix, Type R5440, Oscilloscope System.

Tektronix, Type R5440, Oscilloscope System (fig. 1-27) is a versatile 50-MHz general purpose, plug-in oscilloscope. It features crt readout of plug-in scale factors and a 3 plug-in mainframe.

Crt readout displays plug-in scale factors on the crt, so measurement time and operator errors are reduced by taking into account magnifiers and probe attenuators. It can also be accessed externally.

The wide variety of plug-ins available allows the oscilloscope to meet the demands from a single-trace, single time-base configuration to 4-trace for transducer measurements, to dual-trace, delayed sweep for general purpose measurements.



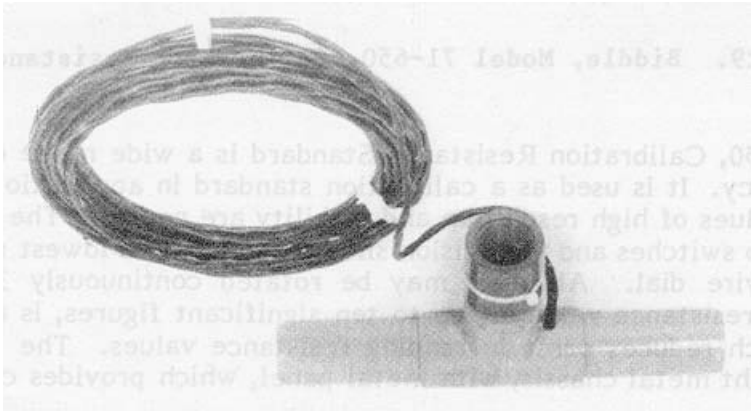


Figure 1-28. Tracor, Model 599K, Receiver Standard.

The all solid-state Tracor, Model 599**{<,** Receiver Standard (fig. 1-28) has been expressly developed to utilize the highly stabilized carrier frequency signals of VLF/LF stations for time and frequency calibration, measurement, and standardization purposes. Phase-locked reception of these VLF signals gives long-term and short-term accuracy that is generally several orders of magnitude better than that obtainable by reception of WWV or WWVH. Frequency measurement to an accuracy of I part in 109 can be achieved in intervals as short as 30 minutes; observation over 24-hour intervals gives a measurement accuracy of several parts in 1011 with the addition of the Omega option. The Omega gating unit grounds the required blanking necessary for any particular station reception. Four front panel selector switches are provided for the selection of the desired Omega segment.

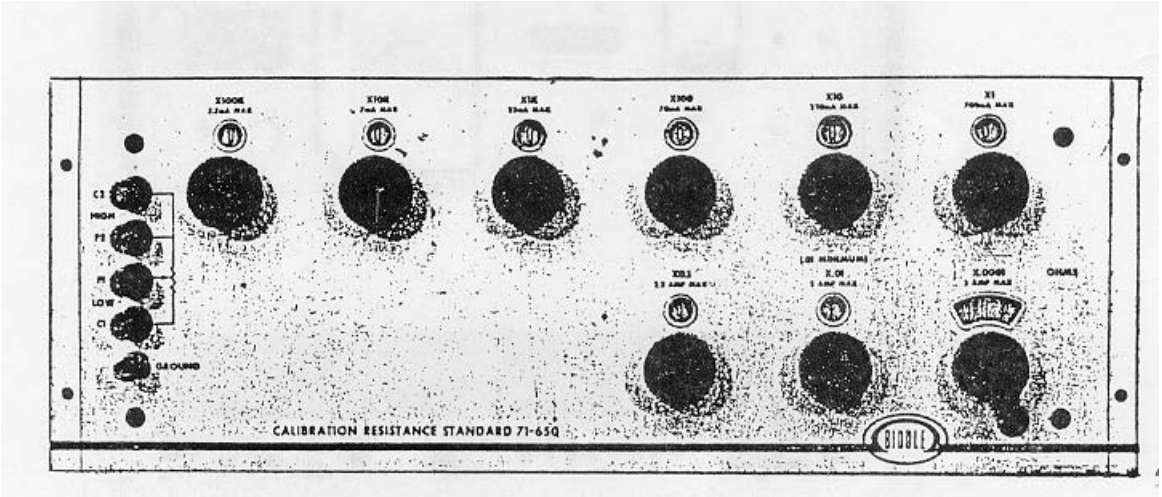


Figure 1-29. Biddle, Model 71-650, Calibration Resistance Standard.

Biddle, Model 71-650, Calibration Resistance Standard is a wide range decade resistance box of very high accuracy. It is used as a calibration standard in applications where a variety of exact resistance values of high resolution and stability are needed. The variable resistor dials consist of eight step switches and a precision slidewire. The two lowest significant figures are read on the slidewire dial. All dials may be rotated continuously 360 degrees in either direction. The set resistance value, of up to ten significant figures, is a digital display, with decimal point, which reduces error in reading resistance values. The resistance standard is housed in a dust-tight metal chassis, with metal panel, which provides complete electrostatic shielding.

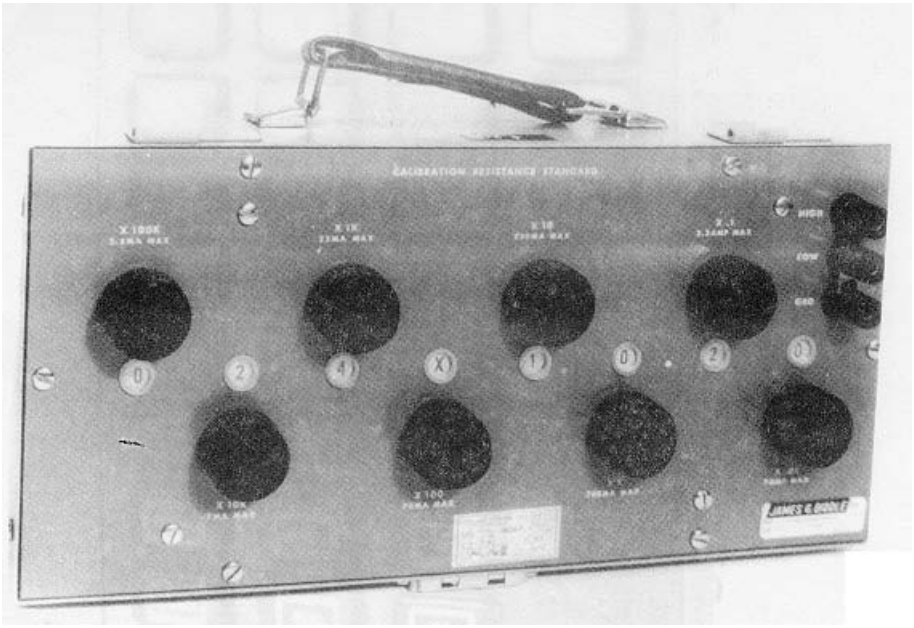


Figure 1-30. Biddle, Model BG 71-631, Decade Resistor.

Biddle, Model BG 71-631, Decade Resistor (fig. 1-30) provides a wide range of precision set resistances to eight significant figures. The 10-step dials permit comparison of the total resistance of any decade with the resistance of each step of the next higher decade. This overlapping adds to the convenience of the instrument's use.

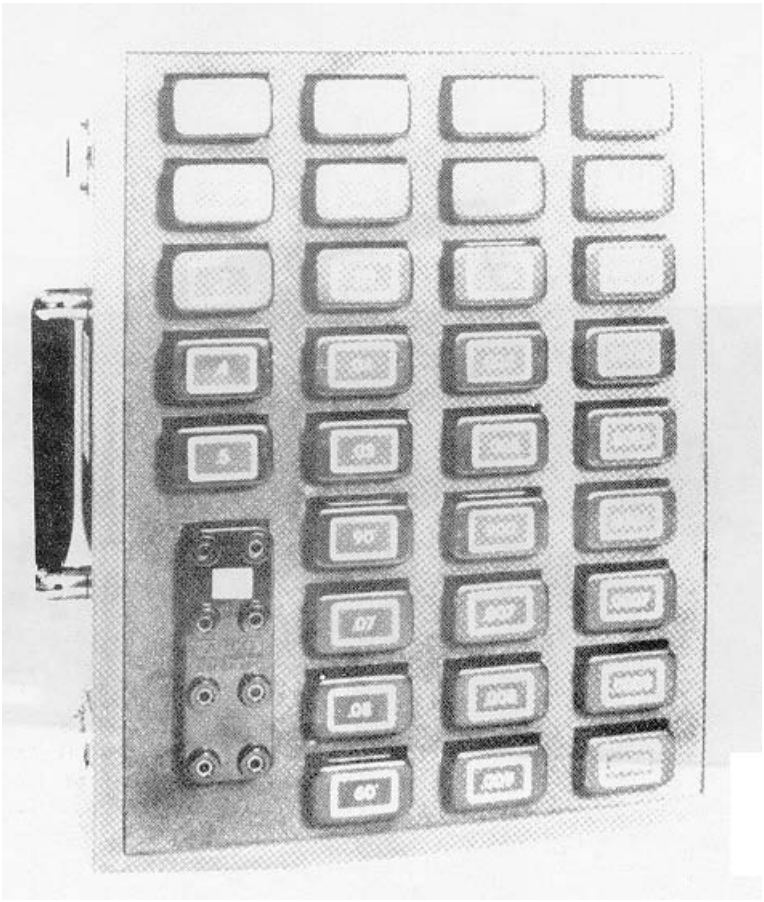


Figure 1-31. ARCO Electronic Instruments, Model SS-32, Capacitor Set Laboratory Standard.

ARCO Electronic lnstruments, Model AEI-SS-32, Capacitor Set Laboratory Standard (fig. 1-31) is primarily intended for precision measurement applications where accuracy and stability are important. The individual capacitors are convenient standards for checking the accuracy of capacitance-measuring devices and can be paralleled to achieve many standard capacitance values.

Figure 1-32. Ballantine, Model 1394( ), Thermal Converters.

Ballantine, Model 1394(), Thermal Converters are wide frequency range rms voltage standards. They are designed to provide accurate voltage measurements, using ac/dc transfer techniques, and precise frequency influence tests.

PRECAUTIONS

The thermocouple heater of model 1394() can withstand continuous, overloads of 20 percent (to 6 mA). Overloads greater than these can result in a permanent change of thermocouple characteristics or burnout of the heater. Burnout occurs so rapidly that the rise in dc couple output cannot be detected. Therefore, it is necessary to take every precaution to avoid overloading the thermocouple.

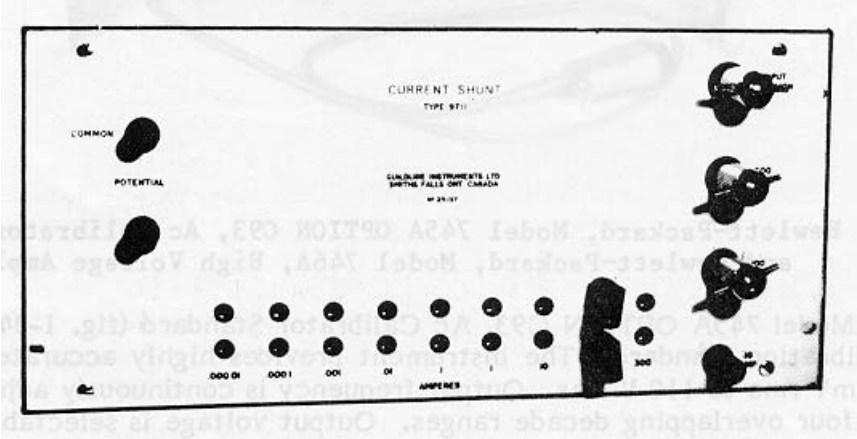


Figure 1-33. Guildline, Model 9711, Current Shunt.

Guildline, Model 9711, Current Shunt (fig. 1-33) is a self-contained 9 range, 4 terminal shunt for precision current measurement up to 300 A. Each shunt resistor Provides a 100 mV drop at nominal rated current. A potentiometer or digital voltmeter is needed as a readout for wide range precise current measurements.

Figure 1-34. Hewlett-Packard, Model 745A OPTION C93, Ac Calibrator Standard, and Hewlett-Packard, Model 746A, High Voltage Amplifier.

Hewlett-Packard, Model 745A OPTION C93, Ac Calibrator Standard (fig. 1-34- is a compact, wide-range ac calibration standard. The instrument provides highly accurate ac calibration voltages from 0.1 mV rms to 110 V rms. Output frequency is continuously adjustable from 10 Hz to 110 kHz in four overlapping decade ranges. Output voltage is selectable in six decade ranges (1 mV through 100 V). A seventh range (1000 V ext.) is provided for use with the external high voltage amplifier. Output voltage can be varied from 10 percent of range to 100 percent of range in steps as small as I ppm of range. The six back-lighted voltage set controls provide a direct r readout of the voltage setting. In addition, model 745A OPTION C93 is equipped with an error measurement function which can be used to provide a direct reading of calibration errors in percent of setting. Hewlett-Packard, Model 746A, High Voltage Amplifier, increases the output of model 745A OPTION C93 to 11I00 V.

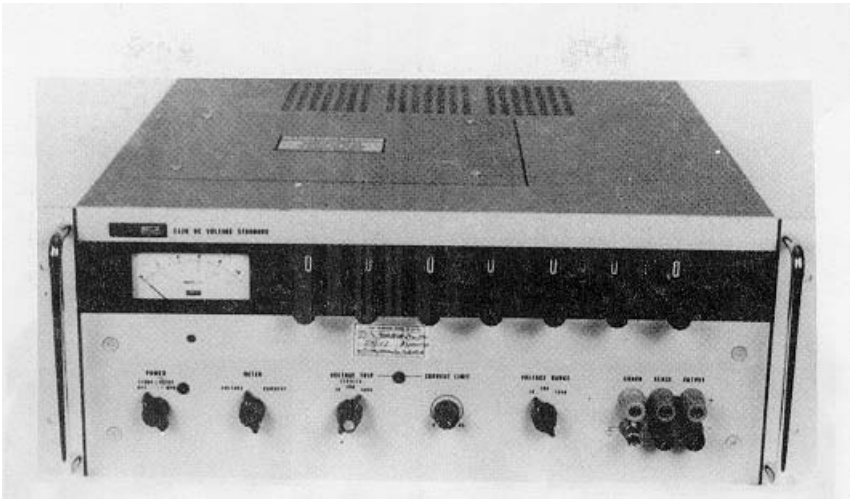


Figure 1-35. John Fluke, Model 332B/AF, Voltage Calibrator.

John Fluke, Model 332B/AF, Voltage Calibrator (fig. 1-35) provides a dc output of 0 to 1111.111 V in three ranges of 10, 100, and 1000 V with a current capability of 50 mA. Model 332B/AF also incorporates three protection circuits: a current limit, a current trip, and a voltage trip. Overcurrent protection is provided by a continuous variable front panel control automatically limiting output current at any present level between I MA and 60 MA.

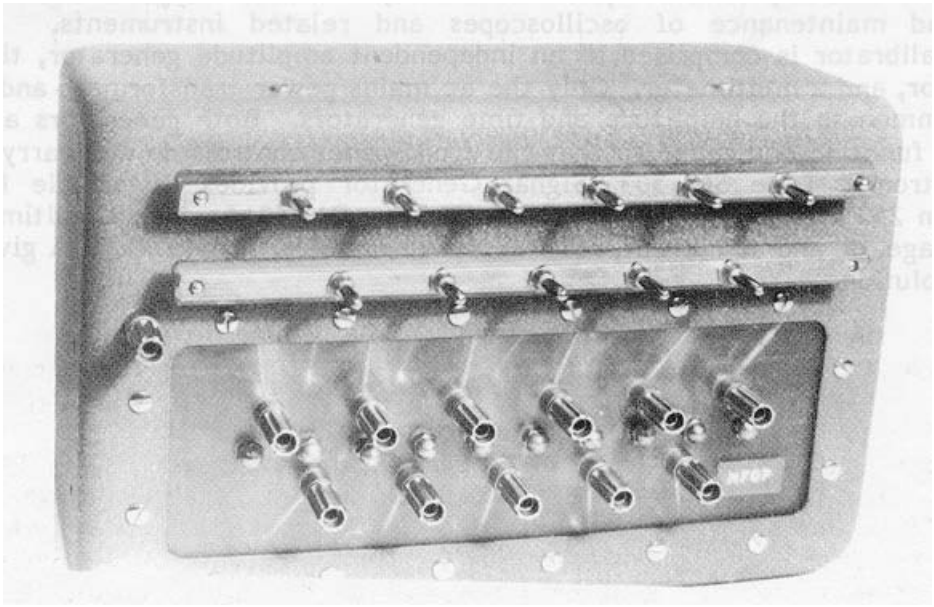


Figure 1-36. Industrial Instruments, Model CR1000M, Resistance Standard.

Industrial Instruments, Model CRIOOO1M, Resistance Standard (fig. 1-36) is primarily intended for precision measurement applications where high accuracy is important. They are convenient resistance standards for checking the accuracy of resistance measuring devices.

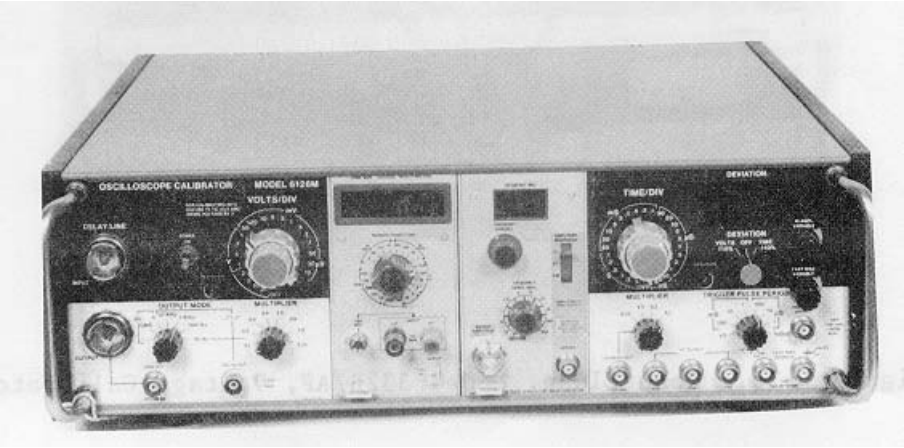


Figure 1-37. Ballantine, Model 6126M, Oscilloscope Calibrator System.

Ballantine, Model 6126M, Oscilloscope Calibrator System is a compact test set intended for calibration and maintenance of oscilloscopes and related instruments. Model 6126M oscilloscope calibrator is comprised of an independent amplitude generator, time generator, signal generator, and a multimeter. Only the ac mains power transformers and the deviation meter are common to the amplitude and time generators. Both generators are electrically controlled for function and range so that the front panel controls do not carry measurement signals. Tektronix, Type SG 503, Signal Generator provides a variable leveled output amplitude from 250 kHz to 250 MHz. Tektronix, Type DM 501A, digital multimeter measures dc and ac voltage, dc and ac current, resistance and decibels. Type DM 501A gives 4 ½ digits of readout resolution.

