

INSTRUCTION SHEET

CHANGE 6

12 July 1965

CHANGE 6 to Instruction Book for RF Signal Generator Set AN/URM-25D and AN/URM-25G

NAVSHIPS 92134(A)

This permanent change reflects the differences in the R. F. Signal Generator Set AN/URM-25G, as manufactured under Contract NObsr 89426, as compared to the AN/URM-25D covered in NAVSHIPS 92134(A), dated 31 December 1953 and changes 1 through 5 thereto. All references to AN/URM-25D apply also to the AN/URM-25G except where otherwise indicated in this change.

This permanent change is in effect upon receipt.

1. Remove superseded pages and insert changed and new pages as indicated below:

<u>Page</u>	<u>Remove</u>	<u>Insert</u>	<u>Page</u>	<u>Remove</u>	<u>Insert</u>
TP/A	CHG 5/CHG 5	CHG 6/CHG 6	6-25A/6-26A	-----	CHG 6
1-3/1-4	CHG 4/CHG 3	CHG 4/CHG 6	6-29/6-30	CHG 3/ORIG	CHG 6/ORIG
2-10A	-----	CHG 6	*7-OAA/7-ODD	-----	CHG 6/CHG 6
2-11/3-0	CHG 3/CHG 1	CHG 6/CHG 1	*Insert between p 6-36 and 7-OA		
6-24A	-----	CHG 6			

2. Make the following pen-and-ink corrections and mark CHG 6 adjacent to the pen-and-ink correction:

<u>Page No.</u>	<u>Change in Effect</u>	<u>Para and Line or Fig. and Location</u>	<u>Action</u>
1-3	CHG 4	2s, line 1	Change first sentence to read: "The power transformer (T201) has a 450-volt center-tapped high-voltage secondary, a 6.5-volt filament secondary, and a 12.6-volt secondary for the regulated circuit."
1-6	ORIG	n (2)	Change 48 watts to read: "60 watts."
6-18	ORIG	7a	Add subpara (5): "(5) If filament voltage at pin 6 of J202 is high or low, check Zener diodes

<u>Page No.</u>	<u>Change in Effect</u>	<u>Para and Line or Fig. and Location</u>	<u>Action</u>
			CR201 and CR202. If no voltage, check series resistor R202."
		7b	Add subpara (3): "(3) Check for shorted CR201 or CR202."
6-25	CHG 3	Alpha-Numerical Order	Add the following under Symbol No. and Figure No. : CR201 ----- 6-21 CR202 ----- 6-21 R202 ----- 6-21
7-28	CHG 3	Following line 26	Add at end of list: 27 ----- CTS Incorporated, Elkhart, Ind. 28 ----- New York Transformer Co., East Newark, N. J. 29 ----- Viewlex, Inc., Holbrook, N. Y.

3. Destroy superseded pages but not until the complete manual has been checked against the "List of Effective Pages" and the "Pen-and-Ink Corrections" in paragraph 2 above.

4. Make appropriate entry on Correction Page

NAVSHIPS 92134(A)

INSTRUCTION BOOK  
*for*  
R.F. SIGNAL  
GENERATOR SET  
AN/URM-25D AND  
AN/URM-25G

DEPARTMENT OF THE NAVY  
BUREAU OF SHIPS

*Publication: 31 December 1953*

*Change 6: 12 July 1965*

*NAVSHIPS 0280-266-6002*

## LIST OF EFFECTIVE PAGES

PAGE NUMBERS	CHANGE IN EFFECT	PAGE NUMBERS	CHANGE IN EFFECT
Title Page	Change 6	4-10 to 4-11	Original
A	Change 6	5-0 to 5-1	Original
B	Original	6-0 to 6-1	Original
C	Change 5	6-2 to 6-4	Change 3
i to ii	Original	6-5	Original
iii	Change 3	6-6	Change 3
1-0	Change 1	6-7	Original
1-0A/1-0B	Change 4	6-8	Change 3
1-1 to 1-2	Change 3	6-9 to 6-15	Original
1-3	Change 4	6-16	Change 1
1-4	Change 6	6-17 to 6-19	Original
1-5	Change 3	6-20 to 6-21	Change 3
1-6	Original	6-22 to 6-24	Original
2-1	Change 3	6-24A	Change 6
2-2	Change 1	6-25/6-26	Change 3
2-3	Change 3	6-25A/6-26A	Change 6
2-4	Original	6-27	Change 1
2-5 to 2-7	Change 3	6-28	Change 3
2-8 to 2-9	Original	6-29	Change 6
2-10	Change 3	6-30 to 6-34	Original
2-10A/2-10B	Change 6	6-35 to 6-36	Change 3
2-11	Change 6	7-0AA to 7-0DD	Change 6
3-0 to 3-1	Change 1	7-0A to 7-0F	Change 2
4-0	Change 1	7-1	Original
4-1 to 4-2	Change 4	7-2	Change 1
4-3 to 4-4	Change 3	7-3 to 7-29	Change 3
4-5	Original	i-1	Change 3
4-6	Change 3	i-2	Original
4-7	Change 5	i-3	Change 3
4-8 to 4-9	Change 1	i-4 to i-5	Original

