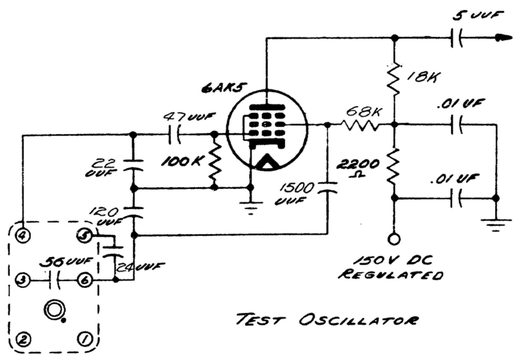
EQUIP. TYPE R390A/URR EXP. NO.

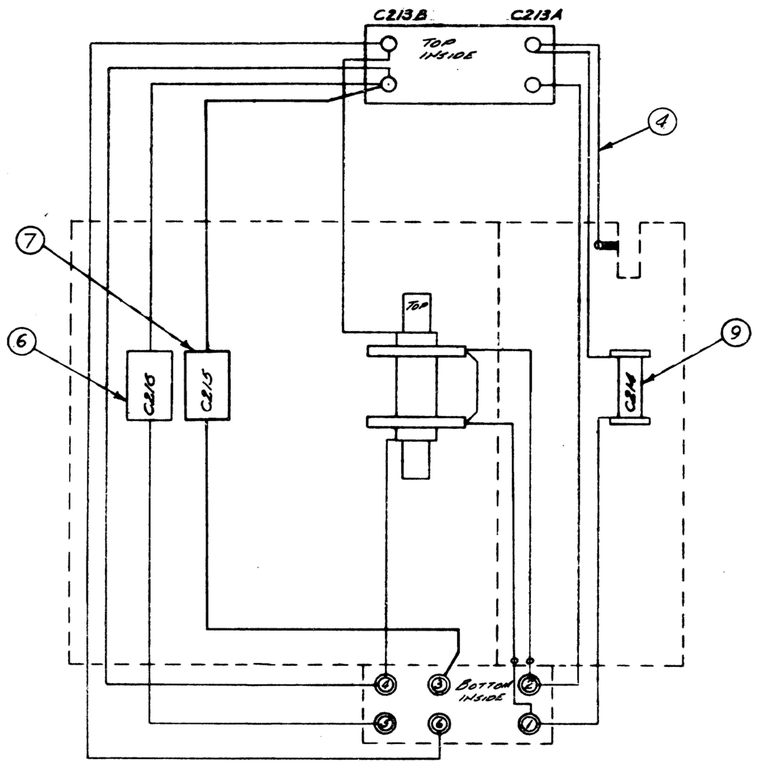
Gen. SIG 7858004

*FOR INFORMATION ONLY. CONTRACTOR MAY AT HIS OPTION DEVIATE FROM THESE PROCESS DETAILS.

SWE APPROVAL SYM	SWE APPROVAL PR10042-18	PTH	REVISIONS DESCRIPTION	DATE	APPROVAL
		A_6	A_1-ADDED ITEM 11. A_2-DELETED ITEM 5 & NOTE 4; A_3-CAN-MARKED WAS CAN-ANT. A_4-SWE PART NO. REPLACED COLLINS PART NO. COL. A_5-MIL-C-20 WAS JAN-C-20 A_6-ADDED APPL. SM-D-343629.	20 NOV. 59	42428-PC-59-A1-51 REVID. PME
B_2	CA84674	B_2	B_2-ITEM 7 WAS SM-C-283229-16. B_2-ITEM 9 DESCRIPTION WAS CAPACITOR-VARIABLE	20 APRIL 60	42428-PC-57 REVID. PME
C	CA84960	C	(1)-ADDED NOTE 13	10 MAY 60	42428-PC-57 REVID. PME
		D_1	(11) ± 1% WAS ± .1%		21582-PC-61 REVD PME



TEST OSCILLATOR

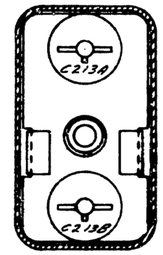


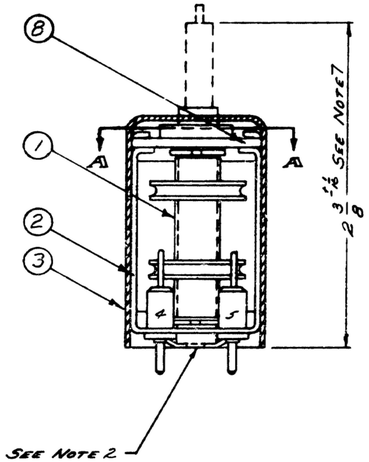
WIRING DIAGRAM

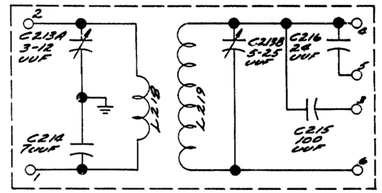
CORE POSITION INCHES ±.0002	TEST OSC FREQ MC	FREQ TOL KC	EFFECTIVE PARALLEL RESISTANCE (OHMS) ±25%
− 0.0300	8.150	33	
0.0000	8.000	25	22000
‡ 0.0800	7.600	‡	
0.1600	7.200	25	
0.2400	6.800	25	
0.3200	6.400	25	
0.4000	6.000	25	22000
0.4800	5.600	25	
0.5600	5.200	25	
0.6400	4.800	25	
‡ 0.7200	4.400	25 ‡	
0.8000	4.000	25	22000
0.8300	3.850	33	