Figure 1-38. General Radio, Model W10MT3AS3, Variable Power Transformer.

General Radio, Model WIOMT3AS3, Variable Power Transformer (fig. 1-38) is supplied with a three-wire cord and plug for connection to 50-60 Hz, nominal 120 V ac power line. The third wire in the cord plug circuit provides automatic grounding of external metal parts as a safety feature. No attempts should be made to operate the variac on dc current.

Figure 1-39. Simpson, Model 260-7, Multimeter.

Simpson, Model 260-7, Multimeter (fig. 1-39) is used to make measurements of dc and ac voltage, direct current, resistance, decibels and output voltage.

Figure 1-40. Tektronix, Type 1101, Accessory Power Supply.

Tektronix, Type 1101, Accessory Power Supply (fig. 1-40) is designed to furnish power for one to four active probes when used with oscilloscopes that do not have a probe power supply. Type 1101 provides +15 V, -15 V, and +5 V and is short-circuit protected.

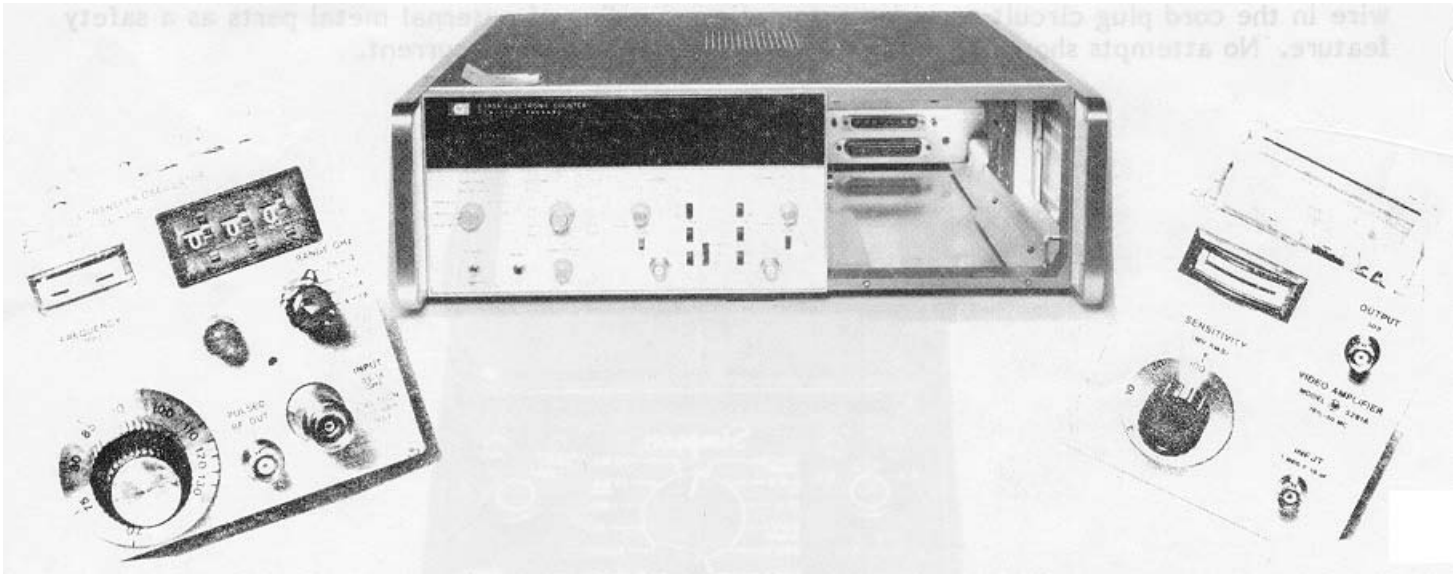


Figure 1-41. Hewlett-Packard, Model 5345A, Electronic Counter System.

Hewlett-Packard, Model 5345A, Electronic Counter System (fig. 1-41) can provide frequency measurements from 1 Hz to 500 MHz or time interval measurements from 10 ns to 20,000 s. The frequency measurements capability is increased to 18 GHz with Hewlett-Packard, Model 5257A, Transfer Oscillator. The amplitude of extremely low signals is amplified with Hewlett-Packard, Model 5261A, Video Amplifier.

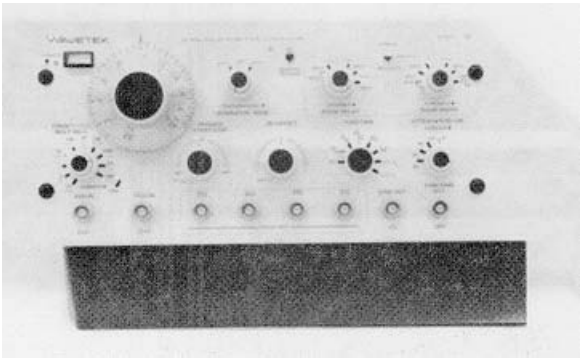


Figure 1-42. Wavetek, Model 145, Signal Generator.

Wavetek, Model 145, Signal Generator (fig. 1-42) provides eight different outputs from 0.0001 Hz to 20 MHz. The output is variable from dc to 15 V peak-to-peak terminated into 50 ohms. The signal generator can be operated in one of three different modes. The continuous modes provide a continuously generated signal at a selected frequency. In triggered mode, the generator is quiescent until triggered by an external signal or manual trigger at which time one cycle is generated at the selected frequency. In gated mode, the signal generator operated the same as in triggered mode except that the signal generator is an oscillation for duration of gate signal.

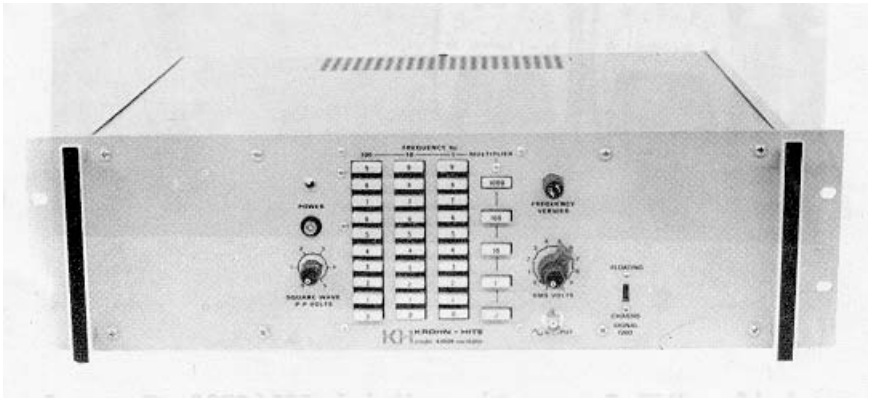


Figure 1-43. Krohn-Hite, Model 4100AR, Oscillator.

Krohn-Hite, Model 4100AR, Oscillator (fig. 1-43) provides an ac voltage source from 0 to 5 V rms across 50 ohms. The frequency range is variable from 10 Hz to 10 MHz. Model 4100AR has a current capability of 2 A. It is used as a driving source for J<rohn-Hite, Model 7500, Amplifier, and Holt Instruments, Model 250, Ammeter Calibrator.

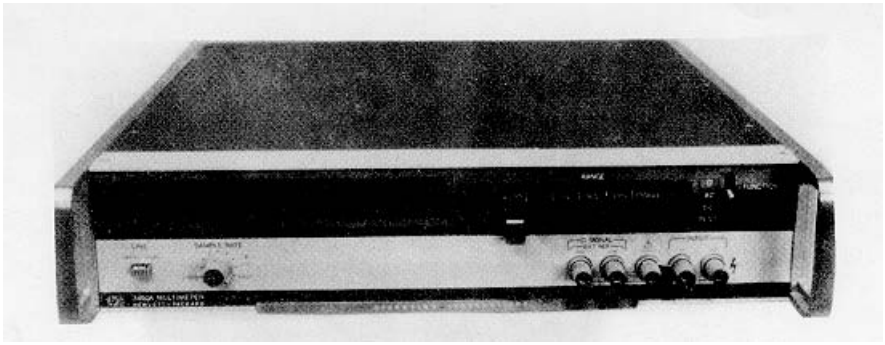


Figure 1-44. Hewlett-Packard, Model 3490, Digital Voltmeter.

Hewlett-Packard, Model 3490, Digital Voltmeter (fig. 1-44) is a five-digit integrating digital voltmeter. The basic instrument measures dc voltages, ac voltages and resistance. Figure 1-45. NJE Corporation, Model CS36CR30, Power Supply.

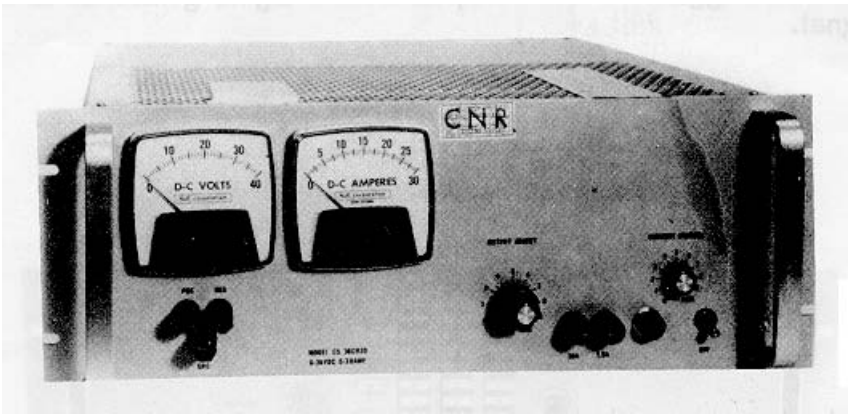


Figure 1-45. NJE Corporation, Model CS36CR30, Power Supply.

NJE Corporation, Model CS36CR30, Power Supply (fig. 1-45) is a constant voltage power supply designed to supply a low voltage high current output with a reliable stability and good regulation. The output current is variable from 0 to 30 A.

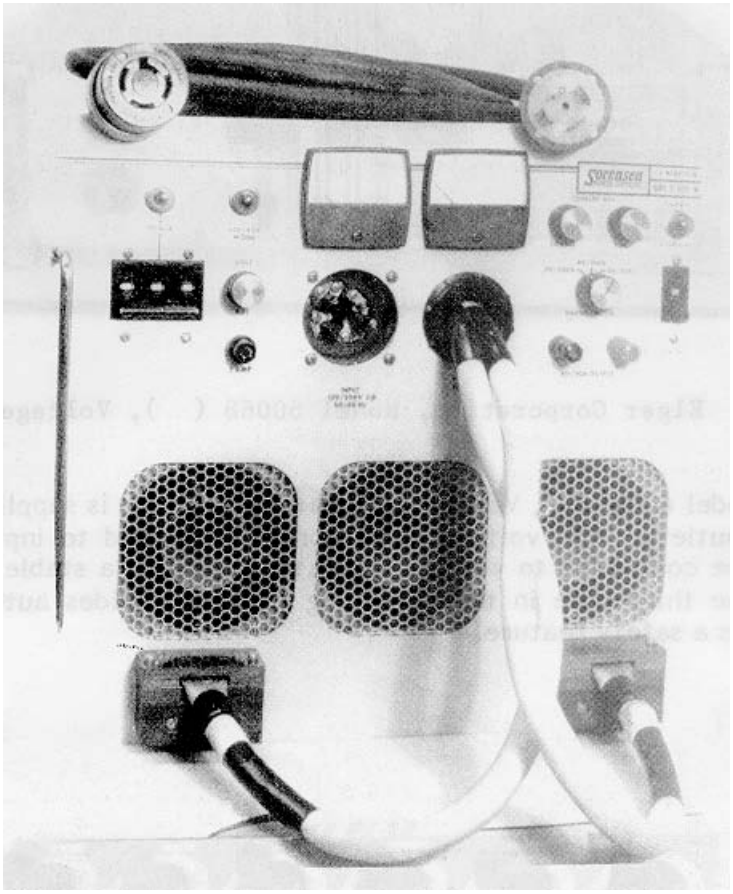


Figure 1-46. Sorensen, Model QRE 3-300M3, Power Supply.

Sorensen, Model QRE 3-300M3, Power Supply (fig. 1-46) is a constant current source power supply designed to supply a low voltage and extremely high current output. The output current is variable from 0 to 300 A in three overlapped ranges. Model QRE 3-300M3 requires an input power of 208 V ac, three phase, four wires.

CAUTION

Extreme care should be exercised when operating the Sorenson, Model QRE 3-300M3.

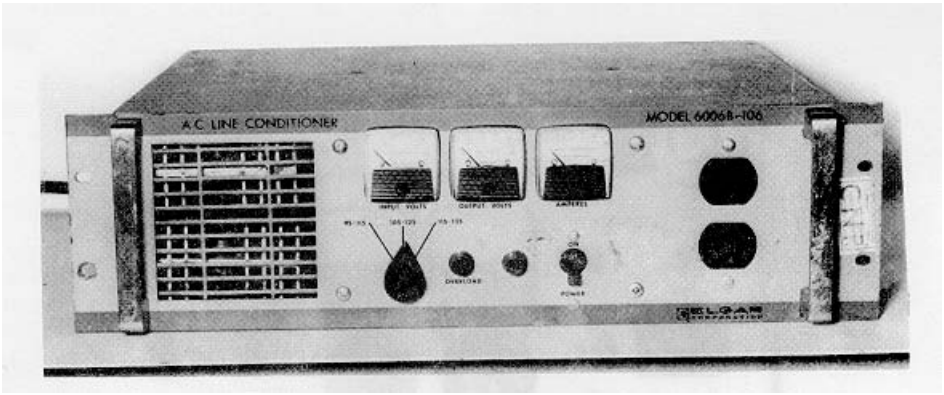


Figure 1-47. Elgar Corporation, Model 6006B ( ), Voltage Regulator.

Elgar Corporation, Model 6006B ( ), Voltage Regulator (fig. 1-47) is supplied with a three-wire cord and two power outlets. The voltage regulator is connected to input power line. Two equipment racks can be connected to voltage regulator providing a stable power source to the equipment in use. The third wire in the cord plug circuit provides automatic grounding of external metal parts as a safety feature.

Figure 1-48. Winslow Teletronics, Model 336, Decade Resistor.

Winslow Teletronics, Model 336, Decade Resistor (fig. 1-48) provides resistance values over the ranges of 1 to 999,999 ohms. It is capable of handling currents from .005 to 5 A; depending on the decade selected it will dissipate a total of 225 W.

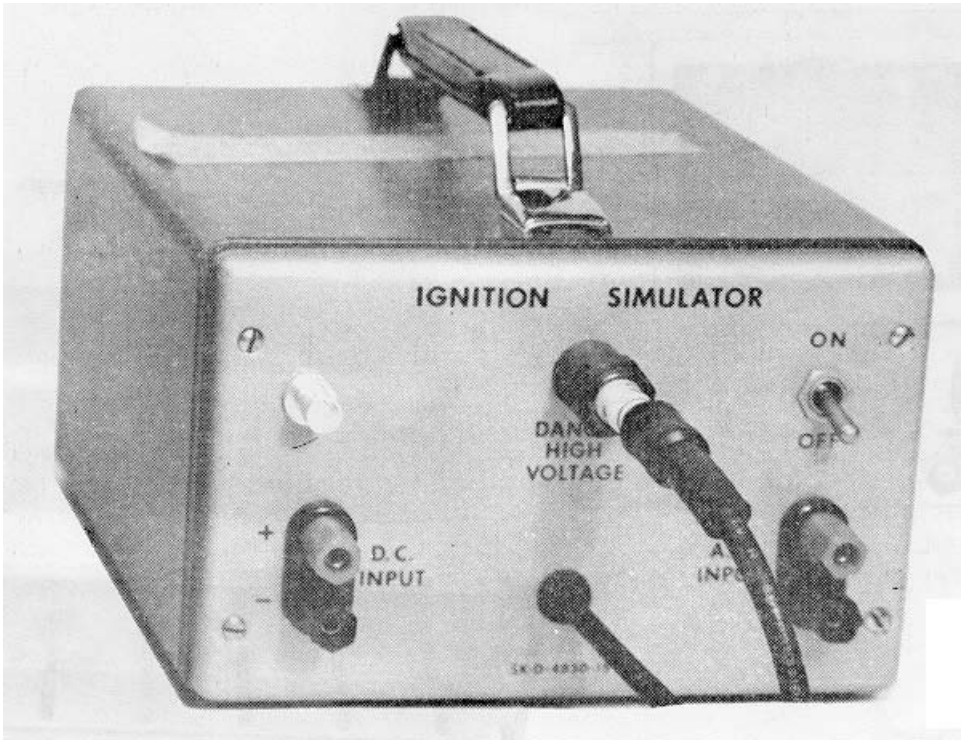


Figure 1-49. Ignition Simulator, SK-D-4850-15 (7916123).

The Ignition Simulator (fig. 1-49) is used to simulate an automotive ignition system in the calibration of tachometers that receive their excitation from a magnetic pickoff connected to the spark plug high voltage cable. The ignition simulator produces a high voltage to fire the spark plug over the frequency range of 1 to 200 hertz when driven by a square wave generator and a dc power input between 8 and 18 V.

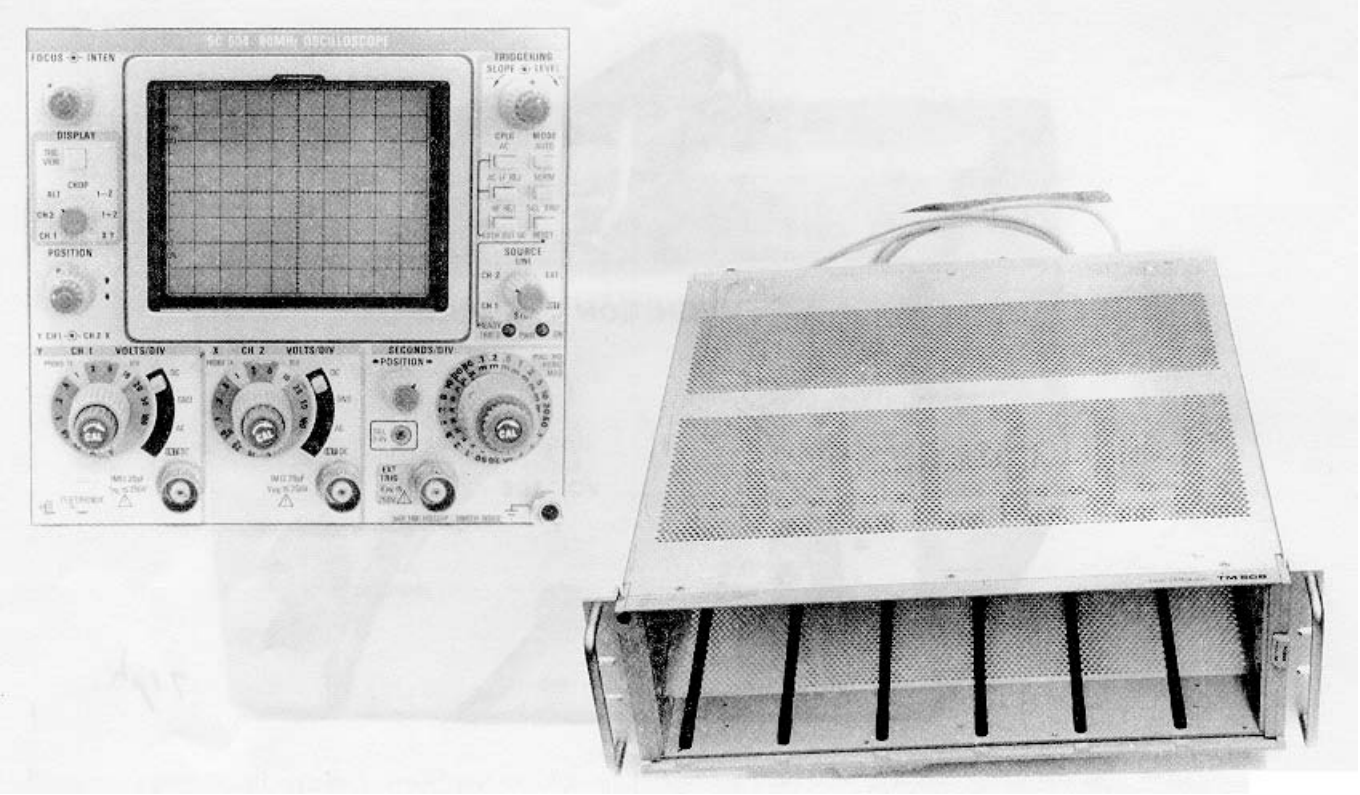


Figure 1-50. TMDE Repair System, Tektronix, Type 500( ) (MIS-30526 Type I).