TRAD ELECTRONICS CORPORATION  
ASBURY PARK, NEW JERSEY

VIEWLEX, INC.  
HOLBROOK, NEW YORK

Contracts: NObsr 52727, NObsr 59494, NObsr 71121,  
NObsr 71304, NObsr 71760, NObsr 75306 (FBM),  
NObsr 75083, NObsr 75870, NObsr 89426

**AN/URM-25D**  
**GENERAL DESCRIPTION**

**NAVSHIPS 92134(A)**

**Section 1**  
**Paragraph 2 q**

q. The Test Lead CX-1363/U should be used for making interstage receiver measurements. It consists of a 0.1 microfarad capacitor (C601) in parallel with a 510-micromicrofarad capacitor (C602) enclosed in an aluminum case similar to the antenna simulator and fixed attenuator units. One end of this case is terminated in a BNC connector. Two 16"-long clip leads extend from the other end. The capacitor network is in series with the red lead, whereas the black lead is grounded to the case.

qA. Fixed Attenuator CN-350/URM-25D (furnished only on Contract NObsr 75083) is contained in an aluminum case of the same type and dimensions as that used with the impedance adapter. The attenuator permits operating this 50-ohm signal generator into the 70-ohm impedance of a Navy receiver. The attenuator network consists of a pi attenuator designed to reflect proper impedance to both the signal generator and the receiver under test. The characteristics of the attenuator matching device require that a loss of 20 db in signal intensity be allowed for in measurement.

r. The Power Supply is an integral part of the RF Signal Generator Set AN/URM-25D. It is contained in a separate sub-chassis located to the rear of the RF signal generator unit SG-85/URM-25D. It employs a full wave rectifier type 6X4WA tube (V201). The interconnecting power cable (W102) is a two-conductor cable with a two-prong connector (P101) on one end. (See figure 6-4.) The other end of its cable is soldered to the a-c input fuses (F101, F102) located on the front panel of the signal generator. When the connector (P101) is plugged into the power supply input power receptacle (J201), this cable assembly (W102) transfers ac power from the front panel to the rectifier sub-chassis. This

interconnecting cable is connected in place and need not be installed prior to using the signal generator. A type 0A2 (V108) regulator tube located in the audio compartment is used for maintaining a regulated 150-volt dc output to V101 and V103. (See figure 2-13). The principal electrical features of the rectifier power unit are shown in figure 2-12.

s. The power transformer (T201) has a 450-volt center-tapped high-voltage secondary and a 6.5-volt filament secondary. It is designed to permit satisfactory operation from a 115V (±10%) single-phase ac source of from 50 to 1000 cycles per second. Each side of the input ac line is fused (F101, F102). An RF filter network, consisting of two 1000-micromicrofarad capacitors (C168, C169) and two RF chokes (L122, L123) enclosed in a metal shield, is mounted on the rear of the front panel of the RF Signal Generator SG-85/URM-25D (see figure 6-13). This network by-passes stray RF currents from the power line.

**3. EQUIPMENT SIMILARITIES.**

a. The AN/URM-25D, though similar in operation to previous models, incorporates basically different mechanical and electrical designs.

b. The frequency range 10 to 50,000 kc is divided differently (see table 1-5).

c. The output impedance of the Signal Generator Set AN/URM-25D is 50 ohms instead of 53.5 ohms used previously.

**4. ELECTRON TUBE COMPLEMENT.**

The quantities and types of electron tubes used with the AN/URM-25D are listed in table 1-4.

**TABLE 1-1. EQUIPMENT SUPPLIED**

QUANTITY PER EQUIPMENT	NAME OF UNIT	NAVY TYPE OR A-N DESIGNATION	OVERALL DIMENSIONS (INCHES)			VOLUME (CU. IN.)	WEIGHT (LBS.)
			HEIGHT	WIDTH	DEPTH		
1	RF Signal Generator Set	AN/URM-25D	11-1/4	14	10-3/4	1627	37
1	a. RF Signal Generator	SG-85/URM-25D					
1	b. Power Supply	PP-977/URM-25D					
1	c. (5:1) Fixed Attenuator	CN-223/URM-25D					
1	d. (10:1) Fixed Attenuator	CN-224/URM-25D					
1	e. Impedance Adapter	MX-1487/URM-25D					
1	f. Test Lead	CX-1363/U					
1	g. Antenna Simulator	SM-35/URM-25					
1	h. Output RF Cable Assembly	CG-409/U (3'11")					
2	i. Output RF Cable Assembly	CG-409/U (0'5")					
1	j. Connector, Adapter						
1	k. Coaxial Adapter (sym P801)	UG-201A/U					
1	l. Connector Adapter	UG-684A/U					
1	m. (10:1) Fixed Attenuator	CN-350/URM-25D					

**TABLE 1-2. SHIPPING DATA**

NUMBER OF BOXES	NAME	DESIGNATION	OVERALL DIMENSIONS (INCHES)			VOLUME (CU. IN.)	WEIGHT (LBS.)
			HEIGHT	WIDTH	DEPTH		
1	RF Signal Generator and Equipment Spares	AN/URM-25D	13	21	12.5	3412.5	44