‡ ALIGNMENT POINTS SEE NOTE 6

SECTION A-A







SCHEMATIC DIAGRAM FOR COIL ASSY

NOTES:
1. SOFT SOLDER PER SPEC MIL-S-6872 USING ROSIN CORE SOLDER (11) COMP. SN60.
2. COIL FORM OF COIL ASSY (1) TO BE CONCENTRIC WITHIN .140 DIA HOLE IN FRAME (2) WITHIN .020 T.I.R.
3. MOUNTING POSITION OF CAPACITORS OPTIONAL, PROVIDING NO CAPACITOR COMES WITHIN 1/16 OF COIL WINDING.
(A_2)
5. TUBES 5, #22 DRAWN & ANNEALED, TIN COATED.
6. ALIGNMENT: WITH COIL ASSY IN TEST JIG, AND 5 STANDARD POWDERED IRON TUNING CORE POSITIONED IN THE COIL, ADJUST SECTION "B" OF VARIABLE CAPACITOR (8), UNIT TEST OSCILLATOR FREQUENCY IS WITHIN 1000 CPS OF THE VALUE SHOWN IN THE TABLE AT THE TWO ALIGNMENT POINTS. THE FINAL SETTING OF THE VARIABLE CAPACITOR (8), SHALL LEAVE A RESERVE ADJUSTMENT OF 90 MMF.
7. BROKEN LINES INDICATE OUTLINE OF STANDARD POWDERED IRON TUNING CORE OF TEST JIG. DIMENSION APPLIES TO THE CORE IN 0.0800 ALIGNMENT POSITION AFTER ELECTRICAL ALIGNMENT PER NOTE 6.
8. TRACKING: TEST OSCILLATOR FREQUENCY SHALL BE WITHIN THE TOLERANCE OF TABLE AT SPECIFIED CORE INSERTIONS AT 25°C.
9. STABILITY: THE RESONANT FREQUENCY OF THE TUNING COIL SHALL VARY NOT MORE THAN 90 PPM/°C FROM THE 25°C VALUE OVER THE SPECIFIED TEMPERATURE RANGE.
10. TEMPERATURE RANGE - 90°C TO +85°C OPERATING, -62°C TO +85°C STORAGE.
11. THE COIL ASSY SHALL BE BONDED TO THE BASE PLATE AND TO THE VARIABLE CAPACITOR BOARD (8) TOP WITH BONDING AGENT (10) "R-313 AS SUPPLIED BY CARL H. BIGGS, LOS ANGELES, CALIF. OR EQUAL.
12. HUMIDITY: UNIT SHALL BE CAPABLE OF OPERATION AFTER EXPOSURE TO 5 HUMIDITY CYCLES CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF SIGNAL CORPS DRAWING SCD-16286. UPON COMPLETION OF THE HUMIDITY CYCLES THE UNIT SHALL BE ALLOWED TO DRY AT 25°C AMBIENT FOR A PERIOD OF 1 HOUR.
(C_1) 13. TUNING CORE REFERRED TO IN NOTE 7 SHOULD BE SM-C-249245, AND MUST BE WITHIN ± 1% OF NOMINAL PERMEABILITY.
(D_1)

A	10S130317-7	11	AS REQD		SOLDER, SOFT	QQ-S-571	1
	11S130318-7	10	AS REQD		BONDING AGENT		11
		9	1	CC20CH070C	CAPACITOR-FIXED	MIL-C-20	
B_2 A_5		8	1	SM-C-283229-2	CAPACITOR-VARIABLE		11
B_1		7	1	SM-C-283226-16	CAPACITOR-FIXED		
A_2		6	1	SM-C-283226-6	CAPACITOR-FIXED		
		5	AS REQD	SM-B-249214	TUBING		4
	30S110GG3-39	4	4	SM-B-249059-4	WIRE	MIL-W-3861	5
A_3		3	1	SM-B-249160	CAN-MARKED		
		2	1	SM-B-249069	FRAME ASSY		11
A_4		1	1	SM-B-283284	COIL ASSY		
	* SWE PART NO.	ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES

LIST OF MATERIAL ~~COLLINS PART NO. 558 0440 004~~

A_6			SM-D-343629				
~~558 0453 004~~	+		SM-D-249089	SC-01-248773			
~~COLLINS NO.~~		~~QTY~~	NEXT ASSY	USED ON			

APPLICATION

DRAWN Hamer CHECKED APPROVED

UNLESS OTHERWISE SPECIFIED:
DECIMAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY ±.005
FRACTIONAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY ±1/64
MACHINED ANGLES MAY VARY ±.5°
SHEARED ANGLES MAY VARY ±.25°
BROKEN ANGLES MAY VARY ±1°
ECCENTRICITY BETWEEN ANY DIAMETERS ON THE SAME CENTERLINE SHALL NOT EXCEED .010 TOTAL INDICATOR READING.
ALL DIMENSIONS ARE FINISH DIMENSIONS INCLUDING APPLIED FINISH AND ARE GIVEN IN INCHES.

~~SIGNAL RADIO CO.~~ ~~SIGNAL SUPPLY SERV.~~ 14214-PH-51-93
SIGNAL CORPS
REVIEWED PME
APPROVED HLY PME
DATE 17 Feb 56 SCALE 2/1

COIL ASSY-ANT

DEPARTMENT OF THE ARMY
SIGNAL CORPS ENGINEERING LABORATORIES
FORT MONMOUTH NEW JERSEY

SM-D-249089

PD-794-674-3971-13-A4765-SIZE D

WHEN REFERRING TO THIS DRAWING STATE DRAWING NO., APPLICABLE ISSUE SYMBOL, IF ANY, AND DATE