TMDE Repair System (fig. 1-50) is a repair station in itself. It contains in one power mainframe Type TM 506, a 80 MHz dual channel oscilloscope with XY capabilities, a variable dual power supply, a GHz counter, and a signal generator capable of seven different outputs. The portable model TMDE Repair System, Tektronix, Type TM515 (MIS-30526 Type III) accepts the same plug-ins.

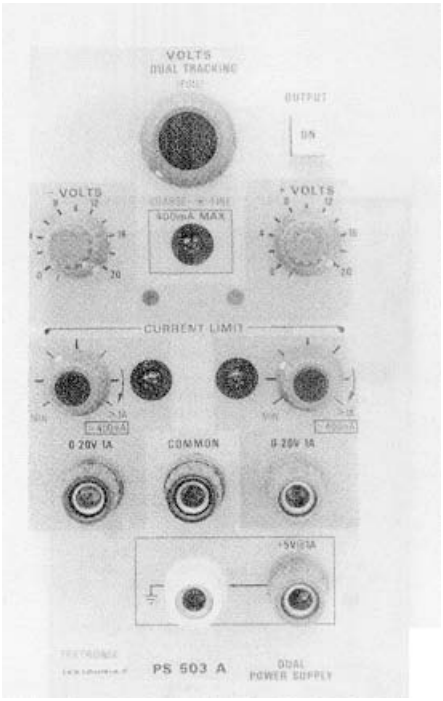


Figure 1-50-1. Tektronix, Type PS 503A, Power Supply.

Tektronix, Type PS 503A, Power Supply (fig. 1-50-1) features superior dual tracking performance, over-voltage protection, and remote resistance programming of voltage. When operated in the high-power compartment of a TM 515 or TM 506 mainframe, Type PS 503A provides up to 1 A from both + and -, 0 to 20 V supplies. The voltage output is variable 0 to $\pm$20 V dc with respect to the common terminal or 0 to 40 V dc across the + and -terminals. Outputs can be varied independently or at a constant ratio. If the two supplies are set independently to any given voltage ratio and then varied by use of the VOLTS DUAL TRACKING control, the two supplies will maintain the same voltage ratio as initially set within +50 mV. The current limit adjustable from less than 100 mA to 1 A (high-power compartment) or from less than 40 mA to 400 mA (standard compartment) on each supply.

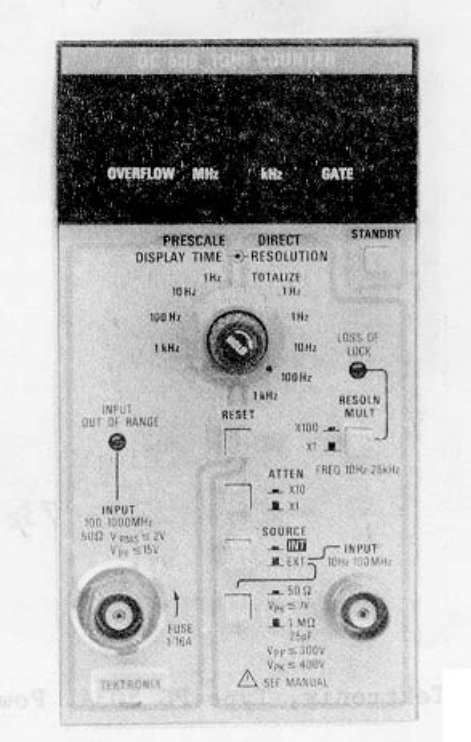


Figure 1-50-2. Tektronix, Type DC 508, Frequency Counter.

Tektronix, Type DC 508, Frequency counter (fig. 1-50-2) measures from 10 Hz to 100 MHz in the direct input mode. The prescaler input allows it to measure frequency from 75 MHz to 1 GHz. A nine-digit LED display shows frequency or totalized events from 0 to 999,999,999. The decimal point is automatically positioned and leading zeros suppressed. The RESOLN MULT X00 position provides two additional digits to the right of decimal point for additional resolution when measuring frequencies below 25 kHz.

Figure 1-50-3. Tektronix, Type FG 502, Function Generator.

Tektronix, Type FG 502, Function Generator (fig. 1-50-3) provides low-distortion sine, square, and triangle waveforms, and positive or negative ramps and pulses. Output frequency is continuously variable from 0.1 Hz to 11 MHz. The frequency range from 1 to 11 MHz permits the versatility of the function generator to be extended into the medium radio frequency range. Voltage controlled frequency input permits the FG 502 to be used as a sweep generator. The external gate input permits the FG 502 output in any of its modes to be controlled by an externally supplied pulse to generate bursts of various output waveforms.

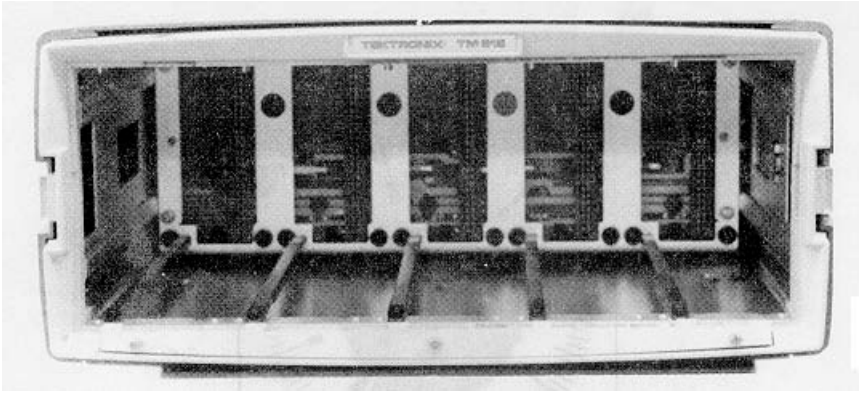


Figure 1-51. Tektronix, Type TM 515, Portable Model, TMDE Repair System (MIS-30526 Type III)

Tektronix, Type TM 515, Traveler Mainframe (fig. 1-51) is designed to protect up to 5 separate instruments during transportation to and from the worksite. Included with this rugged mainframe are pop-off front and back covers which protect the instruments and also store accessories. The Traveler Mainframe comes equipped with a heavy duty handle and tilt bail.

Figure 1-52. Electron Tube Test Set, Model TV-7D/U.

Electron Tube Test Set, Model TV-7D/U (fig. 1-52) tests electron tubes for opens, shorts, gaseous conditions, and performance level. Adapters and a technical bulletin are provided with each set. The technical bulletins provide the required control settings and minimum specifications for all known electron tubes that can be checked by the TV-7D/U.

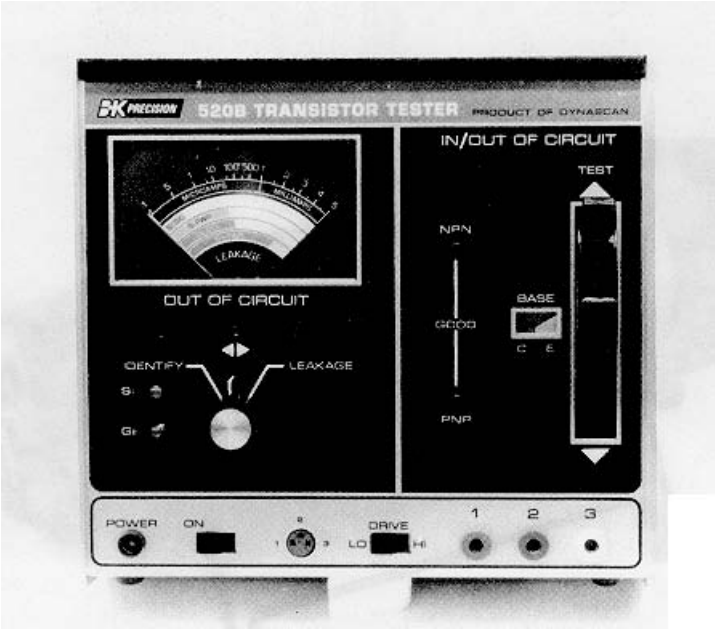


Figure 1-53. BK Precision, Model 520B, Semiconductor Tester.

BK Precision, Model 520B, Semiconductor Tester (fig. 1-53) tests semiconductor for proper operation and base to emitter current leakage. Semiconductor can be tested in or out of the circuit.

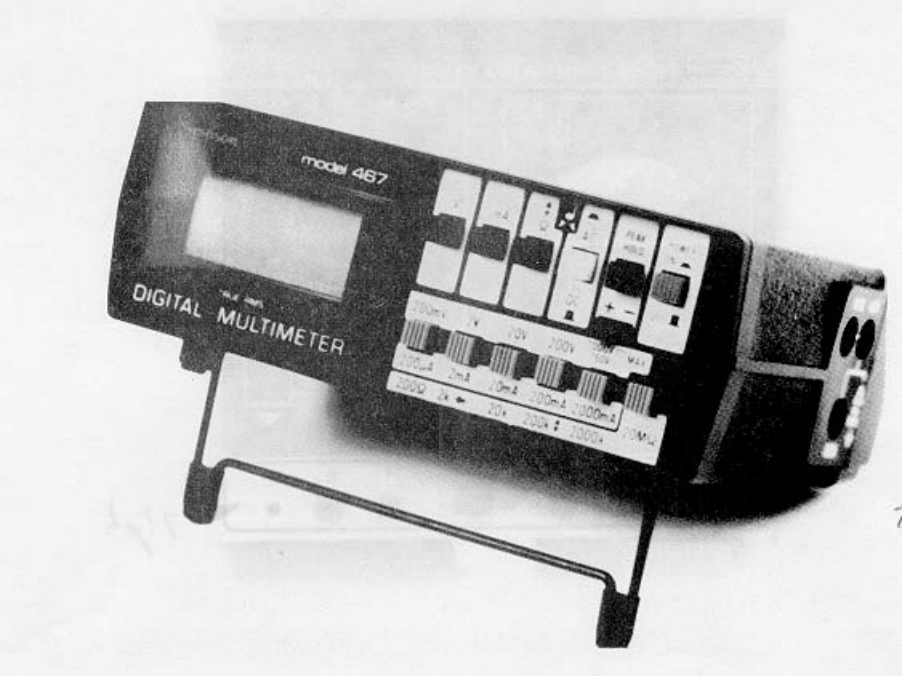


Figure 1-54. Simpson, Model 467 (AN/PSM-45), Digital Multimeter.

Simpson, Model 467, Digital Multimeter, (fig. 1-54), is a replacement for multimeter John Fluke, Model 8020A. Measurement functions include ac volts, dc volts, ac current, dc current, resistance, diode test, low power, and conductance. Additional functions are differential peak hold, 50 microsecond pulse detection, and visual/audible indication measurement of continuity and logic level. It will analyze both steady and pulsating signals.

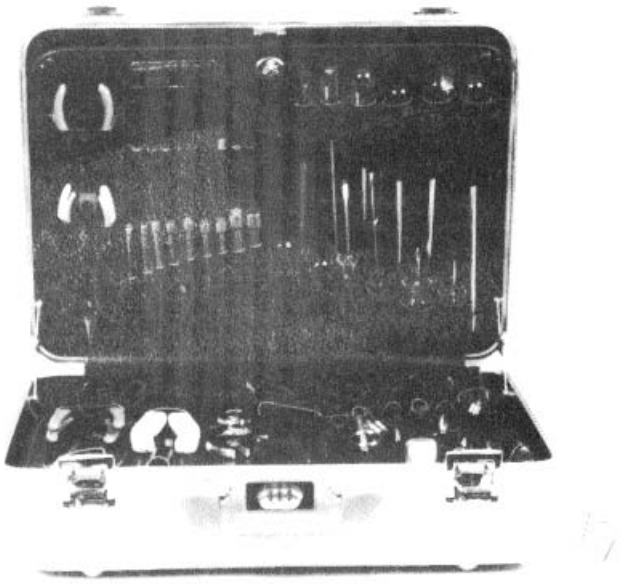


Figure 1-55. Jensen. Model JTK-17LAL, Tool Kit.

Jensen, Model JTK-17LAL, Tool Kit (fig. 1-55) contains the majority of precision and common hand tools a service technician needs to perform most calibration and repair actions. The aluminum case has a three-digit thumble combination lock for security. Special hand tools required for repairs are provided in the calibration tool kit, APN 7659911.

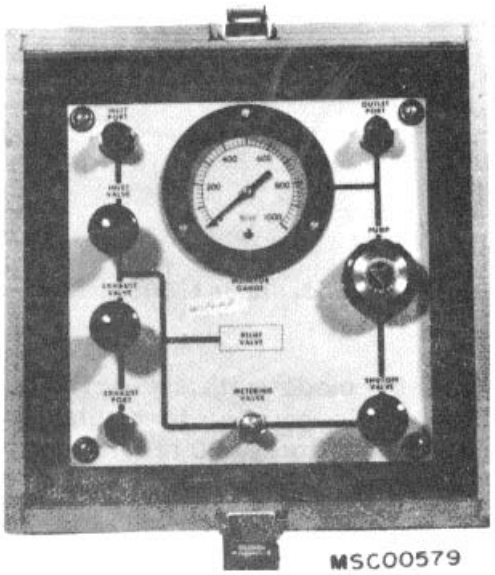


Figure 1-56. Volumetrics, Model BCN-1-1000, Pneumatic Pressure Controller.

Pneumatic pressure controller, Volumetrics, Model BCN-1-1000 (fig. 1-56), when connected to an external pneumatic pressure or vacuum source, provides the local controls necessary to set the pressure level applied to an external test instrument or system with extreme precision and control resolution. Range of control is 25 microns of Mercury, absolute to 1000 psig. The instrument is suitable for use with any water pumped insert gas or non-corrosive gaseous compound.

Figure 1-57. Hewlett-Packard, Model 506A, Motional Transducer.

Angular speed measurements can be made with Hewlett-Packard, Model 506A, Motional Transducer (fig. 1-57) and an electronic counter to display the readings. Model 506A is capable of angular speed measurements up to 12,000 revolutions per minute.

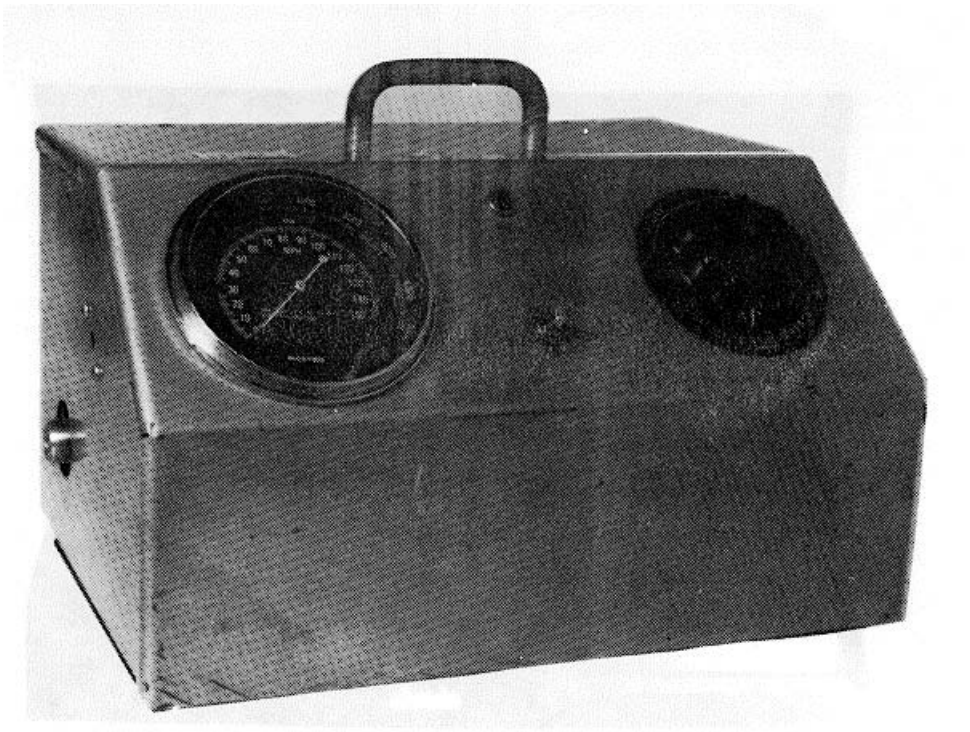


Figure 1-58. Stewart Warner, Model STI-650H-1, Tachometer Calibrator.

Stewart Warner, Model STI-650H-1, Tachometer Calibrator (fig. 1-58) is a source for powering instruments when making angular speed measurements. Model STI-650H-1 is capable of up to 5000 revolutions per minute.