TABLE 1-3. BASIC DIFFERENCES IN AN/URM-25 SERIES EQUIPMENTS

MODEL	LINE CORD	"EXT MOD IN" FILTER	FREQUENCY SCALE LAMP FILTER	CRYSTAL CALIBRATOR	RF PEAKING COIL	POWER SUPPLY	OTHER ITEM DIFFERENCES
AN/URM-25	Cord Filter CX-1595/URM-25	Single section unshielded	none	none	One peaking coil for Band H (L-114)	L-201, T-201 Non types	
AN/URM-25A	Line cord Sym No. W-101	Triple section shielded	Triple section, shielded	none	One peaking coil for Band H (L-114)	RF bypasses C-205, C-206 added; L-201,	RF bypasses C-147, C-148 added to line filter
AN/URM-25B	Line cord Sym No. W-101	Triple section shielded in addition to an unshielded choke	Triple section, shielded	V-108 (6BE6) crystal calibrator	Two peaking coils (L-121, L-122), effective from 16 mc to 50 mc	RF bypasses C-205, C-206 added; L-201, T-201 JAN types	C-108 (.5 mf) removed, Adapter Connector UG-684/U added, C-149, C-156, E-131 and C-118 added, C-113 changed from 10,000 mmf to 6200 mmf, other wiring changes
AN/URM-25C	Line cord Sym No. W-101	Triple section shielded in addition to an unshielded choke	Triple section, shielded	V-108 (6BE6) crystal calibrator	Two peaking coils (L-121, L-122), effective from 16 mc to 50 mc	RF bypasses C-205, C-206 added; L-201, T-201 JAN types	6J4 (Buffer Amplifier) replaced by two 6AH6; 9004 (RF Diode) replaced by IN34 crystal; other circuit and component changes as required for above
AN/URM-25D	Line cord Sym No. W-101-1	Single "L" section LC filter	none	V-105 (5750/6BE6W) crystal calibrator	Pass band accomplished with M-derived filter	Voltage Stabilizer changed to V-108 (OA2WA); R-201 is 3100 ohms, 22 watts	Entire tube complement (See table 1-4), and associated circuitry differs from preceding models
AN/URM-25G	Line Cord Sym No. W-101-1	Single "L" section LC filter	none	V-105 (5750/6BE6W) crystal calibrator	Pass band accomplished with M-derived filter	Voltage Stabilizer is V-108 (OA2WA); R-201 is 3100 ohms, 22 watts. Filament voltage regulated. Added CR-201, CR-202 (1N2970B) and R-202, 7.5 ohms, 22 watts.	CR-101 and CR-102 changed to 1N277. R-104 changed to 3.3K. C-102, C-108, C-110, C-112, C-114 and C-116 changed to 4-30 uuf. C-120 changed to 1000 uuf. Other part changes made to satisfy MIL spec req.







**AN/URM-25D**  
**THEORY OF OPERATION**

**NAVSHIPS 92134(A)**

**Section 2**  
**Paragraph 10 d**

tion with a relatively low voltage drop while the other conducts in the reverse breakdown region. The sum of the voltage drops is equal during either half cycle.

e. The 6.5-volt filament supply (one side B-), the regulated filament supply (one side B-), the 150-volt DC output, and the 220-volt DC output are connected to the power unit output receptacle (J202). These voltages are transferred to the

signal generator subchassis through power cable W103. The B- lead from J202 is not grounded to the power supply chassis but is carried to a single ground point in the audio compartment. The power supply chassis, however, is grounded to the other units of the signal generator. The reason for this separate B- ground is to eliminate RF leakage due to ground voltage gradients. Whenever a voltage measurement is made from the signal generator, it should, therefore, be made between the test voltage point and B-, not to the chassis.

SECTION 3  
INSTALLATION

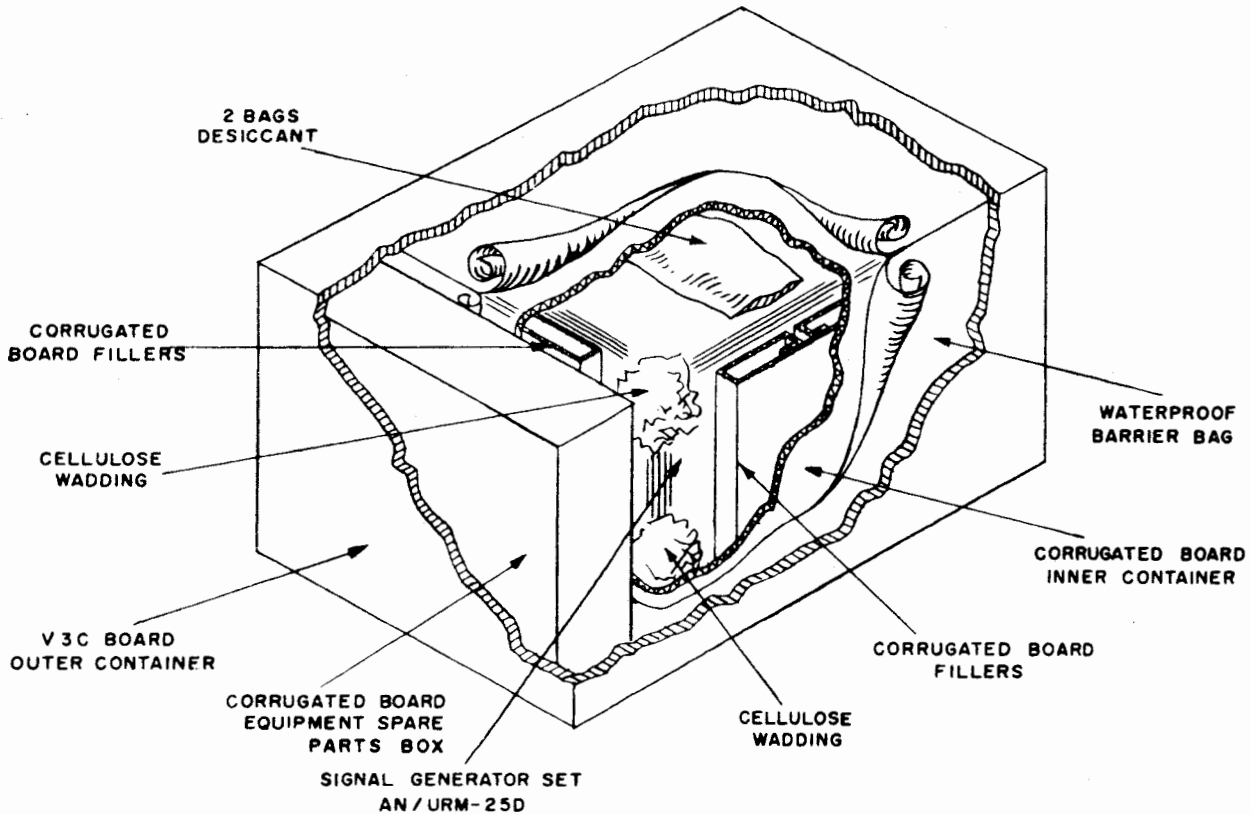


Figure 3-1. RF Signal Generator Set AN/URM-25D, Packaging Diagram

1. UNPACKING.

a. The AN/URM-25D is packed in a V3C board box together with a set of equipment spares. Electron tubes are shipped in place. The Signal Generator with accessories and the set of spares are individually enclosed in separate, specially cushioned cardboard cartons. Great care should be exercised in removing these items (figure 3-1).

b. The location of the accessories in the signal generator carton is as follows (See Section 1, figure 1-1):

(1) Antenna Simulator SM-35/URM-25, (5:1) Fixed Attenuator CN-223/URM-25D, (10:1) Fixed Attenuator CN-224/URM-25D, Impedance Adapter MX-1487/URM-25D, Test Lead CX-1363/U, Coaxial Adapter UG-201A/U (P801), and instruction book will be found on the inside of the panel cover. An aluminum plate with ferrule clips is provided for mounting these units.

(2) Output cables W104, W105, W106 are also mounted on this aluminum plate.

c. Dimensions of the signal generator are shown in Figure 3-2.