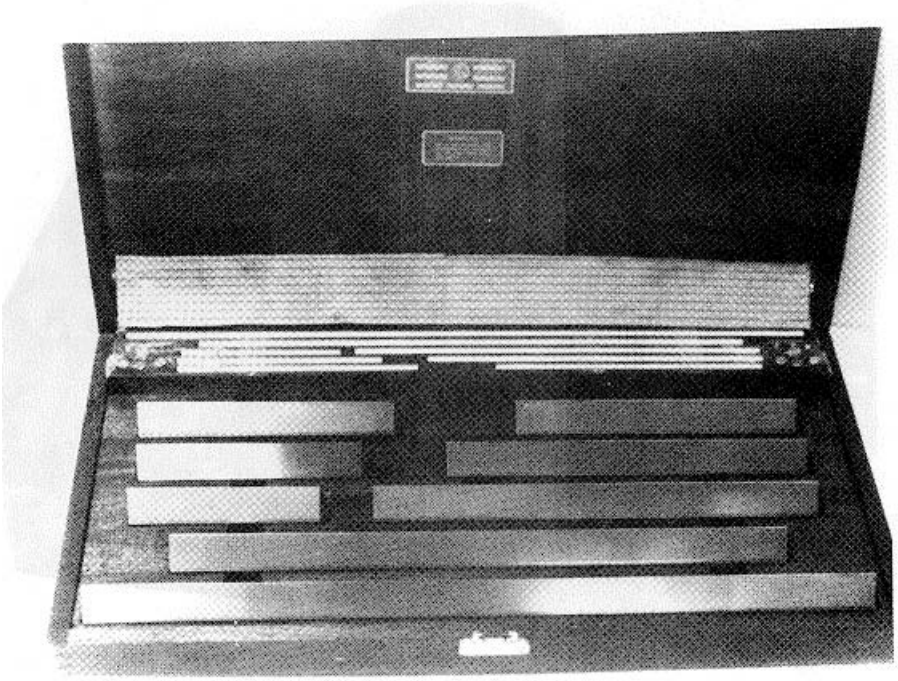


Figure 1-59. Gage Block Set 7915946.

The eight-piece Gage Block Set (7915946) (fig. 1-59) consists of eight blocks, varying in length from 5 to 20 inches. The blocks are one 5-inch, one 6-inch, one 7-inch, one 8-inch, one 10-inch, one 12-inch, one 16-inch, and one 20-inch.

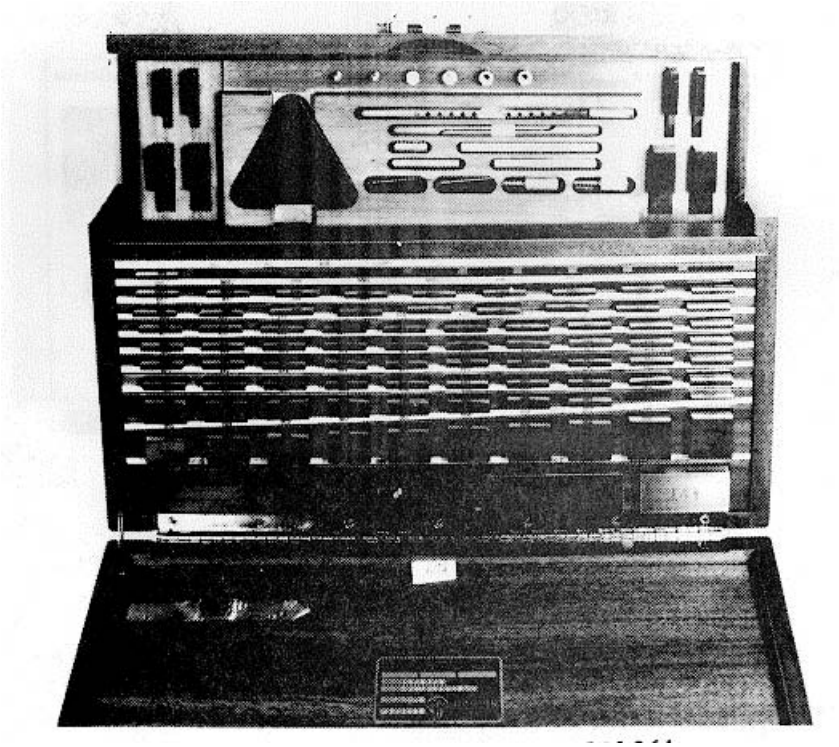


Figure 1-60. Gage Block Set 7901961.

The 81-piece Gage Block Set (7901961) (fig. 1-60) consists of nine blocks, 0.1001 through 0.1009 inch in steps of 0.0001 inch. Forty-nine blocks, 0.101 through 0.149 inch in steps of 0.001 inch; 19 blocks, 0.050 through 0.950 inch in steps of 0.050 inch; and 4 blocks, 1.000 through 4.000 inch in steps of 1 inch.

Figure 1-61. Federal Products, Model 400B-1, Dial Indicator Calibrator.

Federal Products, Model 400B-1, Dial Indicator Calibrator (fig. 1-61) is designed for use primarily with high magnification indicators. A special thread lapping process provides a very high degree of lead screw accuracy.

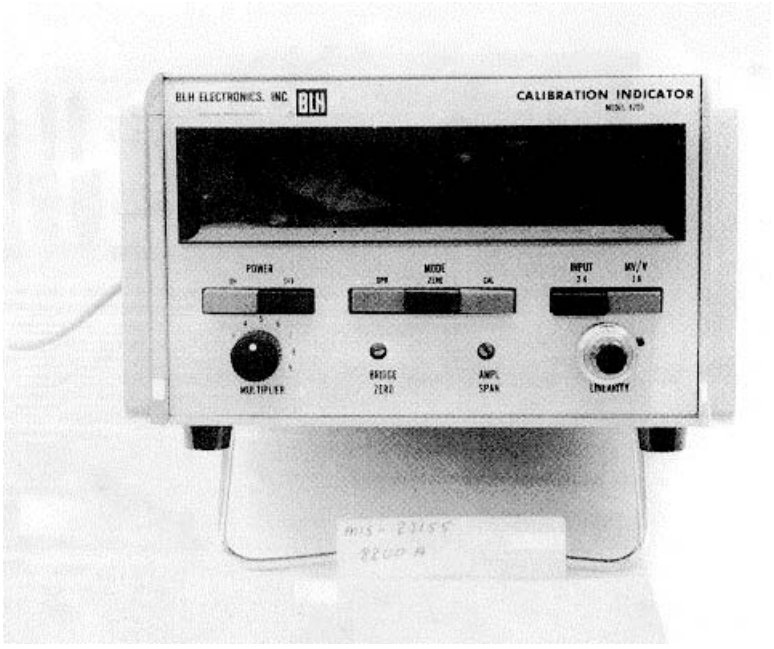
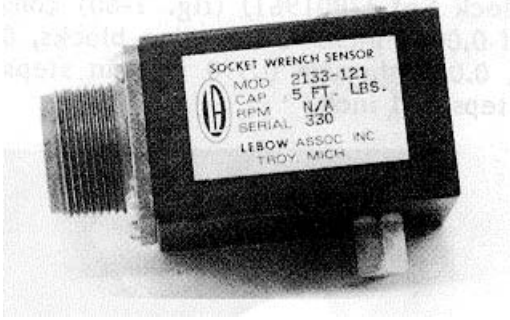


Figure 1-62. BLH Electronics, Model 8200A, Calibration Indicator.



BLH Electronics, Model 8200A, Calibration Indicator (fig. 1-62) is used with Lebow Associates, Model 2133 Series, Torque Cells (fig. 1-65). Torque measurements with full scale measurements from 5 to 3000 feet pounds with an accuracy of 0.5% can be made with this measurement system.

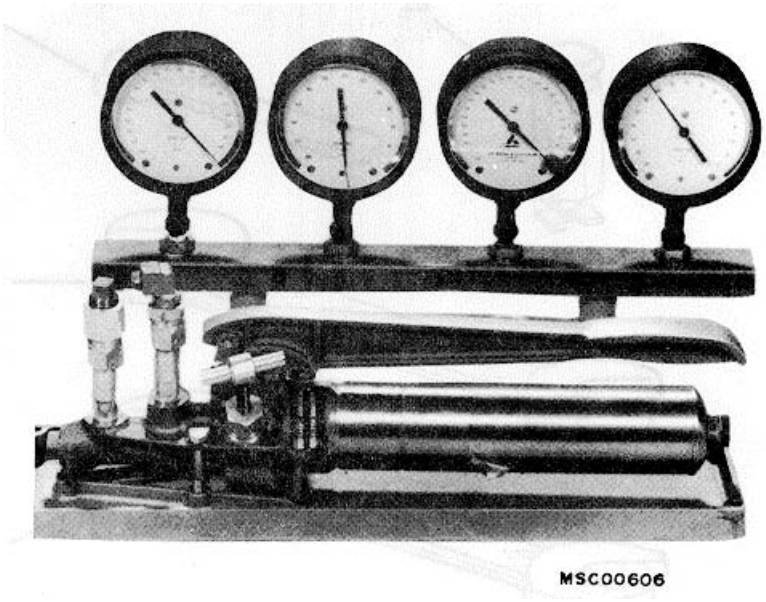


Figure 1-63. Mansfield Green, Model 10-10525, Dead Weight Tester.

The basic component of Dead Weight Tester (fig. 1-63) is a twin seal Hydrostatic Test Unit. This unit is a hand operated piston type pump designed specifically for testing of pressure gages. This assembly is designed for operation to 10,000 pounds per square inch.

Each unit of equipment consists of a carrying case complete with twin seal pressure test unit, wrenches, gage pointer puller (fig. 1-64) and set assembly, testing attachment, dead weight cylinder, offset pipe assembly, high pressure hose assembly and a complete set of dead weights in separate carrying cases. This equipment will produce pressure in 5 pounds per square inch increments from 5 to 2000 pounds per square inch pressure using low pressure piston and from 25 to 10,000 pounds per square inch pressure with high pressure piston.

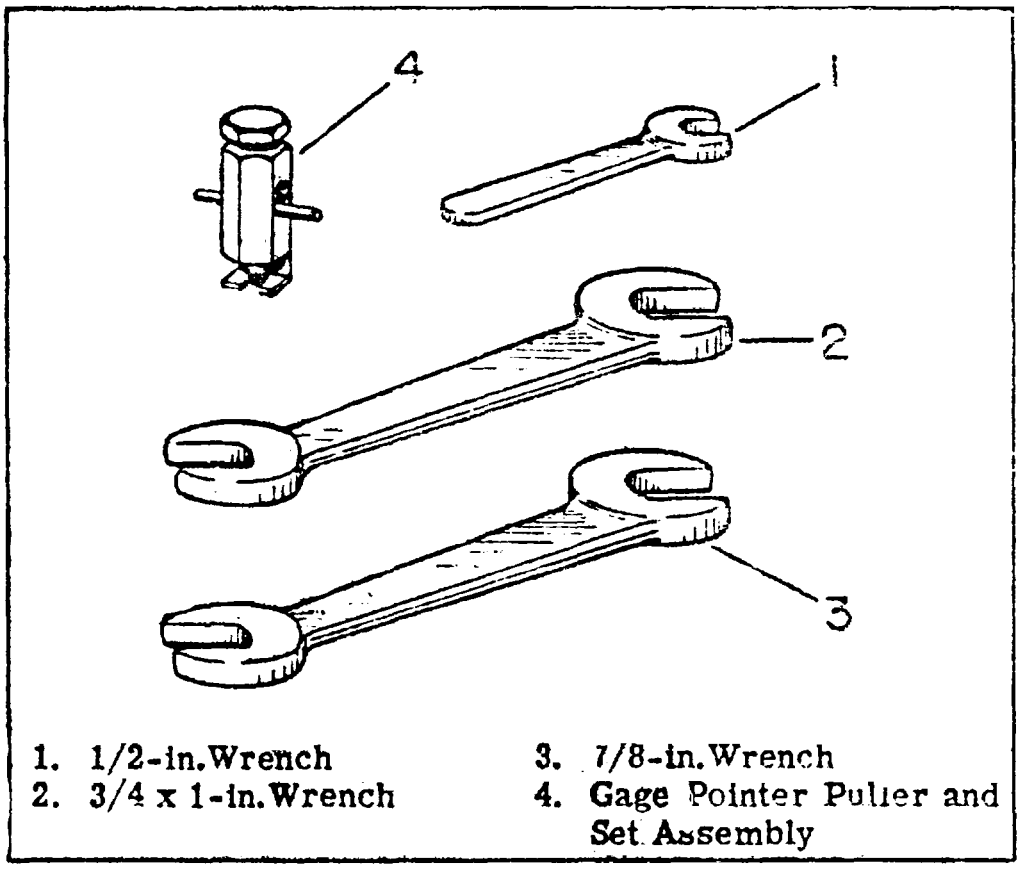


Figure 1-64. Special Service Tools.

Figure and index No.	Tool No.	Nomenclature	Application
1-64, 1	F-1	1/2 in. wrench	To remove or secure the holddown bolts attaching the twinseal pressure test unit to the long drip pan
1-64, 2	F-32A	3/4 x 1-in. wrench	For removal and assembly of parts where required
1-64, 3	F-733	7/8 X 1-in. wrench	For removal and assembly of parts where required.
1-64, 4	1GT-99	Gage pointer puller and set assembly	For removal and assembly of the gage pointer

Figure 1-65. Hewlett-Packard, Model 400EL, Voltmeter.

Hewlett-Packard, Model 400EL, Voltmeter (fig. 1-65) is used for measuring voltages from 1 mV to 300 V rms full scale. Model 400EL covers a frequency range from 10 Hz to 10 MHz and has a constant 10-megohm input resistance on all ranges. Input capacitance less than 25 pF on the 1-mV to I-V range and less than 12 pF on the 3 to 300 V range. Model 400EL gives direct voltage and dBm readings.

Figure 1-66. Weight Set, 7910419.

The 0-500 Gram Weight Set, 7910419 (fig. 1-66) is used for checking resiliency testers, making tension tests, and determining sensitivity of balances and small postal type scales up to 1 pound.

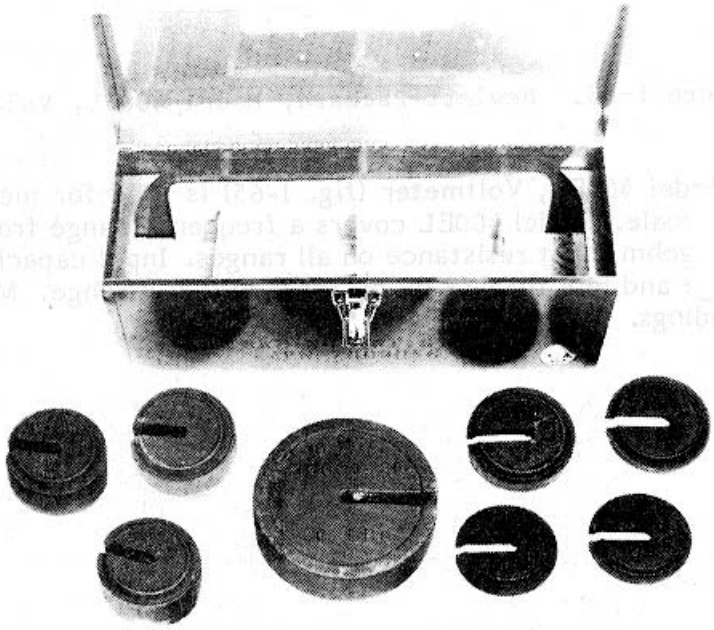


Figure 1-67. Weight Set, 79Q9056.

Weight Set, 7909056 (fig. 1-67) provides a total of 40 pounds and consists of three 1-pound, one 2-pound, three 5-pound, and one 20-pound weights. This set is a split-type weight used for calibrating pendulum type torque calibrators.

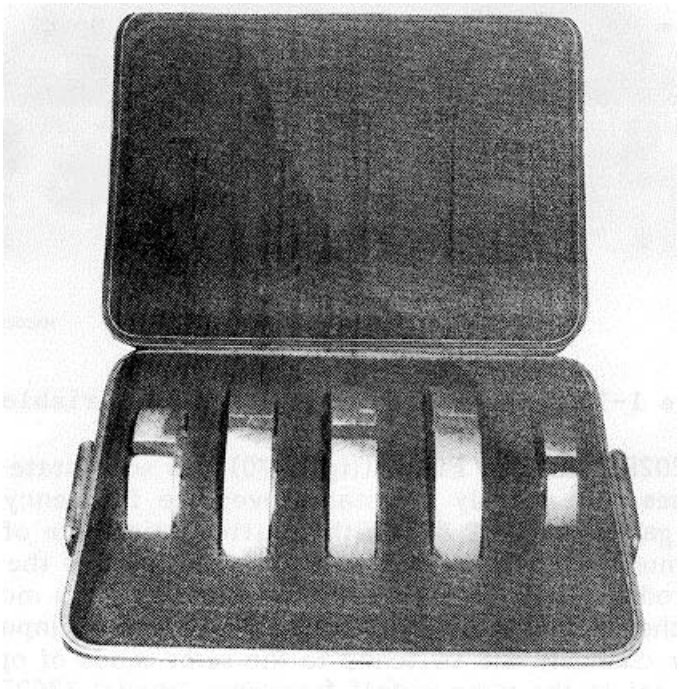


Figure 1-68. Weight Set, 7910346.

The Avoirdupois Class T Weight, 7910346 (fig. 1-68) consists of two 5-pound, two 10-pound, and six 20-pound class T tolerance dead weights. The weights are laboratory reference weights that conform to all NBS class T weights.

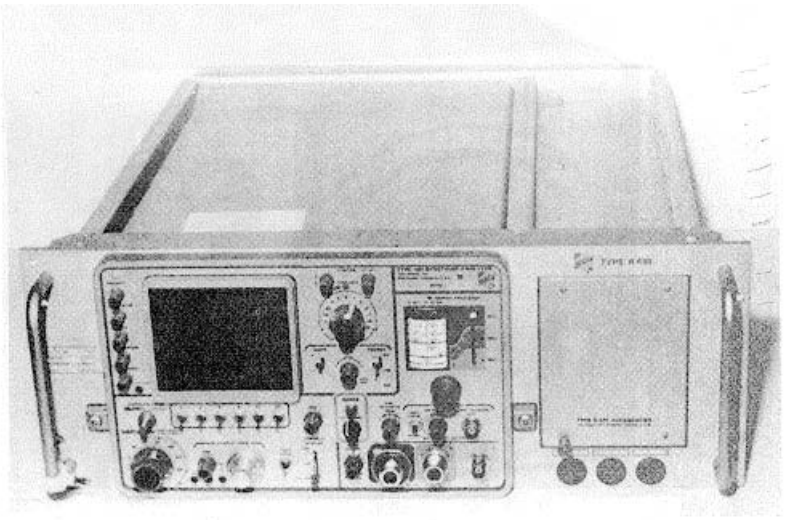


Figure 1-69. Tektronix, Type R491, Spectrum Analyzer.

Tektronix, Type R491, Spectrum Analyzer (fig. 1-69) is a wide band and general purpose portable instrument with an RF center frequency range from 10 MHz to 40 GHz. The analyzer displays signal amplitude as a function of frequency for a selected portion of the spectrum. Frequency is displayed along the horizontal axis (dispersion) and signal amplitude on the vertical axis of a self-contained system.