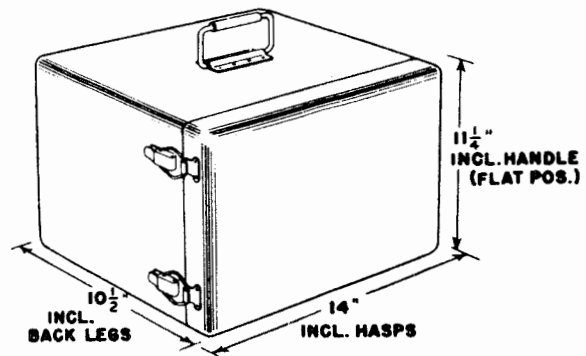


Figure 3-2. RF Signal Generator Set AN/URM-25D Outline Dimension Drawing

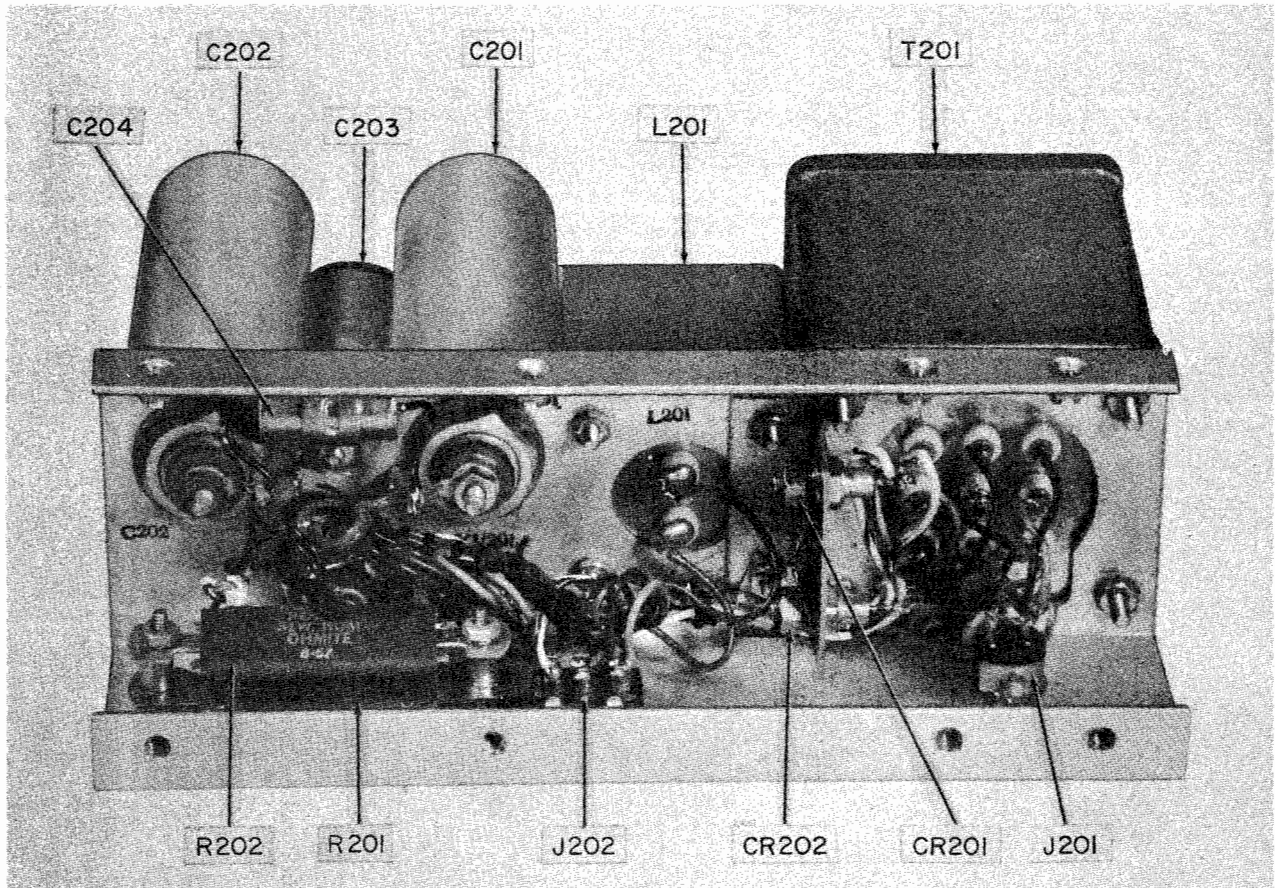


Figure 6-21A. Bottom View of Power Supply PP-977A/URM-25D, Part of AN/URM-25G



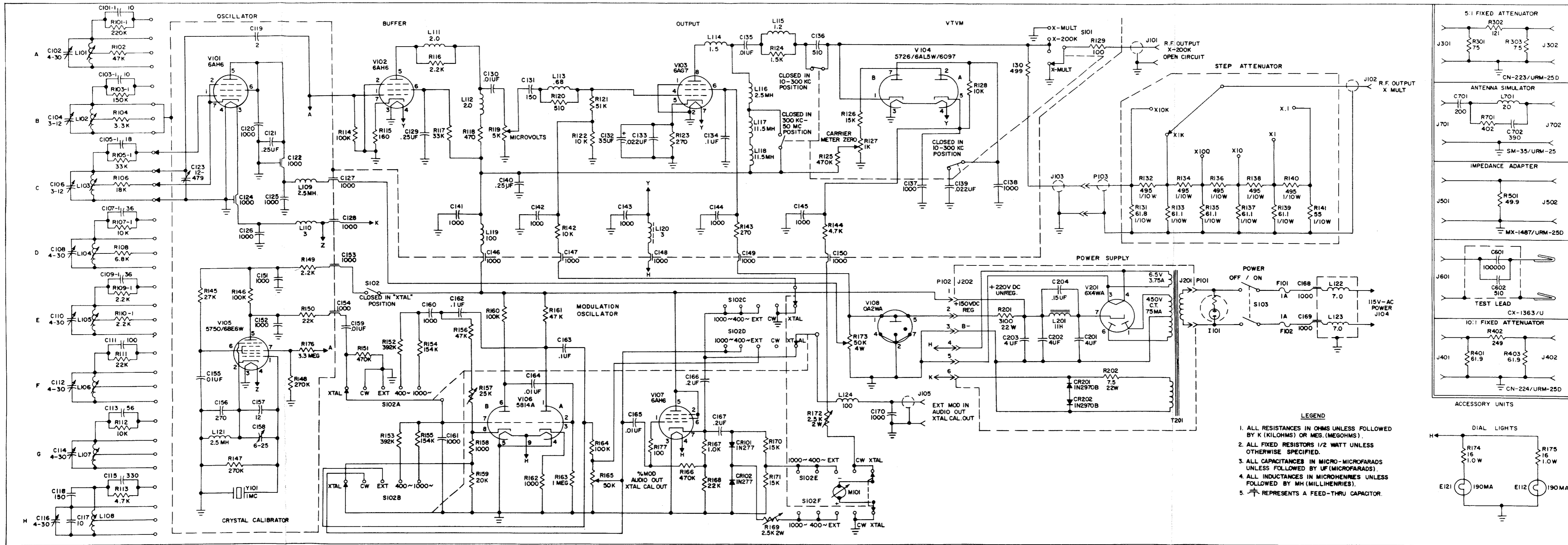


Figure 6-24A. R.F. Signal Generator Set AM/URM-25G, Overall Schematic Diagram

CHANGE 6

6-25A/6-26A

TABLE 6-6. RATED TUBE CHARACTERISTICS

TUBE TYPE	FILAMENT VOLTAGE (V)	FILAMENT CURRENT (A)	PLATE VOLTAGE (V)	GRID BIAS (V)	SCREEN VOLTAGE (V)	PLATE CURRENT (MA)	SCREEN CURRENT (MA)	A-C PLATE RESISTANCE (OHMS)	VOLTAGE AMPLIFICATION (MU)	TRANSCONDUCTANCE (MICROMHOS)		EMISSION	
										NORMAL	MINIMUM	IS(MA)	TEST VOLT
OA2WA	.....	.....	150	.....	.....	5-30	.....	.....	.....	.....	.....		
6AG7	6.3	0.65	375	-75	250	30	9.0	.....	.....	.....	.....		
6AH6	6.3	0.45	300	160	150	10	2.50	500,000	.....	9000	.....		
6X4WA	6.3	0.60	325	.....	.....	210	.....	.....	.....	.....	.....		
5726/6AL5W/ 6097	6.3	0.30	117	.....	.....	.....	.....	.....	.....	.....	.....		
5750/6BE6W	6.3	0.30	250	-1.5	100	2.6	7.5	1 Meg.	.....	Conversion 475	.....		
5814A	12.6	.175	250	-8.5	.....	26	.....	1800	43	24000	.....		

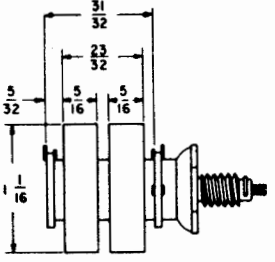
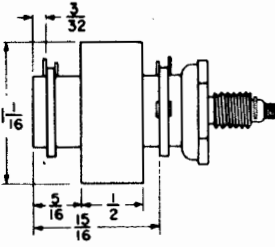
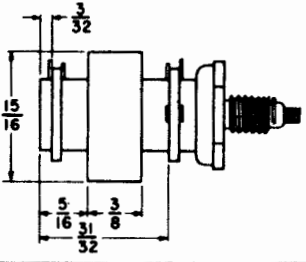
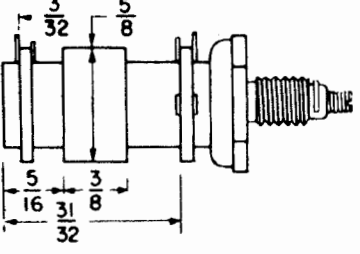
RATED ZENER DIODE CHARACTERISTICS

	ZENER VOLTAGE $V_z$ @ $I_{ZT}$ (OHMS)	TEST CURRENT $I_{ZT}$ (MA)	MAX ZENER IMPEDANCE $Z_{ZT}$ @ $I_{ZT}$ (OHMS)	MAX DC ZENER CURRENT 55°C BASE $I_{ZM}$ (MA)	MAX FORWARD VOLTAGE $V_F$ @ $I_F = 2A$
1N2970B	6.8 ± 5%	370	1.2	1.320	1.3

RATED GERMANIUM CRYSTAL DIODE CHARACTERISTICS

TYPE	MAX. INVERSE VOLTS	PEAK RECTIFIED MA.	MAX. SURGE MA.	MAX REVERSE u-Amp.	MAX AVERAGE MA.
1N69A	60	150	500	800 @ 50V	40
1N277	125	270	400	250 @ 50V	50

TABLE 6-7. WINDING DATA

DESIGNATION SYMBOL	TRAD MFG. & ENG. PART NO.	DIAGRAM	WINDING	WIRE SIZE	TURNS	DC RESISTANCE IN OHMS	REMARKS
L101	107-B-632		Universal wound 2 pie	#40 Single Strand Enameled	4800 Tap at 1700 turns	1000 ± 10%	Inductance: 511.5 mh; Impregnated
L102	107-B-633		Universal wound 1 pie	#38 Single Strand Enameled	1800 Tap at 780 turns	170 ± 10%	Inductance: 56.2 mh; Impregnated
L103	107-B-634		Universal wound 1 pie	#36 Double Strand Enameled	560 Tap at 240 turns	52 ± 10%	Inductance: 5.7 mh; Impregnated
L104	107-B-635		Universal wound 1 pie	#36 Double Strand Enameled	180 Tap at 85 turns	12.2 ± 10%	Inductance: 0.574 mh; Impregnated

CHANGE 6

Note:  
Tables 7-4A and 7-4 of the parts list section have been corrected by means of the following supplementary table to cover the AN/URM-25G. Always refer to the supplementary tables for a given item first as it

completely supersedes any corresponding listing in the basic table. If no information is shown for a given item, then refer to the basic table for the required information.