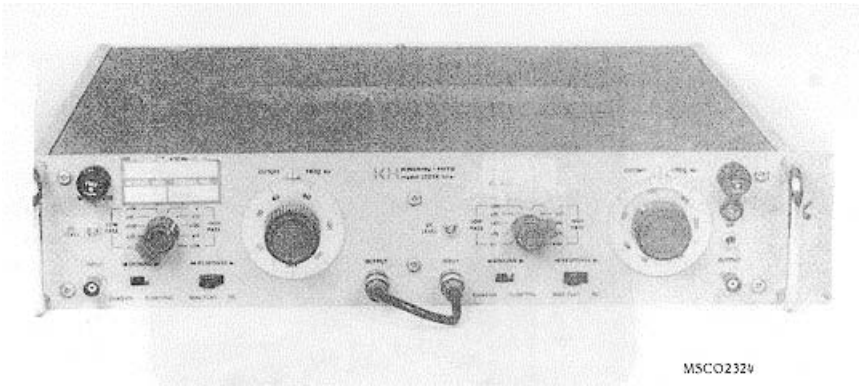


Figure 1-70. Krohn-Hite, Model 3202R, Variable Filter.

Krohn-Hite, Model 3202R, Variable Filter (fig. 1-70) is a solid state variable electronic filter with cutoff frequencies continuously adjustable over the frequency range from 20 Hz to 2 MHz. The pass-band gain is unity (0 dB), with an attenuation rate of 24 dB per octave outside the pass-band. Maximum attenuation is greater than 80 dB and the output hum and noise is less than 100 pV. Model 3202R consists of two separate filters mounted in a single cabinet isolated from each other with independent power supplies, and input and output connectors. When these two filter channels are switched to the same mode of operation and connected in series with both dials set to the same cutoff frequency, model 3202R will function as a high-pass or low-pass filter with an attenuation rate of 48 dB per octave. If the two channels are connected in series, and one channel is operated in the low-pass mode and the other channel in the high-pass mode, model 3202R will function as a band-pass filter with attenuation rate of 24 dB per octave outside the pass-band.

Figure 1-71. Hewlett-Packard, Model 415E, Standing Wave Ratio (SWR) Meter.

Hewlett-Packard, Model 415E, Standing Wave Ratio (SWR) Meter (fig. 1-71) is a high gain amplifier, tuned to an audio frequency, with a square-law calibrated meter readout. Model 415E is designed for use with square-law detectors in the measurement of SWR and attenuation. In addition, because of the high-sensitivity and tuned amplifier, it can be used as a null detector for audio-frequency bridges.

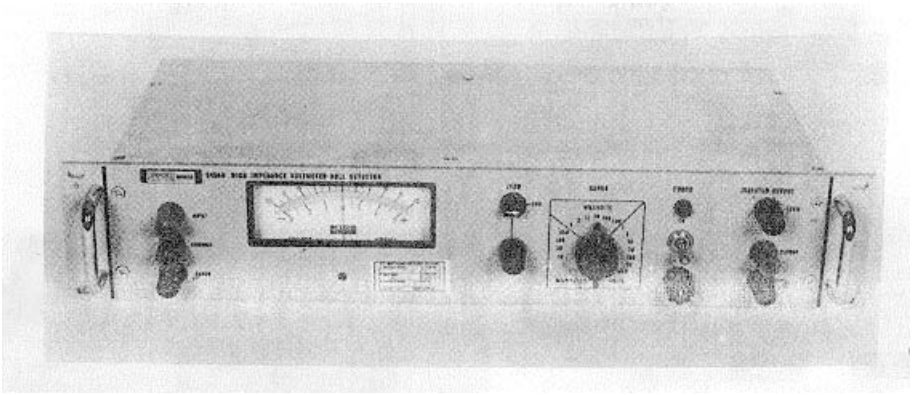


Figure 1-72. John Fluke, Model 845AR, Null Detector.

John Fluke, Model 845AR, Null Detector (fig. 1-72) allows measurement of dc voltages from I 1V to 1000 V dc in 19 ranges. When used as a null detector on the 100 mV range and below, the input impedance is 10 MQ. A linear recorder output allows the instrument to be used for production testing and also as a dc amplifier with a maximum gain of 120 dB.

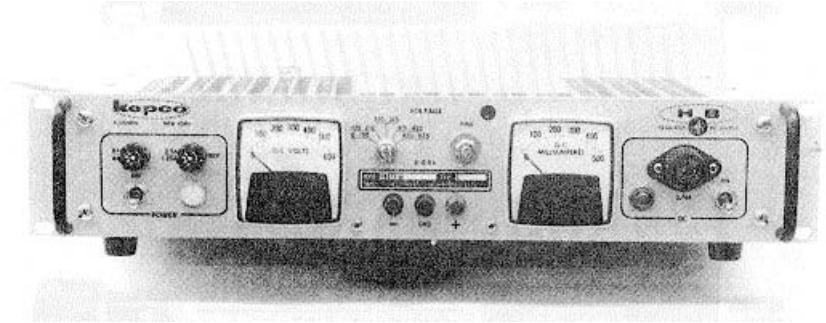


Figure 1-73. Kepco, Model HB 525M 20480, Power Supply.

Kepco, Model HB 525M 20480, Power Supply (fig. 1-73) is a wide range, precision regulated unit which incorporates a hybrid regulator, high resolution voltage control, and is fully programmable up to 525 V. It has two auxiliary 6.5 V, 10 A filament windings connection available at the rear barrier strips. These two auxiliary outputs can be used separately, in parallel or in series operation.

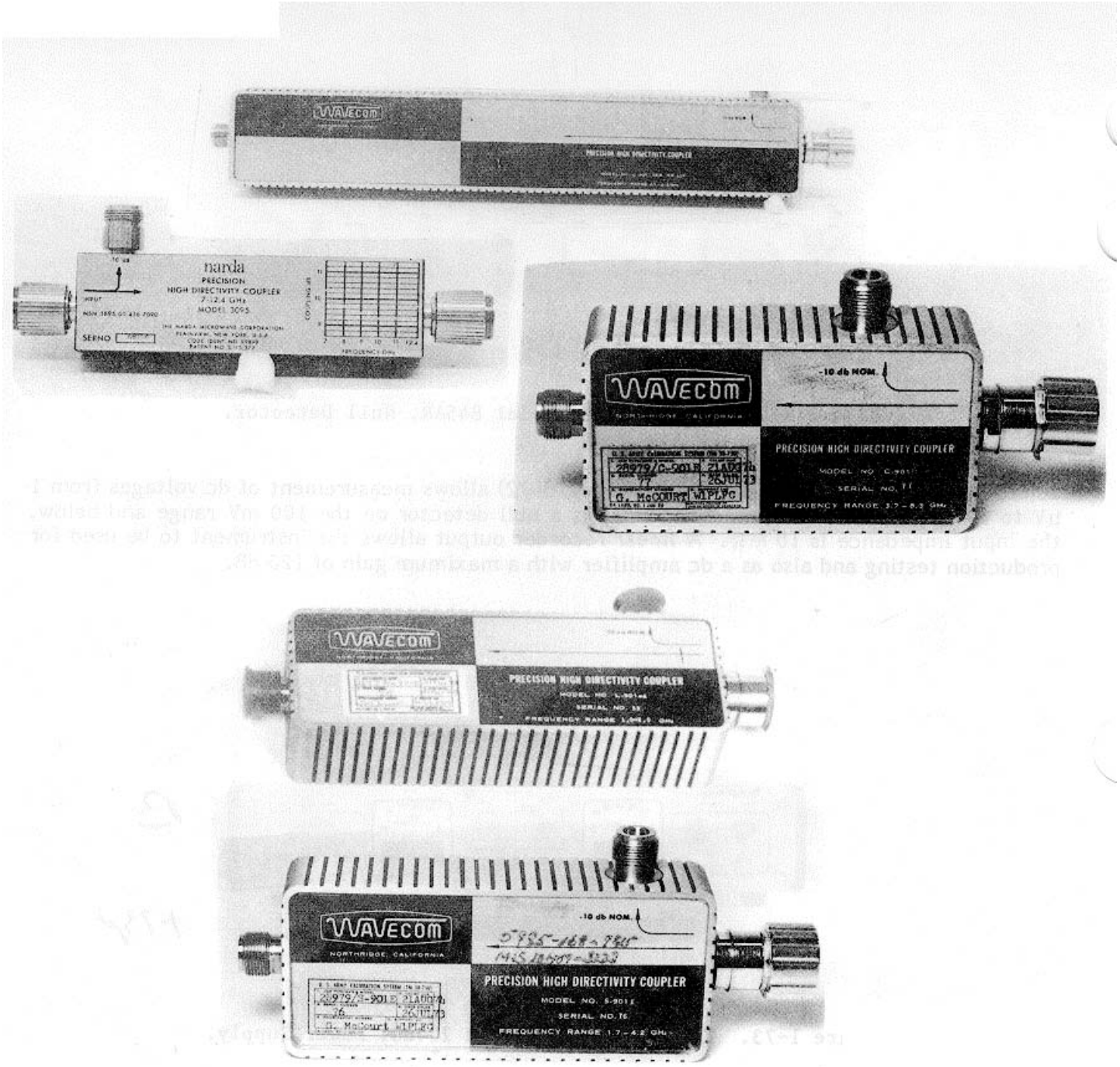


Figure 1-74. Directional Couplers.

Directional couplers (fig. 1-74) provide a means of sampling a portion of an RF signal for monitoring or measurement purposes. Both coaxial and waveguide couplers are equipped with three connectors or ports for input, output, and coupling connections.

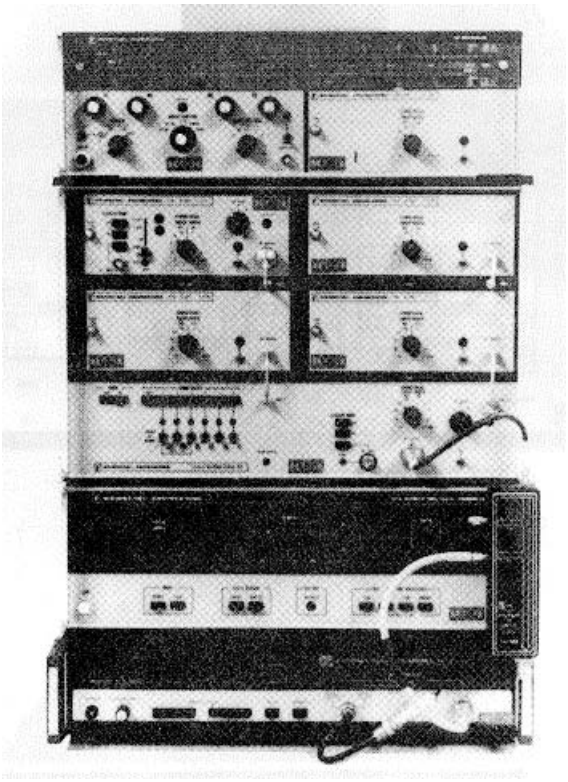


Figure 1-75. Weinschel, Model 4312 A/K-16F, Sweep Generator System.

The Weinschel, Model 4312A/K-16P, Sweep Generator System, (fig. 1-75), is capable of providing up to 10 mW of RF power in the frequency range of 10 MHz to 18 GHz. The multiband configuration (fig. 1-75) can be operated manually or in the automatic mode by BCD programs. The system has the capability to provide external leveling, pulse and square wave modulation plus programmable output attenuation. Normally the sweep generator system would not be missing the synchronizer and microwave counter. When these two items may be missing, the system can be operated in the single band configuration.

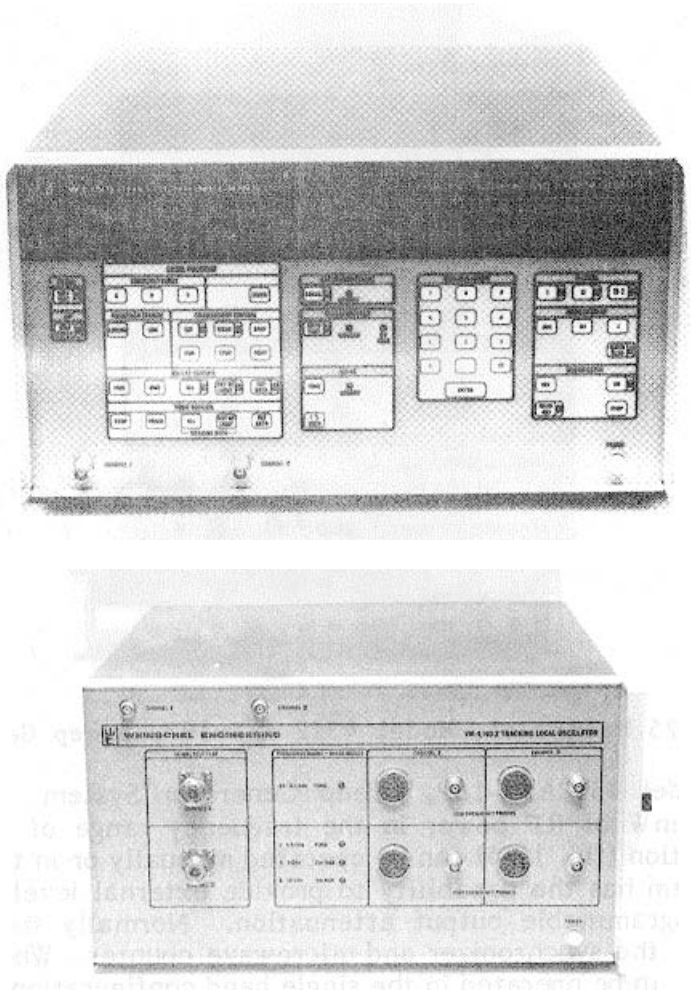


Figure 1-76. Weinschel, Model VM4A, Attenuator and Signal Generator Calibration System.

Weinschel, Model VM4A, Attenuator and Signal Generator Calibrator System (fig. 1-76), is a broad-band, dual channel vector voltmeter. The system has a frequency range of 10 MHz to 18 GHz and an attenuation range of -120 dB reference to 0 dBm. The VM-4A (fig. 1-76, item 1) contains the main microprocessor, controller subsystem, front panel keyboard and display unit. The VM-4A/HO-2 (fig. 1-76, item 2) contains the tracking oscillator, phased-locked loop subsystem and 30 MHz self-test module. When the VM4A is used with model 4312A/K-16P microwave system, it serves as the buss controller. Programming is accomplished by model VM4A front panel controls.

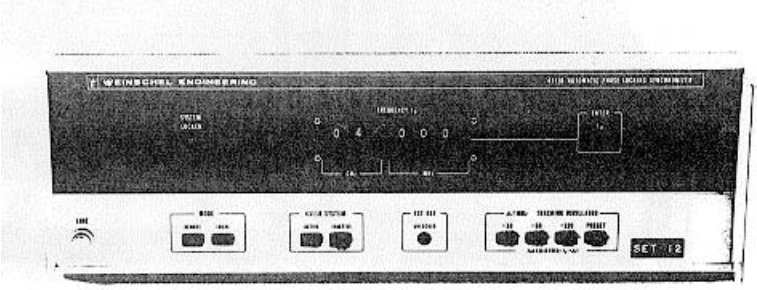


Figure 1-77. Weinschel, Model 4311B, Automatic Phase Locking Synchronizer.

Weinschel, Model 4311B, Automatic Phase Locking Synchronizer (fig. 1-77), provides the necessary control and interface functions configuring the model 4312A/ <16P, multiband microwave system. Model 4311B supplies a precise digitally controlled source of RF signals with spectral purity, low noise content, high stability, and resolution down to I MHz. Depending on the accessories used, the system can supply either unmodulated or modulated signals from 0.01 to 18 GHz. This instrument can be operated using internal or external reference frequencies.

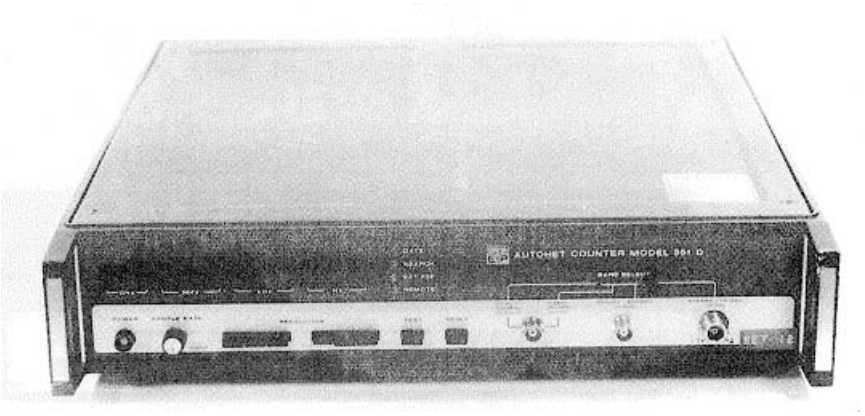


Figure 1-78. EIP, Inc., Model 351D Autohet Counter.

EIP Inc., Model, 351D, Autohet Counter (fig. 1-78), automatically measures frequency of any cw source from 20 Hz to 18 GHz. The display gives a direct readout of measured frequency over entire operating range. Leading zeros are automatically suppressed except during a no signal input condition. Four time gates are automatically selected depending upon setting of resolution switch. The input sensitivity is 25 mV rms for Band I, 40 mV rms for Band II and 12 mV rms for Band III.

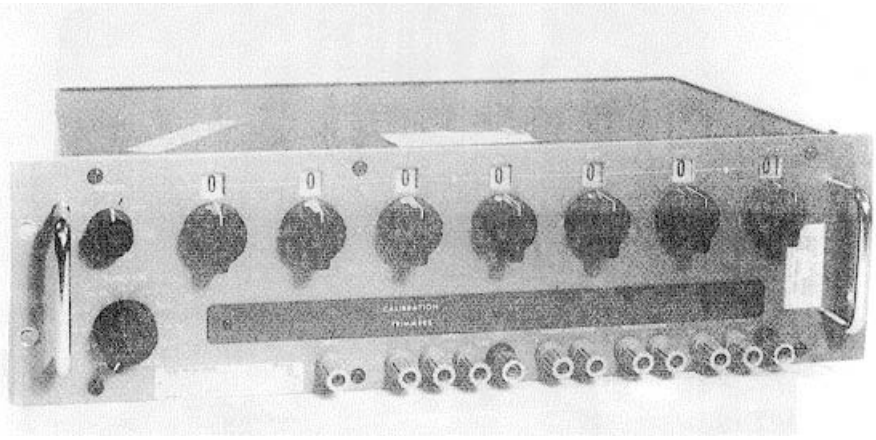


Figure 1-79. Electro Scientific Instrument, Model RV726, Decade Voltage Divider.

Electro Scientific Instrument, Model RV726, Decade Voltage Divider (fig. 1-79), is a modified Kelvin-Varley voltage divider with a built-in ratio bridge that allows extremely high linearity without comparison to the external standards. The decade dials indicate the output voltage in proportional parts of voltage applied at input terminals. Maximum input voltage is 1000 V on 1.0 input terminal or 1100 V on 1.1 input terminal. Maximum input power is 10 or 11 W on 1.0 and 1.1 input terminals respectively.