AN/URM-25D

NAVSHIPS 92134(A)

Section 7

TABLE 7-4AA. SUPPLEMENTARY COMBINED PARTS AND SPARE PARTS LIST

SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN AND (NAVY TYPE) NO.	STAND. NAVY AND (SIGNAL CORPS) STOCK NO.	MFR. & MFR'S DESIG.	CONTRACTOR DRAWING PART NO.	ALL SYMBOL DESIG. INVOLVED	QUAN. PER EQUIP.
CAPACITORS								
C101-1	CAPACITOR, fixed: mica dielectric; single section; 10 uuf $\pm 10\%$ ; 300 vdcw; Spec MIL-C-5/1	V101 grid blocking capacitor, band A	CM15B100K	N16-C026025-754			C101-1, 103-1	2
C102	CAPACITOR, variable: temperature compensated N650ppm/ $^{\circ}$ C, ceramic dielectric; rotary type; single section; 4.0 uuf to 30uuf; 500 vdcw; Spec MIL-C-81	Carrier oscillator band A trimmer	CV11D300				C102, 108, 110, 112, 114, 116	6
C104	CAPACITOR, variable: ceramic dielectric; rotary type; single section; 3.0uuf to 12.0uf; 500 vdcw; Spec MIL-C-81	Carrier oscillator band B trimmer	CV11A120				C104, 106	2
C106	Same as C104	Carrier oscillator band C trimmer						
C117	CAPACITOR, fixed: ceramic dielectric; temperature compensated N750 ppm/ $^{\circ}$ C; 10uuf $\pm 0.5$ uuf; 500 vdcw; Spec MIL-C-20	Carrier oscillator band H fixed trimmer	CC20UJ101D				C117	1
C120	CAPACITOR, fixed: ceramic dielectric; stand-off type; 1000uuf $\pm 20\%$ ; 500 vdcw; power factor 2.5% @ 1 KC; special temp. coeff; 1-1/64" lg x 5/16" diam; one 1/4" - 28 thd axial screw term. 3/8" lg; one axial post term; internally grounded; insulated; Spec MIL-C-11015	V101 plate circuit RF bypass capacitor	CK80AW102M				C120, 125, 126, 137, 138, 141, 142, 143, 144, 145, 151, 152	12
C122	CAPACITOR, fixed: ceramic dielectric; feed-through type; 1000 uuf $\pm 20\%$ ; 500 vdcw; power factor 2.5% @ 1 KC; special temp coeff; 3/4" lg x 3/16" diam; 2 axial wire leads each terminated in 1/8" lg loop; one 1/4" - 28 x 7/32" lg axial screw for mtg; insulated; Spec MIL-C-11015	V101 plate circuit bypass capacitor (feed thru)	CK70AW102M				C122, 124, 127, 128, 146, 147, 148, 149, 150, 153, 154, 168, 169	13

7-00A



TABLE 7-4AA. SUPPLEMENTARY COMBINED PARTS AND SPARE PARTS LIST (Cont'd.)

7-08B

7 Section

NAVSHIPS 92134(A)

AN/URM-25D

CHANGE 6

PARTS								
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN AND (NAVY TYPE) NO.	STAND. NAVY AND (SIGNAL CORPS) STOCK NO.	MFR. & MFR'S DESIG.	CON- TRACTOR DRAWING PART NO.	ALL SYMBOL DESIG. INVOLVED	QUAN. PER EQUIP.
CAPACITORS (Cont'd.)								
C125	Same as C120	V101 B+ filter capacitor						
C126	Same as C120	V101 heater filter capacitor						
C127	Same as C122	V101 B+ RF filter capacitor (feed-thru)						
C128	Same as C122	V101 heater RF filter capacitor (feed-thru)						
C132	CAPACITOR, fixed: electrolytic; 35 uf; 25 vdcw; tolerance -10, +100 percent; polarized; aluminum case; Spec MIL-C-62	V103 cathode bypass	CE10C350F				C132	1
C137	Same as C120	VTVM (V104) output decoupling capacitor						
C138	Same as C120	VTVM (V104)						
C141	Same as C120	V102 and V103 B+ RF filter capacitor						
C142	Same as C120	Modulation input RF filter capacitor						
C143	Same as C120	V102 and V103 and V104 heater RF filter capacitor						
C144	Same as C120	V103 screen voltage RF filter capacitor						
C145	Same as C120	VTVM (V104) output RF filter capacitor						
C146	Same as C122	V102 and V103 B+ RF filter capacitor (feed-thru)						
C147	Same as C122	Modulation input RF filter capacitor (feed-thru)						
C148	Same as C122	V102, V103 and V104 heater RF filter capacitor (feed-thru)						
C149	Same as C122	V103 screen voltage RF filter capacitor (feed-thru)						
C150	Same as C122	VTVM (V104) output RF filter capacitor (feed-thru)						
C151	Same as C120	V105 B± RF filter capacitor						
C152	Same as C120	V105 output RF filter capacitor						

TABLE 7-4AA. SUPPLEMENTARY COMBINED PARTS AND SPARE PARTS LIST (Cont'd.)

PARTS								
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN AND (NAVY TYPE) NO.	STAND. NAVY AND (SIGNAL CORPS) STOCK NO.	MFR. & MFR'S DESIG.	CON- TRACTOR DRAWING PART NO.	ALL SYMBOL PART NO.	QUAN. PER EQUIP.
<b>CAPACITORS (Cont'd.)</b>								
C153	Same as C122	V105 B± RF filter capacitor (feed-thru)						
C154	Same as C122	V105 output RF filter capacitor (feed-thru)						
C204	CAPACITOR, fixed: paper dielectric, 0.15 uf ±10%; 400 vdcw; mounting clamp soldered to case; Spec MIL-C-25	L201 resonating capacitor	CP10A1KE 154K3				C204	1
<b>CRYSTAL UNITS</b>								
CR101	CRYSTAL UNIT, RECTIFYING: germanium crystal; 50 ma. max. avg. fwd current, 125 piv. 400 ma. surge. Spec MIL-E-1/993A	Audio voltage rectifier	1N277				CR101, 102	2
<b>ZENER DIODES</b>								
CR201	DIODE, ZENER; silicon; 6.8v ±5% at 370 ma; dissipation 10w; Spec MIL-S-19500/124C	Filament voltage regulator	1N2970B				CR201, 202	2
CR202	Same as CR201	Filament voltage regulator						
<b>RESISTORS</b>								
R104	RESISTOR, fixed: composition; 3.3K ±10%; 1/2W, MIL-R-11/2	Band B, V101 cathode resistor	RC20GF332K				R104	1
R111	RESISTOR, fixed: composition; 22K ±10%; 1/2W, MIL-R-11/2	Band F, V101 grid leak resistor	RC20GF223K				R111,150, 168	3
R131	RESISTOR, fixed: film, high stability; 61.8 ohms ±1%; 1/10W; 200 max rv; insulated; Spec MIL-R-10509	p/o step attenuator	RN55D61R8F				R131	1
R132	RESISTOR, fixed: film, high stability; 495 ohms ±1%; 1/10W; 200 max rv; insulated; Spec MIL-R-10509	p/o step attenuator	RN55D495OF				R132,134, 136, 138, 140	5
R133	RESISTOR, fixed: film, high stability; 61.1 ohms ±1%; 1/10W; 200 max rv; insulated; Spec MIL-R-10509	p/o step attenuator	RN55D61R1F				R133,135, 137, 139	4

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7-0CC

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TABLE 7-4AA. SUPPLEMENTARY COMBINED PARTS AND SPARE PARTS LIST (Cont'd.)

PARTS								
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN AND (NAVY TYPE) NO.	STAND. NAVY AND (SIGNAL CORPS) STOCK NO.	MFR. & MFR'S DESIG.	CON-TRACTOR DRAWING PART NO.	ALL SYMBOL DESIG. INVOLVED	QUAN. PER EQUIP.
R141	RESISTOR, fixed: film high stability; 55.0 ohms ±1%; 1/10W; 200 max rv; insulated; Spec MIL-R-10509	p/o step attenuator	RN55D55R0F				R141	1
R150	Same as R111	V105 output RF filter resistor						
R168	Same as R111	V107 cathode resistor						
R202	RESISTOR, fixed: wire wound; 7.5 ohms ±5%; 22W; Spec MIL-R-26	Regulated filament supply series dropping resistor	RW21V7R5				R202	1
SWITCHES								
S101	SWITCH, rotary: 2 section; 4 position; 1-1/2" wd x 1-5/16" high x 2-7/16" lg; single hole mtg; bushing 3/8" -32 x 1/4" lg; 1/4" diam rd shaft 1-1/4" lg; non-turn device; Spec MIL-S-3786A/3	Carrier range switch			(27) 107-B-646	107-B-646	S101	1
S102	SWITCH, rotary: 4section; 5 position; 2 poles per section on 3 sections: 2 stator contacts on 1 section; 2-7/8" lg x 1-1/2" wd x 1-3/8" high; shorting type; solder lug term; single hole mtg; bushing 3/8"-32 x 1/4" lg; 1/4" diam rd shaft 7/8" lg; non-turn device; Spec MIL-S-3786A/3	Mod, Xtal, & Meter Selector			(27) 107-C-647	107-C-647	S102	1
TRANSFORMERS								
T201	TRANSFORMER, power filament and plate type, 115v, 50-1000 cycle; single ph; three output windings; sec #1-6.5v at 3.75 amp; sec #2-450V CT at 70 ma sec #3-12.6v at 1.75 amp; working voltage to ground, pri-165V-RMS test 500V, sec 1-10V -RMS test 500V; sec #2-320V-RMS test 900V; sec #3-20V-RMS test 500V; hermetically sealed rect case; 3" lg x 2-7/8" wd x 3-3/4" high excl term; nine 1/2" high standoff term; four No. 8-32 x 1/2" lg mtg bolts on 2" x 2-3/8" mtg c; Spec MIL-T-27, Grade 1, Class A, Family 03	Power transformer			(28) 107-B-309	107-B-309	T201	1
TERMINAL BOARDS								
TB103	BOARD, terminal: resistor, capacitor, choke mounting board; 6 feed-through lug term., 4 stand-off lug term.; XXX phenolic board 0.093" thk; irregular shape; 3-13/32" lg x 2-1/8" wd o/a; two 0.128" dia holes on 1-9/16" mtg c	RF bracket terminal board assy			(29) 107-B-720	107-B-720	TB103	1

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