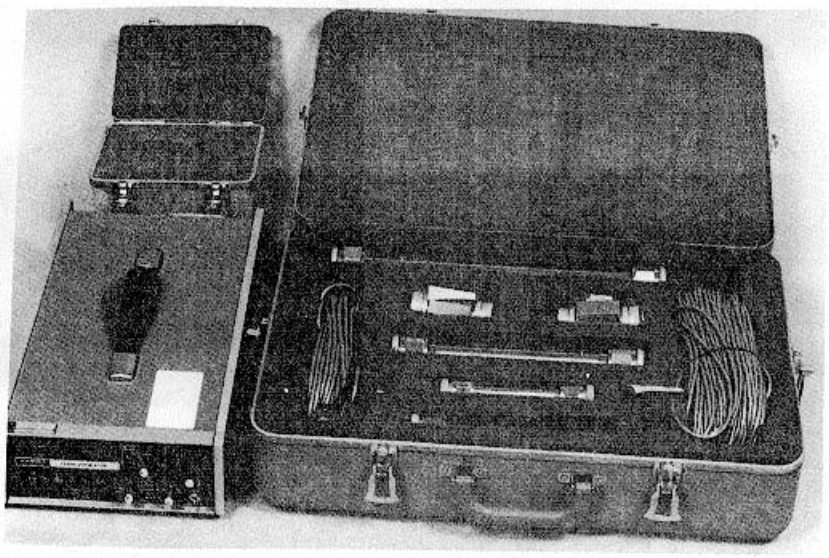


Figure 1-80. Flow Technology, Model FT-AFS-4-CF, Flowmeter Kit.

Flow Technology, Model FT-AFS-4-CF, Flowmeter Kit (fig. 1-80), is a turbine type volumetric fluid flow measuring instrument. The flowmeter kit consists of two cases; one case contains the flowmeter and accessories, the second case contains the flow indicator unit. A freely suspended bladed rotor transducer is positioned in line with the flowing fluid to sense the volume of the passing fluid. The signal from transducer is applied to the indicator unit which displays a digital readout of volumetric flow rate and accumulated total volume of fluid measured. The flow range is from 1.0 to 50 gallons per minute with a viscosity range of 0.5 to 30 centistokes.

WARNING

Water is not an acceptable fluid for use with this flowmeter kit.

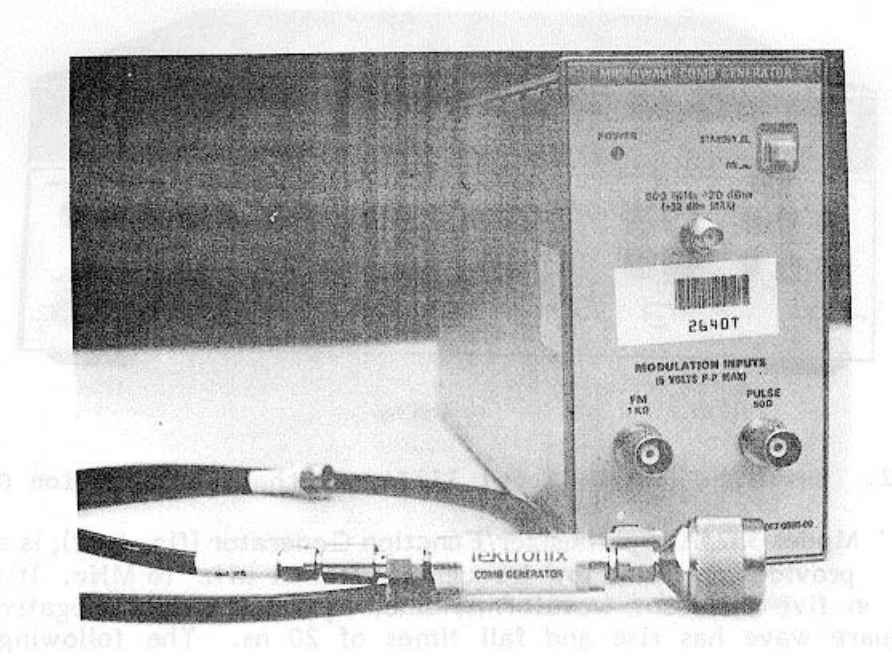


Figure 1-81. Tektronix, Type 067-0885-00, Microwave Comb Generator.

Tektronix, Type 067-0885-00, Microwave Comb Generator (fig. 1-81), is a calibration fixture for microwave spectrum analyzers. It consists of a signal source, a coaxial cable, 3 dB attenuator, and a comb generator module. The signal source is powered by a TM500 series power module. The output of signal source is applied to comb generator module via the coaxial cable. The 500 MHz signal source can be frequency or pulse-modulated externally. When the output of signal source is applied to the comb generator, a comb line (spectrum) of markers is generated, which are harmonics of fundamental 500 MHz. The crystal controlled source provides an accurate reference to check frequency readout accuracies up to 20 GHz.

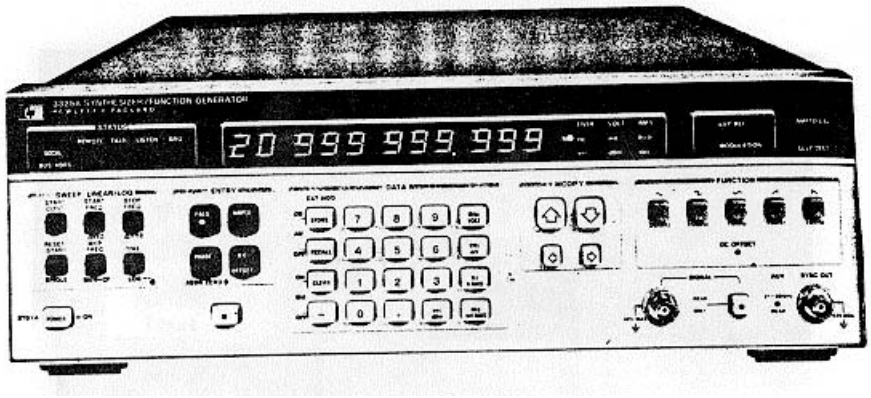


Figure 1-82. Hewlett-Packard, Model 3325A, Synthesizer/Function Generator.

Hewlett-Packard, Model 3325A, Synthesizer/Function Generator (fig. 1-82), is a programmable signal source that provides precision low frequencies from 1 μHz to MHz. It provides eleven digit resolution on five different waveforms; sine, square, triangle, negative, and positive ramps. The square wave has rise and fall times of 20 ns. The following functions are programmable: frequency, amplitude, phase, dc, offset, modulation, sweep parameters, amplitude calibration and self-test. Ten storage registers are available for programming with ten different combinations of function/parameter settings from the front panel controls, stored, and then recalled.

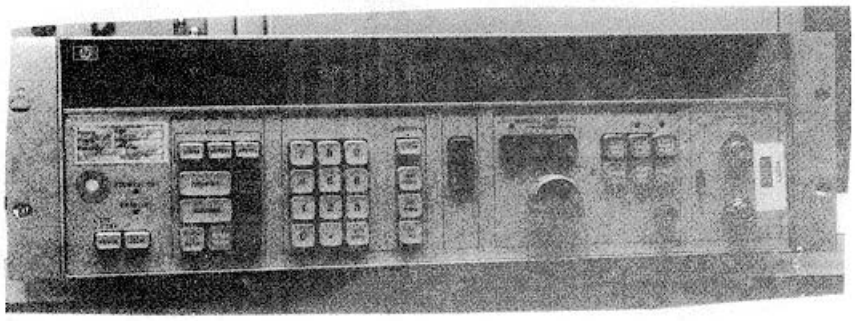


Figure 1-83. Hewlett-Packard, Model 3335A, Synthesizer/Level Generator.

Hewlett-Packard, Model 3335A, Synthesizer/Level Generator (fig. 1-83), is a wide range signal source from 200 Hz to 80 MHz with an output resolution of .001 Hz. The synthesizer/level generator is capable of making a step frequency sweep automatically or manually under operator control from the keyboard. Frequency and amplitude can be selected manually from keyboard or external when connected to Hewlett-Packard Interface Bus. The output amplitude range is from +13 dBm to -86 dBm for 50 ohms output from +11 dBm to -88 dBm for 75 ohms output.

CHAPTER 2

SERVICE UPON RECEIPT AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF THE AN/GSM-286

2-1. General. When an *AN/GSM-286/287* is received at the using organization, it is the responsibility of the officer in charge to determine whether the material has been properly prepared for service by the supplying organization and assure that it is in condition to perform its assigned mission when placed into operation. For these reasons, inspect all major units (each standard) to assure they are properly assembled and secure. Check all equipment against the packing list to assure all standards and accessories are present and not damaged. Refer to Chapter 3 for detailed inspection instructions.

2-2. Checking Unpacked Equipment

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6.

b. Check the equipment against the component listing in tables 1-2, 1-3, 1-4, and the packing list to see if the shipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 738-750. The equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

c. Check to see whether the equipment has been modified. (Equipment which has been modified will have the Modification Work Order (MWO) number on the front panel, near the nomenclature plate.) Check to see whether all currently applicable MWO's have been applied. (Current MWO's applicable to the equipment are listed in DA PAM 25-30.)

2-3. Preliminary Operational Checks. The following procedures describe the preliminary operation checks for the AN/GSM-286/287. To avoid improper operation or possible equipment damage, personnel should become familiar with the preliminary operating procedures and the various controls and indicators on each instrument before putting the individual standards into operation. All preliminary and operating procedures for the calibration van and vehicle are contained in TM 9-2320-260-10.

a. ANIGSM-286/287 (Electrical) Preliminary Operating Procedures

(1) Prior to applying power to the equipment van, assure all equipment switches are in the "OFF" position.

CAUTION

As a safety precaution to equipment, all output producing instruments should be set to the lowest range, unless otherwise specified by individual operating procedures for that instrument.

(2) After power has been applied to the equipment, observe the equipment for a short period of time (1 to 2 minutes) for blown fuses or short circuits.

(3) Operational checks for performance should be made on initial operation for all standards. Thereafter, the instrument should be checked for operational performance at the time it is to be used, or at intervals established by internal operating procedures (IOP).

(4) Refer to individual instrument manuals when detailed operating instructions are necessary.

b. AN/GSM-286/287 (Physical) Preliminary Operating Procedures ,

(1) Assure that mounting plate for torque calibrators is positioned on a solid, level bench top prior to use.

(2) Prior to making any pressure vacuum measurements, assure that all fittings, hoses, coupling, etc., are securely connected and free from leaks.

2-4. Periodic Checks

a. Depending upon the type of equipment to be supported, some AN/GSM-286/287 standards will be utilized more than others. In the absence of IOP's, any standard that has not been used in a 14-calendar day period should be given an operational check to assure reliability and that the instrument is still in good operating condition.

b. Some standards must maintain accuracy specifications at or near maximum accuracy capability because of their use requirements. These standards should be checked each day they are used.

Section II. OPERATING INSTRUCTIONS

2-5. Operating Instructions

a. Operating instructions for individual standards are not contained in this manual. The AN/GSM-286/287 contains an operating and maintenance manual for each individual standard. The operator should refer to the appropriate manual when detailed operating instructions are required.

b. Instructions on operation of the vehicle and expandable van are contained in TM 9-2320-260-10.

c. Operating instructions for the power tail gate are contained in the manufacturer's pamphlet on the tail gate. The manufacturer's pamphlet will be retained with the vehicle.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

Section I. PREVENTIVE MAINTENANCE SERVICES

3-1. General. The purpose of preventive maintenance is to detect the first signs of electrical and mechanical failures, and to ensure that appropriate corrective action is taken before expansive and time-consuming repairs or replacements are required. This system is based on frequent inspections and services accomplished by operators or maintenance personnel under active supervision by all commanders and supervisors.

3-2. Responsibility. Operators and team chiefs are personally responsible for assigned materiel. Unit and organization commanders are required to ensure that materiel issued or assigned to their commands is properly maintained in a serviceable condition and is properly cared for and used.

3-3. Intervals. The principal criteria for determining the frequency of preventive maintenance services are operating hours and road movement. Since these cannot be accurately predicted, these intervals should be established in an IOP. Operating under adverse conditions such as extreme temperature or inclement weather may require that preventive maintenance services be performed more frequently. Reduce the intervals when environmental conditions indicate the need. Do not exceed the intervals unless authorized to do so.

3-4. General Procedures for all Services and Inspections

a. The following general procedures apply to preventive maintenance services and to all inspections, and are just as important as the specific procedures.

b. Inspections to see if items are in good condition, correctly assembled or stored, secure, not excessively worn, not leaking, and adequately lubricated apply to most items in the preventive maintenance and inspection procedures. Any or all of these checks that are pertinent to any item (including supporting, attaching, or connecting members) will be performed as general procedures, in addition to any specific procedures given.

(1) Inspection for good condition is usually an external visual inspection to determine whether the unit is damaged beyond safe or serviceable limits. Good condition is explained further as meaning not bent or twisted, not chafed or burred, not broken or cracked, not bare or frayed, not dented or collapsed, not torn or cut, and not deteriorated.

(2) Inspection of a unit to see that it is correctly assembled or stowed is usually a visual inspection to see if the unit is in its normal position in the materiel and if all its parts are present and in their correct relative position.

(3) Inspection of a unit to determine if it is secure is usually an external visual examination or a check by hand or wrench for looseness. Such an inspection must include any brackets, lockwashers, locknuts, locking wires, or cotter pins as well as any connecting tubes, hoses, or electrical cables.

(4) Excessively worn means worn beyond serviceable limits or to a point likely to result in failure if the unit is not replaced before the next scheduled inspection. Excessive wear of mating parts or linkage connection is usually evidenced by too much play (lash or lost motion). It includes illegibility as applied to markings, data and caution plates, and printed matter.

(5) Such expressions as “adjust if necessary” or “replace if necessary” are not used in the specific procedures. It is understood that whenever inspection reveals the need of adjustment, repair or replacement, the necessary action will be taken.

3-5. Daily Preventive Maintenance Services. The daily preventive maintenance service is a systematic inspection of any instrument or item each day it is operated and after each time it is emplaced so that defects may be discovered and corrected before they result in serious damage or failure. This service is performed by the operator. Any defects noted, beyond scope of the operator to correct, will be reported immediately to the supervisor.

3-6. Other Scheduled Maintenance Service. Scheduled calibration of AN/GSM-286/287 components will be controlled by the "Recall System." Scheduled maintenance, other than operator maintenance, for vehicles and power generators will be coordinated by team chief with maintenance supervisors at motor pools and generator shops. Refer to TM 9-2320-260-10 for operator's instructions regarding the M820A2 vehicle.

Section II. MAINTENANCE INSTRUCTIONS

3-7. General. This section contains information regarding methods for determining the degree of maintenance required on the AN/GSM-286/287 equipment.

3-8. Methods

a. Preventive Maintenance. 1 Preventive maintenance is action taken by the operator of equipment to attempt to prevent repair from becoming necessary by making periodic visual checks and inspection of equipment in order to detect physical irregularities in equipment.

b. Cross Check.1 A method of detecting change in equipment that may establish trends and assist in the prevention of usage of out-of-tolerance equipment for performance of calibration. By use of the cross check method, the technician can ascertain whether further maintenance service is required.

c. Calibration.1 The comparison of an instrument of unverified accuracy to an instrument of known accuracy to correct any discrepancy in the accuracy of the unverified instrument. Through the calibration process the technician can determine if repair efforts will be necessary.

3-9. Maintenance Allocation Chart (MAC)

a. The MAC (appendix B) contains explanations of all maintenance and repair functions authorized for the various echelons. The maintenance functions are assigned to the lowest available maintenance category based on the following conditions:

(1) Skills available.
(2) Time required.
(3) Tools and equipment authorized.
(4) Repair parts available.

b. Maintenance should be performed in accordance with the appropriate TM, TB, or Manufacturer's Manual. Repair parts and special tools lists available as Department of the Army publications for selected items of AN/GSM-286/287 equipment are listed in appendix A with a cross reference to the manufacturer's model number. Coverage for items of equipment not listed is provided in the manufacturer's manual. The manufacturer's manuals also contain theory of operation and calibration instructions as well as detailed schematic diagrams to be used as an aid in troubleshooting and repair functions.

[1]Because of the multiple use application of individual instruments, test hookups, pictorial presentations and operating instructions are not given in this manual. These instructions and presentations are not contained in the individual instrument manuals and technical bulletins supplied with the AN/GSM-286/287.

Section III. INSPECTION OF AN/GSM-286

3-10. Scope. This section provides specific instructions for the technical inspection of the AN/GSM-286/287 either by maintenance (calibration) personnel of the calibration team or when received for repair in shops. This section also defines the in- process inspection of materiel during repair or overhaul and the final inspection after repair and overhaul have been completed. Appropriate manufacturer's information is incorporated in the troubleshooting and repair manuals for the standards and is a normal phase of inspection.

3-11. Purpose of Inspection. Inspection is primarily for the purpose of (1) determining the condition of an item; i.e., serviceable or unserviceable, (2) recognizing conditions which would cause failure, (3) assuring proper application of maintenance policies at prescribed levels, and (4) determining the ability of a unit to accomplish its maintenance and calibration mission.

3-12. Categories of Inspection. There are four categories of inspection performed by maintenance personnel.

a. Overall Technical Inspection. This inspection is performed periodically on all materiel by the calibration team while the item is in operation or being maintained. It ensures that the item is in serviceable condition and is being maintained properly. This inspection is to be performed, using standards and techniques prescribed in the operation and maintenance manuals, to the manufacturer's specification. Detailed procedures are presented in paragraphs 3-14 through 3-16 below.

b. In-process Inspection. This inspection is performed by the repair technician in the process of repairing or overhauling the materiel and its components. It ensures that all parts conform to prescribed standards, that workmanship is in accordance with approved methods and procedures, and that deficiencies not disclosed by the technical inspection are found and corrected.

c. Final Inspection. This is an acceptance inspection performed by a final inspector after repair or overhaul has been completed to ensure that materiel is acceptable according to established standards.

d. Spot-Check Inspection. This inspection will be performed on the item by calibration and maintenance personnel at any time deemed necessary to ensure that the item meets all established standards and requirements.

3-13. Classification of Materiel. All materiel, after inspection, is classified as follows:

a. Serviceable. Serviceable property consists of all new or used supplies which are in condition for issue for the purpose intended and all supplies which can be placed in such condition through pre-issue tests or inspections, in-storage deprocessing, installation of accessories, correction of minor deficiencies which have developed since the item was classified as serviceable, application of modification work orders for which parts are available, or assembly of available components.

b. Unserviceable. Unserviceable property consists of all supplies which are not serviceable. The definition of unserviceable property is further broken down into the following subclassifications: Property which is unserviceable but economically repairable, and property which is unserviceable and not economically repairable.

3-14. Technical Inspection of AN/GSM-286/287

a. General. Technical inspection of the AN/GSM-286/287 will be conducted by maintenance personnel. The AN/GSM-286/287 may be considered serviceable when all defects disclosed by the inspection have been corrected, all modification work orders classified as urgent have been completed, and the AN/GSM-286/287 is complete and performs its intended function properly.

(1) Forms and reports. For authorized forms and reports refer to paragraph 1-3 above. Preventive maintenance logs, if available, will be examined to determine the general maintenance background of the materiel. A record of progressive repairs may indicate a defective unit, while a record of regular preventive maintenance may indicate the unit is in excellent condition.

(2) Modification work orders. Check to ensure that unauthorized alterations have not been made and that no work beyond the authorized scope of the unit is being attempted.

b. Inspection of Mechanical Components

(1) Completeness. Examine all components and accessories thoroughly to ensure that the AN/GSM-286/287 is complete.

(2) Appearance. The overall appearance of the item is an indication of its general condition and the type of treatment it has received. Examined the item to ensure that there are no dented surfaces, bent or broken parts, and other evidence of damage or misuse which might indicate a need for repair.

(3) Nameplate, charts, and indexes. Inspect the item to ensure that scale numbers, charts, divisions and indexes, and lettering on cautions, directions, and nameplates are clearly defined and easily read.

(4) Paint and finish. Inspect the item for damaged finish, which exposes bare metal surfaces and may permit corrosion and spot paint as required. If the finish is in serious need of repair, take corrective action to prevent corrosion and if necessary, return the item to a depot for refinishing.

(5) Lubrication. All assemblies and parts requiring lubrication should be lubricated and operating properly. Refer to appropriate manufacturer's manuals for lubrication instructions.

c. Inspection and Electronic Components

(1) Cables and Wires

(a) Mounting clamps should be securely attached to pins or terminals and hold cables and wires firmly without pinching.

(b) Wiring should not be broken or kinked, or have sharp bends.

(c) Insulation should be free from breaks, cracks, tears, cuts, abrasions, oil, grease, burns, and fungus growth and should not be broken or pulled loose from connections.

(d) Lacing should be tight, neat, and not broken or frayed.

(e) Insulation sleeving, wire, and cable markers should be present and legible.

(2) Fuses. Fuses should be securely installed, not blown, and must be of the correct type and ampere rating.

(3) Indicator Lights and Lamps

(a) The correct light or lamp should be installed, securely sealed, and not broken.

(b) The protective glass or cap should be securely seated and not broken or cracked.

(4) Control Knobs

(a) Control knobs should be securely attached to their respective shafts.

(b) Knobs should not be broken, cracked, or chipped.

(c) Knobs should operate smoothly in all directions.

(5) Meters

(a) Meters should be securely installed.

(b) Windows should not be broken, cracked, scratched, or discolored. © Pointers should not be broken or bent and should be resting at a zero-reference mark.

(6) Dials and micrometer indexes

(a) Dials and micrometer indexes should be securely attached to their respective shafts.

(b) Dials and micrometer indexes should not be broken, cracked, or chipped.

(c) Dials and micrometer indexes should operate smoothly in all directions. (d) Lettering and other markings should be clear, easily read and free from obstruction.

(7) Rotary switches

(a) Rotary switches should be securely installed.

(b) Controls should be securely attached to the shafts and should not be broken, cracked, or chipped.

(c) Rotary switches should operate freely in all directions.

(d) Indexes should be alined at all positions of the switch.

(8) Toggle switches

(a) Toggle switches should be securely installed.

(b) Toggle switches should operate smoothly in all positions. © External contacts should be clean and free of foreign matter.

(d) Lettering on switches should be legible.

(9) Electron tubes

(a) The correct types of tubes should be installed, securely seated, and firmly held in the socket or mount.

(b) Tubes should not be broken or cracked.

(c) Envelopes should not be loose or warped.

(d) Tube pins should not be broken or bent.

(e) Tubes should be clean and free of foreign matter.

(10) Electronic tube sockets and mounts.

(a) Electronic tube sockets and mounts should be securely installed.

(b) Tube sockets and mounts should not be broken, cracked, or chipped.

(11) Fans and filters

(a) Inspect the filters and fan in accordance with the manufacturer's manual or appropriate TM.

(b) Filters should be cleaned as described in the appropriate publication.

(c) Check fan blades for accumulated debris.

(12) Operational performance check

(a) Visually inspect the item and its components to ensure that every component requiring calibration has a calibration label verifying its accuracy, and that the calibration period specified on the label has not expired.

(b) Ensure that the item is operating properly, using the techniques prescribed in the manufacturer's handbook, as appropriate.

CHAPTER 4
SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

4-1. Repackaging for Shipment or Limited Storage. The exact procedure for repackaging depends on the materials available, the type of equipment to be packaged, and the conditions under which the equipment is to be shipped or stored. Refer to TM 38-230-1 for instructions covering packaging for shipment and storage of AN/GSM-286/287 electrical and physical equipment.

Section II. DEMOLITIAN OF MATERIAL

4-2. Authority for Demolition. The demolition procedures given in paragraph 4-3 below will be used to prevent the enemy from using or salvaging this equipment. Demolition of the equipment will be accomplished only upon order of the Commander.

4-3. Methods of Destruction. The tactical situation and time available will determine the method to be used when destruction of equipment is ordered. In most cases, it is preferable to demolish completely some portions of the equipment rather than partially destroy all the equipment units.

a. Smash. Use sledges, axes, hammers, and similar tools to smash meters, control panels, and indicators.

b. **Cut**. Use axes, machetes, hatchets, and similar tools to cut wiring, cording, and cabling.

WARNING

Be extremely careful with explosives and incendiary devices. Use these only when the need is urgent.

c. Burn. Use gasoline, kerosene, flame throwers, or incendiary granades to burn cords, cables, spare parts, literature, etc.

d. Explode. Use firearms, grenades, powder charges, or explosive compounds to demolish equipment where feasible or necessary.

e. Dispose. Scatter or bury destroyed parts or throw them in waterways, if possible.

APPENDIX A
REFERENCES

A-1. Publication Indexes. The following indexes should be consulted frequently for latest changes or revisions of references given in this appendix and for new publications relating to material covered in this manual:

Index of administrative publications (regulations, circulars, pamphlets, posters, Joint Chiefs of Staff publications,. DOD and miscellaneous publications	DA Pam 25-30
Military publications: U.S. Army equipment index of modification work orders	DA Pam 210-1

A-2. Supply Catalog. The following Department of the Army Supply Catalog is pertinent when destroying materiel to prevent enemy use:

Ammunition and explosives (class 1375 explosives, solid propellants, explosive devices)	SC 1340/98-IL

A-3. Repair Parts and Special Tools List

John Fluke 760A	TM 9-6625-1420-34P
Hewlett-Packard 400EL211B	TM 9-6625-047-34P
Hewlett-Packard E 12-432A	TM 9-6625-1935-34P
Hewlett-Packard 8640B001	TM 9-4931-488-34P
Hewlett-Packard C38-214A	TM 9-6625-1176-34P
Hewlett-Packard 3490A060	TM 9-6625-1942-34P
General Radio WlOMT3AS3	TM 9-4931-487-34P
Simpson 260-6	TM 9-4931-487-34P
NJE CS36CR30-D	TM 9-4931-487-34P
Mansfield-Green 10-10525	TM 9-4931-487-34P
Hewlett-Packard 355C, 350D	TM 9-4931-487-34P
ARCO Electronic SS-32	TM 9-4931-700-34P
B&K Electronic 520B	TM 9-4931-700-34P
Ballantine 1394	TM 9-4931-700-34P
Beckman CRIOM	TM 9-4931-700-34P
Beckman CR1 OOM	TM 9-4931-700-34P
Beckman CRIOOOM	TM 9-4931-700-34P
Biddle 601147-1	TM 9-4931-700-34P
Biddle 71-311	TM 9-4931-700-34P
Biddle 71-650	TM 9-4931-700-34P
BLH 8200	TM 9-4931-700-34P
EIP 351D	TM 9-6625-1974-34P
Electro Scientific Inc., PC874	TM 9-4931-700-34P
Electro Scientific Inc., RV722	TM 9-4931-700-34P
Electro Scientific Inc., 290B	TM 9-4931-700-34P
Electro Scientific Inc., 801MOD	TM 9-4931-700-34P
Elgar 6006B( )	TM 9-4931-700-34P
Federal 400B-1	TM 9-4931-700-34P

Guildline 9711	TM 9-4931-700-34P
Hewlett-Packard 214B	TM 9-5985-315-34P
Hewlett-Packard 3490A	TM 9-6625-1942-34P
Hewlett-Packard 350D	TM 9-4931-700-34P
Hewlett-Packard 355C	TM 9-4931-700-34P
Hewlett-Packard 400EL	TM 9-6625-047-34P
Hewlett-Packard 5345A	TM 9-4931-509-34P
Hewlett-Packard 7035B	TM 9-4931-700-34P
Hewlett-Packard 8477A	TM 9-4931-700-34P
Hewlett-Packard 8640B	TM 9-4931-488-34P
Hewlett-Packard 8900B	TM 9-4931-480-34P
1Holt 250	TM 9-4931-700-34P
John Fluke 540B	TM 9-4931-700-34P
John Fluke 760A	TM 9-6625-1420-34P
John Fluke 80E10	TM 9-4931-700-34P
1<EPCO HB525M20480	TM 9-4931-700-34P
< rohn-Hite 7500	TM 9-6695-260-34P
Ridge 9020F	TM 9-4931-700-34P
Tracor 543	TM 9-4931-700-34P
Tracor 599<	TM 9-6625-2090-34P
Weinschel VM4A	TM 9-4931-526-34P

A-4. Forms

The following forms pertain to this materiel:

Materiel inspection tag	
Request for issue or turn-in	DA Form 2765
Materiel inspection and receiving report	DD Form 250
Discrepancy in shipment report	SF 361
Report of discrepancy	SF 364
Quality deficiency reports	SF 368
Exchange tag	DA Form 2402
Recommended changes to publications and blank forms	DA Form 2028
Maintenance request	DA Form 2407
Calibration data	DA Form 2416
Unserviceable or limited use	DA Form 2417

A-5. Other Publications

a. Safety

WARNING

Do not attempt to pack, store, ship, or destroy radioactive materials without consulting the local CBR office for instructions and assistance.

Safety color code markings and signs	AR 385-30
Disposal of unwanted radioactive material	AR 385-11
Safety precautions for maintenance of electrical/electronic equipment	TB 385-4
Chemical, biological, and radiological (CBR) decontamination	F M 3-5

b. Electronics

Basic theory and application of electron tubes	FM 11-63
Cathode-ray tubes and their associated circuits	TM 11-671
Direct support and general support maintenance repair parts and special tools list for selected items of calibration standard sets: secondary transfer (NSN 6695-00-621-7877) and secondary reference (NSN 4931-00-621-7878)	TM 9-4931-700-34P
Electronic power supplies	FM 11-62

c. Destruction to Prevent Enemy Use

Explosives and demolitions	FM 5-25

d. General

Accident reporting and records	AR 385-40
Authorized abbreviations and brevity codes	AR 310-50
Dictionary of United States Army terms (Short title: AD)	AR 310-25
Requisitioning, receipt, and issue system	AR 725-50
First aid for soldiers	FM 21-11
Military symbols	FM 101-5-1
The Army maintenance management system	DA Pam 738-750
Operator's manual for truck, chassis: 5-ton, 6x6, M809, M809A1, M810, M811, M811A1, M811A2, M812, M812A1; truck, cargo: 5-ton, 6x6, M813; truck, cargo: 5-ton, 6x6, M814; truck, bolster: 5-ton, 6x6, M815; truck, wrecker, medium, 5-ton, 6x6, M816; truck, dump: 5-ton, 6x6, M817; truck, tractor: 5-ton, 6x6, M818; truck, tractor, wrecker: 5-ton, 6x6, M819; truck, van: expansible, 5-ton, 6x6, M820, M820A 1, M820A2; truck, stake: bridge transporting, 5-ton, 6x6, M821	TM 9-2320-260-10
Spectacles, industrial, and lenses (opthalmic, plane and prescription, glare and impact resistant)	Fed spec GGG-S-620

e. Maintenance

Army metrology and calibration systems	AR 750-25
Desiccants, activated, bagged, packaging use, and static dehumidification	MIL-D-3464C
Finishing of metal and wood surfaces	MIL-STD-171B
Materials used for cleaning, preserving, abrading, and cementing ordnance materiel; and related materials including chemicals	TM 9-247
Preservation, packaging, and packing of military supplies and equipment, preservation and packaging (volume 1)	TM 38-230-1

APPENDIX B
MAINTENANCE ALLOCATION CHART (MAC)

B-1. General. This appendix provides a summary of the maintenance operations covered in the equipment literature. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

B-2. Maintenance Functions. Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. Maintain within prescribed limits by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

e. Aline. To adjust specified variable elements of an item to about optimum or desired performance.

f. Calibrate. To determine necessary corrections and cause corrections to be made on, or to adjust instruments or test measuring and diagnostic equipment used in precision measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of em placing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. The act of substituting a serviceable like part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module/component/assembly, end item or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (e.g., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipment/components.

B-3. Explanation of Format

a. Group Number. Column I lists group numbers, whose purpose is to match components, assemblies, subassemblies, and modules with the next higher assembly.

b. Functional Group. Column 2 lists the next higher assembly group and the item names of components, assemblies, subassemblies, and modules within the group for which maintenance is authorized.

c. Maintenance Functions. Column 3 lists the maintenance functions defined in paragraph B-2 above.

d. Maintenance Category. Column 4 lists the level of each maintenance function required for an item and the time required to perform that task as defined in subparagraph e below.

e. Work Measurement Time. The active repair time required to perform the maintenance function is included directly below the level responsible for the appropriate maintenance function. The skill levels used to obtain the measurement times approximate those found in typical TOE units. Active repair time is the average aggregate time required to restore an item (subassembly, assembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, fault isolation/diagnostic time, and QA/QC time in addition to the time required to perform specific maintenance functions identified for the tasks authorized in the maintenance functions identified for the tasks authorized in the maintenance allocation chart. This time is expressed in man-hours and carried to one decimal place (tenths of hours).

f. Tools and Equipment. This column is used to specify, by code, those tools and equipment required to perform the designated function.

APPENDIX B
SECTION II

Maintenance Category 1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0010	Decade resistor	Inspect			.2			1
	336	Test			.5			1
		Repair			1.0			1
0020	Multimeter	Inspect			.2			2
	260-7	Test			1.0			2
	Calibrate				2.0			2
	Repair				2.0			2A
0030	Signal generator	Inspect			.5			3
	18500B	Test			1.0			3
	Aline				3.0			3
	Repair				5.0			3
0040	Variable attenuator	Inspect			.2			4
	355C	Test			.5			4
		Calibrate			1.0			4
		Repair			2.0			4A
0050	Coaxial converter	Inspect				2		5
	1394 set	Test				5		5
	Calibrate					2.0		5
	Repair					1.5		5A
0060	Phase compensator	Inspect			.2			6
	PC874	Test			.5			6
	Repair				1.0			6
0070	Calibration ammeter	Inspect				.5		7
	250	Test				1.0		7
		Calibrate				2.5		7
		Repair				3.0		7A
0080	Variable attenuator	Inspect			.2			8
	350D	Test			.5			8
		Calibrate			1.0			8
		Repair			2.0			8A
0090	Square wave	Inspect			.2			9
	generator	Test			1.0			9
	211B	Calibrate			2.0			9
	Repair				2.0			9A
0100	Generator detector	Inspect			.5			10
	801MOD	Test			1.0			10
	Repair				2.5			10

See footnote at end of Appendix.

Maintenance Category1

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0110	OMEGA gating unit 543	Inspect			.3			11
		Test			.5			11
		Repair			2.5			11
0120	Decade resistor 71-631	Inspect				.5		12
		Test				1.0		12
		Calibrate				2.0		12
		Repair				3.0		12
0130	Pulse generator 214B	Inspect			.5			13
		Test			.5			13
		Calibrate			2.0			13
		Repair			2.0			13A
0140	Standard resistance CR1OOOM	Inspect			.2			14
		Test			.2			14
		Calibrate			1.0			14
		Repair			1.5			14A
0150	Signal generator 8640B	Inspect			.5			15
		Test			1.0			15
		Calibrate			2.5			15
		Repair			4.0			15A
0160	Power meter E12-432A	Inspect			.5			16
		Test			.5			16
		Calibrate			2.0			16
		Repair			2.0			16A
0161	Thermistor mount 478A	Inspect			.2			17
		Test			.5			17
		Calibrate			1.0			17
		Repair			2.0			17A
0170	Instrument shunt 9711A	Inspect				.5		18
		Test				1.0		18
		Calibrate				2.5		18
		Repair				3.5		18A
0180	Voltage divider 80E10AN	Inspect			.5			19
		Test			1.0			19
		Calibrate			1.0			19
		Repair			2.0			19A
0190	Standing wave ratio meter 415E	Inspect			.2			20
		Test			.5			20
		Calibrate			1.0			20
		Repair			2.0			20A

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0200	Variable capacitor 1422D	Inspect				.2		21
		Test				.5		21
		Calibrate				2.5		21
		Repair					4.0	21A
0210	Resistance bridge 230B	Inspect			.5			22
		Test			1.0			22
		Calibrate			2.5			22
		Repair			4.0			22A
0220	Capacitance standard SS-32	Inspect				.5		23
		Test				1.0		23
		Calibrate				3.0		23
		Repair				4.0		23A
0230	Impedence bridge 290B	Inspect			.5			24
		Test			1.0			24
		Calibrate			2.0			24
		Repair			2.0			24A
0240	Thermal voltmeter 540B	Inspect				.5		25
		Test				1.0		25
		Calibrate				2.0		25
		Repair				4.0		25A
0250	Tachometer calibrator 650A	Inspect			.2			26
		Test			.5			26
		Repair			2.0			26
0260	Flow rate meter FT-AFS4CF	Inspect				.5		27
		Test				2.0		27
		Calibrate				4.0		27
		Repair					3.0	27
0270	Voltmeter 410C	Inspect			.2			28
		Test			.5			28
		Calibrate			2.0			28
		Repair			2.0			28A
0280	Test oscillator 652A	Inspect			.5			29
		Test			.8			29
		Calibrate			2.0			29
		Repair			4.0			29A
0290	Power supply CS36CR30	Inspect			.5			30
		Test			1.0			30
		Repair			3.0			30

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0300	Power supply 410B/AT	Inspect			.5			31
		Test			.5			31
		Calibrate			2.0			31
		Repair			2.5			31A
0310	Fluid separator 534-2	Inspect			.2			32
		Test			1.0			32
		Repair			2.0			32
0320	Meter calibrator 760A	Inspect			.5			33
		Test			1.0			33
		Calibrate			3.0			33
		Repair			4.0			33A
0330	Pressure gage tester 10-10525	Inspect			.2			34
		Test			.5			34
		Calibrate			2.0			34
		Repair			2.0			34A
0340	Digital voltmeter 3490A	Inspect			.5			35
		Test			.5			35
		Calibrate			1.5			35
		Repair			4.0			35A
0350	Frequency counter 5345A	Inspect			.2			36
		Test			. 5			36
		Calibrate			2.0			36
		Repair			2.0			36A
0351	Frequency converter 5257A	Inspect			.2			37
		Test			.5			37
		Repair			2.0			37A
0352	Video amplifier 5261A	Inspect			.5			38
		Test			.5			38
		Repair			2.0			38A
0360	Amplifier 7500	Inspect			.2			39
		Test			.5			39
		Calibrate			2.0			39
		Repair			2.5			39A
0370	Distortion analyzer C41-334A	Inspect			.2			40
		Test			.5			40
		Calibrate			2.0			40
		Repair			4.0			40A

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0380	High voltage amplifier C90-746A	Inspect			.2			41
		Test			1.0			41
		Calibrate				3.0		41
		Repair				2.6		41A
0390	Ac calibrator 745AOPTC93	Inspect			.2			42
		Test			1.0			42
		Calibrate				4.0		42
		Repair				3.5		42A
0400	Differential voltmeter 887AB/AN	Inspect			.2			43
		Test			.5			43
		Calibrate			2.0			43
		Repair			2.5			43A
0410	Dc voltage divider < DV4	Inspect			.5			44
		Test			.5			44
		Repair			2.0			44
0420	Voltage standard 332BAF	Inspect			.5			45
		Test			1.0			45
		Calibrate				3.0		45
		Repair				4.5		45A
0430	Signal generator 145	Inspect			.2			46
		Test			.5			46
		Calibrate			2.0			46
		Repair			2.5			46A
0440	Oscilloscope 5440	Inspect			.5			47
		Test			1.0			47
		Calibrate			2.5			47
		Repair			3.5			47A
0441	Dual trace amplifier 5A48	Inspect			.2			48
		Test			.5			48
		Calibrate			2.0			48
		Repair			2.0			48A
0442	Differential amplifier 5A 13N	Inspect			.2			49
		Test			.5			49
		Calibrate			2.0			49
		Repair			2.0			49A
0443	Time base 5B42	Inspect			.2			50
		Test			.5			50
		Calibrate			2.0			50
		Repair			2.5			50A

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0444	Sweep sampler 5S14N	Inspect			.3			51
		Test			1.0			51
		Calibrate			2.0			51
		Repair			3.5			51A
0450	Ignition simulator 7916123	Inspect		.2				51
		Test		.5				51
		Repair			2.0			51
0460	Generator detector 865A	Inspect			.2			52
		Test			.5			52
		Repair			2.0			52
0470	Frequency meter 527E	Inspect			.2			53
		Test			.5			53
		Calibrate				2.0		53
		Repair				2.0		53A
0480	Quartz oscillator 105A	Inspect			.2			54
		Test			1.0			54
		Repair				2.5		54
0490	Multimeter DM501OPT02	Inspect			.2			55
		Test			.5			55
		Calibrate			2.0			55
		Repair			1.5			55A
0500	Oscilloscope calibrator 6126M	Inspect			.5			56
		Test			1.0			56
		Calibrate			2.0			56
		Repair			3.5			56A
0510	Oscillator 4100AR-8	Inspect			.2			57
		Test			.5			57
		Calibrate			2.0			57
		Repair			2.0			57A
0520	Standard receiver 599K<	Inspect			.5			58
		Test			1.0			58
		Aline			1.5			58
		Repair				3.0		58
0530	Voltage regulator 6006B-()	Inspect			.2			59
		Test			.5			59
		Repair			2.0			59
0540	Variable autotransformer 9020F	Inspect			.2			60
		Test			.5			60
		Calibrate			1.0			60
		Repair			1.5			60A

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0550	Voltmeter 400EL	Inspect			.2			61
		Test			.5			61
		Calibrate			2.0			61
		Repair			2.0			61A
0560	True rms voltmeter 8922A	Inspect			.2			62
		Test			.5			62
		Calibrate			2.0			62
		Repair			2.5			62A
0570	Pressure accessory kit 7913310	Inspect			.5			63
		Repair			1.0			63
0580	Dial indicator calibrator 400B1	Inspect			.2			64
		Test			.5			64
		Calibrate				1.5		64
		Repair				2.0		64A
0590	Load cell indicator 8200B	Inspect			.2			65
		Test			.5			65
		Calibrate				2.0		65
		Repair				2.5		65A
0600	Pneumatic pressure standard MIS-30859	Inspect			.2			66
		Test			1.0			66
		Calibrate				3.0		66
		Repair				4.0		66
0610	Vacuum pump 6513	Inspect			.2			67
		Test			.5			67
		Repair			1.0			67
0620	Power module T M515	Inspect			.2			68
		Test			.5			68
		Repair			1.0			68
0630	Digital Multimeter AN/PSM4S	Inspect			.2			69
		Test			.5			69
		Calibrate			2.0			69
		Repair			2.0			69A
0640	Electron test set TV-7/D	Inspect			.2			70
		Test			.5			70
		Repair			2.0			70
0650	Semiconductor test set 520B	Inspect			.2			71
		Test			.5			71
		Repair			2.0			71

See footnote at end of Appendix.

Maintenance Category1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0660	Test measurement system							
0661	Power mainframe RT M506	Inspect			.2			72
		Test			.5			72
		Repair			1.0			72
0662	Oscilloscope SC504	Inspect			.2			73
		Test			.5			73
		Calibrate			2.0			73
		Repair			2.0			73A
0663	Function generator FG502	Inspect			.3			74
		Test			.5			74
		Calibrate			2.0			74
		Repair			2.5			74A
0664	Digital counter DC508A	Inspect			.2			75
		Test			.5			75
		Calibrate			2.0			75
		Repair			2.0			75A
0665	Power supply PS503A	Inspect			.2			76
		Test			.5			76
		Repair			2.0			76
0666	Signal generator SG503	Inspect			.2			77
		Test			.5			77
		Calibrate			2.0			77
		Repair			2.5			77A
0700	Autotransformer WIOMT3AS3	Inspect			.2			78
		Test			.5			78
		Calibrate			1.0			78
		Repair			1.5			78A
0710	Accessory power supply 1101	Inspect			.2			79
		Test			.5			79
		Calibrate			1.0			79
		Repair			2.0			79A
0720	Torque cells 2133()	Inspect			.2			80
		Test			.5			80
		Calibrate				2.0		80
		Repair				4.0		80

See footnote at end of Appendix.

Maintenance Category 1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL C	O	F	H	D	TOOLS AND EQUIPMENT
0730	Ratio transformer DT72A	Inspect			.2			81
		Test			.5			81
		Calibrate				2.0		81
		Repair				2.5		81A
0740	Lead compensator LCR-201	Inspect			.2			82
		Test			.5			82
		Repair			1.5			82
0750	Quadrature generator RA79	Inspect			.2			83
		Test			.5			83
		Calibrate				2.0		83
		Repair				2.0		83A
0760	Amplifier RF815	Inspect			.2			84
		Test			1.0			84
		Repair			2.0			84
0770	Voltage divider RV722	Inspect				.2		85
		Test				.5		85
		Calibrate				2.5		85
		Repair				2.0		85A
0780	Spectrum analyzer R491	Inspect			.5			86
		Test			1.0			86
		Calibrate			2.5			86
		Repair			3.0			86A
0790	Risetime system							
0791	Pulse generator 1105A	Inspect			.2			87
		Test			.5			87
		Calibrate				2.0		87
		Repair					1.5	
0792	Tunnel diode mount 1106A	Inspect			.2			88
		Test			.5			88
		Calibrate				2.0		88
		Repair				2.0		88A
0800	Variable filter 3202R	Inspect			.2			89
		Test			.5			89
		Calibrate			2.0			89
		Repair			3.0			89A
0810	Standard voltage reference 730A	Inspect			.2			90
		Test			.5			90
		Calibrate				2.5		90
		Repair				4.0		90A

See footnote at end of Appendix.

Maintenance Category 1

GROUP NUMBER	COMPONENT ASSEMBLY	MAINTENANCE FUNCTION	MAINTENANCE LEVEL[1] C	O	F	H	D	TOOLS AND EQUIPMENT
0820	Potentiometer calibrator 72-311J	Inspect			.2			91
		Test			.5			91
		Calibrate			1.5			91
		Repair			2.5			91A
0830	Thermal converter 7842( )	Inspect			.2			92
		Test			.5			92
		Calibrate				1.5		92
		Repair				2.0		92A
0840	Galvanomenter 845AR	Inspect			.3			93
		Test			.5			93
		Repair			2.0			93
0850	Peak power calibrator 8900B	Inspect			.2			94
		Test			.5			94
		Calibrate			2.0			94
		Repair			2.0			94A
0860	Thermistor mount 8478B	Inspect			.2			95
		Test			.5			95
		Calibrate				2.0		95
		Repair				2.0		95A
0870	Recorder, X-Y data 7035B	Inspect			.2			96
		Test			.4			96
		Calibrate			1.0			96
		Repair			2.0			96A
0880	Attenuator calibrator VM4A	Inspect			.2			97
		Test			1.0			97
		Calibrate				2.5		97
		Repair				6.0		97A
0890	Multiband sweep 4310-AK-16P	Inspect			.5			98
		Test			1.5			98
		Calibrate				3.0		98
		Repair				4.5		98A
0900	Frequency counter 351D	Inspect			.5			99
		Test			1.0			99
		Calibrate			2.5			99
		Repair			3.0			99A

1C - Operator/CRRW, O- Organizational, F - Direct Support, H - General Support, D - Depot.

Tools Required

Tool code	Category	Nomenclature	Tool number
1	F	Manufacturer's manual for tools and TMDE	
2	F	TB 9-6625-2147-35 for calibration standards	
2A	F	Manufacturer's manual for tools and TMDE	
3	F	Manufacturer's manual for tools and TMDE	
4	F	TB 9-4931-423-35 for calibration standards	
4A	F	Manufacturer's manual for tools and TMDE	
5	H	TB 9-4931-406-35 for calibration standards	
5A	H	Manufacturer's manual for tools and TMDE	
6	F	Manufacturer's manual for tools and TMDE	
7	H	TB 9-4931-399-35 for calibration standards	
7A	D	Manufacturer's manual for tools and TMDE	
8	F	TB 9-6625-376-35 for calibration standards	
8A	F	Manufacturer's manual for tools and TMDE	
9	F	TB 9-6625-1944-35 for calibration standards	
9A	F	Manufacturer's manual for tools and TMDE	
10	F	Manufacturer's manual for tools and TMDE	
11	F	Manufacturer's manual for tools and TMDE	
12	H	TB 9-6625-1176-35 for calibration standards	
12A	H	Manufacturer's manual for tools and TMDE	
13	F	TB 9-6625-2153-35 for calibration standards	
13A	F	TM 9-5985-315-34	
14	F	TB 9-6625-2153-35 for calibration standards	
14A	F	Manufacturer's manual for tools and TMDE	
15	F	TB 9-4931-488-35 for calibration standards	
15A	F	Manufacturer's manual for tools and TMDE	
16	F	TB 9-6625-1935-35 for calibration standards	
16A	F	Manufacturer's manual for tools and TMDE	
17	F	TB 9-6625-1932-35 for calibration standards	
17A	H	Manufacturer's manual for tools and TMDE	
18	H	TB 9-4931-405-35 for calibration standards	
18A	D	Manufacturer's manual for tools and TMDE	
19	F	TB 9-6625-1493-35 for calibration standards	
19A	F	Manufacturer's manual for tools and TMDE	
20	F	TB 9-4931-321-35 for calibration standards	
20A	F	TM 11-6625-1534-15	
21	H	TB 9-6625-1064-35 for calibration standards	
21A	D	Manufacturer's manual for tools and TMDE	
22	F	TB 9-4931-217-35 for calibration standards	
22A	F	Manufacturer's manual for tools and TMDE	
23	H	TB 9-6625-1062-35 for calibration standards	
23A	D	Manufacturer's manual for tools and TMDE	
24	F	TB 9-4931-217-35 for calibration standards	
24A	F	Manufacturer's manual for tools and TMDE	
25	H	TB 9-6625-1485-35 for calibration standards	
25A	D	Manufacturer's manual for tools and TMDE	
26	F	Manufacturer's manual for tools and TMDE	
27	D	TM 9-4931-456-14-1	
28	F	TB 9-6625-046-35 for calibration standards	

Tools Required

Tool code	Category	Nomenclature	Tool number
28A	F	TM 11-6625-1614-15	
29	F	TB 9-6625-1356-35 for calibration standards	
29A	F	TM 11-6625-1842-40	
30	F	Manufacturer's manual for equipment calibration standards	
31	F	TB 9-4931-401-35 for calibration standards	
31A	F	Manufacturer's manual for tools and TMDE	
32	F	Manufacturer's manual for tools and TMDE	
33	F	TB 9-6625-1420-35 for calibration standards	
33A	F	TM 11-6625-2399-15	
34	F	TB 9-6685-316-35 for calibration standards	
34A	F	Manufacturer's manual for tools and TMDE	
35	F	TB 9-6625-1942-35 for calibration standards	
35A	F	Manufacturer's manual for tools and TMDE	
36	F	TB 9-6625-1996-35 for calibration standards	
36A	F	Manufacturer's manual for tools and TMDE	
37	F	Manufacturer's manual for tools and TMDE	
37A	F	TM 9-4931-509-34P	
38	F	Manufacturer's manual for tools and TMDE	
38A	F	TM 9-4931-509-34P	
39	F	TB 9-6625-1293-35 for calibration standards	
39A	F	TM 9-6695-260-34P	
40	F	TB 9-6625-1098-35 for calibration standards	
40A	F	TM 11-6625-1576-15	
41	F	TB 9-4931-700-50 for calibration standards	
41A	H	TM 9-4931-700-14-2	
42	F	TB 9-4931-700-50 for calibration standards	
42A	H	TM 9-4931-700-14-1	
43	F	TB 9-4931-1493-35 for calibration standards	
43A	F	Manufacturer's manual for tools and TMDE	
44	F	Manufacturer's manual for tools and TMDE	
45	F	TB 9-4931-383-50	
45A	H	TM 9-4931-383-14-1	
46	F	TB 9-6625-2088-35	
46A	F	Manufacturer's manual for tools and TMDE	
47	F	TB 9-4931-501-35	
47A	F	Manufacturer's manual for tools and TMDE	
48	F	TB 9-4931-502-35	
48A	F	Manufacturer's manual for tools and TMDE	
49	F	TB 9-4931-505-50	
49A	F	Manufacturer's manual for tools and TMDE	
50	F	TB 9-4931-503-50	
50A	F	Manufacturer's manual for tools and TMDE	
51	F	Manufacturer's manual for tools and TMDE	
52	F	Manufacturer's manual for tools and TMDE	
53	F	TB 9-4931-427-50	
53A	H	Manufacturer's manual for tools and TMDE	
54	H	Manufacturer's manual for tools and TMDE	
55	F	TB 9-6625-1957-35	

Tools Required

Tool code	Category	Nomenclature	Tool number
55A	F	Manufacturer's manual for tools and TMDE	
56	F	TB 9-6695-259-35	
56A	F	Manufacturer's manual for tools and TMDE	
57	F	TB 9-6695-261-35	
57A	F	Manufacturer's manual for tools and TMDE	
58	F	TM 9-6625-2090-34P	
59	F	TM 9-4931-486-34P	
60	F	TB 9-6120-275-35	
60A	F	Manufacturer's manual for tools and TMDE	
61	F	TB 9-6625-047-35	
61A	F	TM 11-6625-1538-15	
62	F	TB 9-6695-258-35	
62A	F	Manufacturer's manual for tools and TMDE	
63	F	Manufacturer's manual for tools and TMDE	
64	F	TB 9-4931-441-50	
64A	H	Manufacturer's manual for tools and TMDE	
65	F	TB 9-6670-256-50	
65A	H	Manufacturer's manual for tools and TMDE	
66	H	Manufacturer's manual for tools and TMDE	
67	F	Manufacturer's manual for tools and TMDE	
68	F	Manufacturer's manual for tools and TMDE	
69	F	TB 9-6625-1986-35	
69A	F	Manufacturer's manual for tools and TMDE	
70	F	TM 11-6625-274-35	
71	F	Manufacturer's manual for tools and TMDE	
72	F	Manufacturer's manual for tools and TMDE	
73	F	TB 9-6625-1981-35	
73A	F	Manufacturer's manual for tools and TMDE	
74	F	NA 17-20AG-222Q for calibration standards	
74A	F	Manufacturer's manual for tools and TMDE	
75	F	TB 9-6625-1982-35	
75A	F	Manufacturer's manual for tools and TMDE	
76	F	TM 9-6625-257-34P	
77	F	TB 9-6625-1959-35	
77A	F	Manufacturer's manual for tools and TMDE	
78	F	TB 9-6120-275-35	
78A	F	Manufacturer's manual for tools and TMDE	
79	F	TB 9-6625-1979-35	
79A	F	Manufacturer's manual for tools and TMDE	
80	H	TB 9-6670-257-50	
80A	D	Manufacturer's manual for tools and TMDE	
81	H	TB 9-6625-1878-50	
81A	D	Manufacturer's manual for tools and TMDE	
82	F	Manufacturer's manual for too' and TMDE	
83	F	TO 33K(8-4-10-1 for calibration standards	
83A	F	TO 33A1-12-k458 for tools and TMDE	
84	F	Manufacturer's manual for tools and TMDE	
85	H	TB 9-4935-214-35	
85A	H	Manufacturer's manual for tools and TMDE	
86	F	TB 9-6625-2058-35	

Tools Required

Tool code	Category	Nomenclature	Tool number
86A	F	Manufacturer's manual for tools and TMDE	
87	F	Manufacturer's manual for tools and TMDE	
88	F	TB 9-6625-1908-50	
88A	H	Manufacturer's manual for tools and TMDE	
89	F	TB 9-6625-357-35	
89A	F	TM 9-6625-357-14-1	
90	H	TB 9-4931-702-50 for calibration standards	
90A	H	TM 9-4931-702-14	
91	F	TB 9-4931-287-50	
91A	F	Manufacturer's manual for tools and TMDE	
92	H	TB 9-4931-406-50	
92A	H	Manufacturer's manual for tools and TMDE	
93	F	Manufacturer's manual for tools and TMDE	
94	F	TB 9-6695-264-35	
94A	F	TM 9-4931-480-34P	
95	F	TB 9-6625-1932-35	
95A	H	Manufacturer's manual for tools and TMDE	
96	F	TB 9-6625-1496-35 for calibration standards	
96A	F	Manufacturer's manual for tools and TMDE	
97	H	TB 9-4931-533-50 for calibration standards	
97A	D	TM 9-4931-526-34P	
98	F	TB 9-4931-524-35	
98A	H	Manufacturer's manual for tools and TMDE	
99	F	TB 9-6625-1978-50	
99A	F	TM 9-6625-1974-34P	
	F	Tool set, field engineer	JTK-17( )
	F	Cloth polishing, NSN 7920-00-985-6849	
	F	Brush, dusting, NSN 7510-00-242-3815	
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