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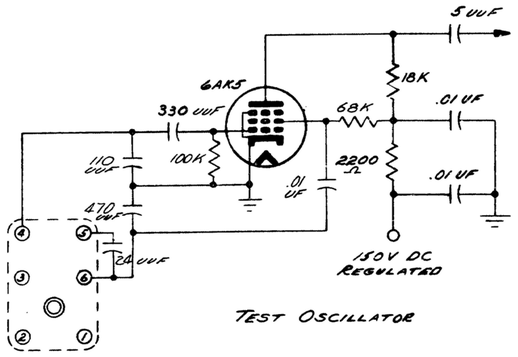
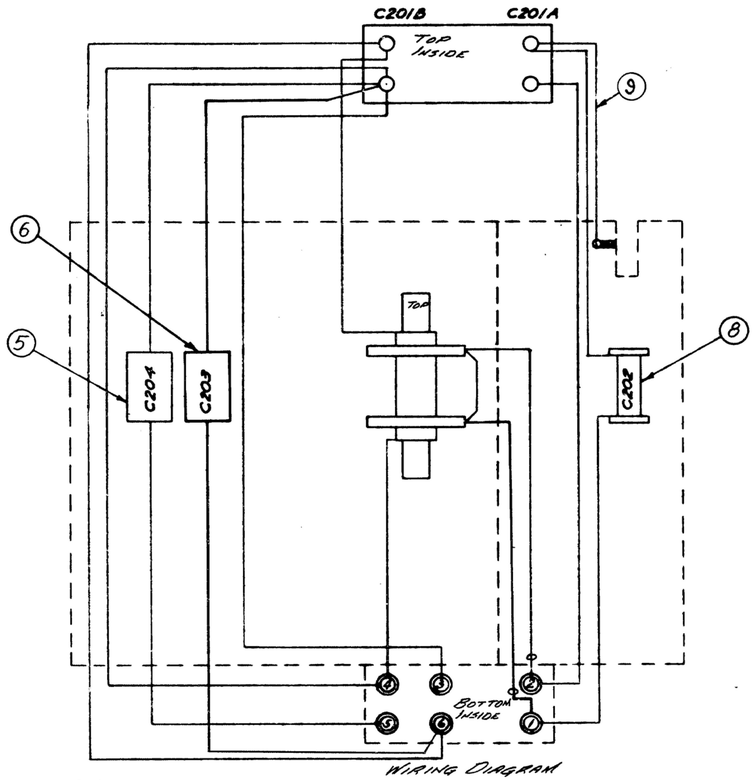
EQUIP. TYPE R390A/URR EXP. NO.

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

* SWE APPROVAL SYM	PR10042-18	SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
		A_7	A_1-ADDED ITEM 11; A_2-DELETED ITEM 4 & NOTE 4; A_3-CAN-MARKED WAS CAN-ANT. A_4-SWE PART NO. REPLACED COLLINS PART NO. COL. A_5-CM15D331G WAS SM-C-288226-25 A_6-ADDED NEW APPL. A_7-MIL-C-20 WAS JAN-C-20.	20 NOV 59	42428-PC-59-A1-51 REV'D PME
B_1	CA 84781	B_1	B_1 - MIL-C-5 WAS MIL-C-25.	17 MAY 60	42428-PC-59 REV'D PME
C	CA84960	C	(1) - ADDED NOTE 13	16 NOV 60	42428-PC-59 REV'D PME
		D	(11) ± 1% WAS ± .1%	26 MAR 1965	21582-PC-61 REVD PME

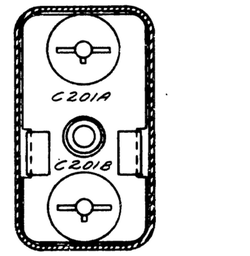


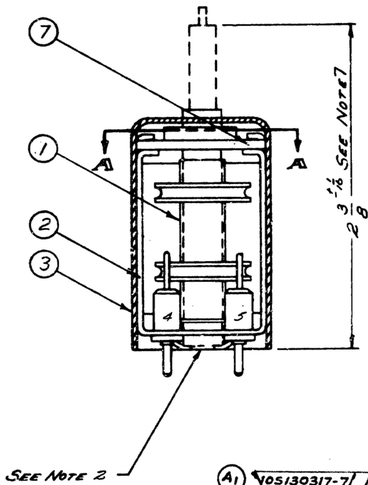
TEST OSCILLATOR

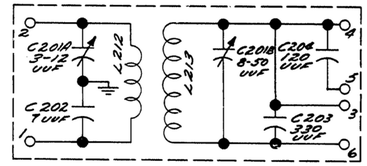


WIRING DIAGRAM

SECTION A-A







SCHEMATIC DIAGRAM OF COIL ASSY

CORE POSITION INCHES ±.0002	TEST OSC FREQ MC	FREQ TOL KC	EFFECTIVE PARALLEL RESISTANCE (OHMS) ±25%
− 0.0300	1.01875	7	
0.0000	1.0	5	19000
+ 0.0800	.95	±	
0.1600	.90	5	
0.2400	.85	5	
0.3200	.80	5	
0.4000	.75	5	19000
0.4800	.70	5	
0.5600	.65	5	
0.6400	.60	5	
± 0.7200	.55	±	
0.8000	.50	5	19000
0.8300	.48125	7	

± ALIGNMENT POINTS SEE NOTE 6

NOTES:
1. SOLDER PER SPEC MIL-S-6872 USING ROSIN CORE SOLDER (11) COMP SN60.
2. COIL FORM OF COIL ASSY (1) TO BE CONCENTRIC WITH .140 DIA HOLE IN FRAME (12) WITHIN .020 T.I.R.
3. MOUNTING POSITION OF CAPACITORS OPTIONAL, PROVIDING NO CAPACITOR COMES WITHIN 1/16 OF COIL WINDING.
A_2 5. TYPES NO. 22 DRAWN & ANNEALED, TIN COATED.
6. ALIGNMENT: WITH COIL ASSY IN TEST JIG, AND STANDARD POWDERED IRON TUNING CORE POSITIONED IN THE COIL, ADJUST SECTION "B" OF VARIABLE CAPACITOR (7), UNTIL TEST OSCILLATOR FREQUENCY IS WITHIN 500 CPS OF THE VALUE SHOWN IN TABLE AT THE TWO ALIGNMENT POINTS. THE FINAL SETTING OF THE VARIABLE CAPACITOR (7), SHALL LEAVE A RESERVE ADJUSTMENT OF 4 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 NO MORE THAN 40 PPM/°C FROM THE 25°C VALUE OVER THE SPECIFIED TEMPERATURE RANGE.
10. TEMPERATURE RANGE: −40°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 TOP (7) WITH BONDING AGENT (10) AS SUPPLIED BY CARL H BIGGS CO, 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_1	105130317-7	11	AS REQ'D	——	SOLDER, SOFT	QQ-S-571	1
	MS130318-7	10	AS REQ'D	——	BONDING AGENT		11
A_7	306110663-39	9	AS REQ'D	SM-D-249086-1	WIRE	MIL-W-3861	5
		8	1	CC20CH070C	CAPACITOR	MIL-C-20	
		7	1	SM-C-293229-3	CAPACITOR-VARIABLE		11
B_1 A_5		6	1	CM15D331G	CAPACITOR-FIXED	MIL-C-5	
A_2		5	1	SM-C-293226-18	CAPACITOR-FIXED		
		4	AS REQ'D	SM-D-249084	TUBING		4
A_3		3	1	SM-B-249157	CAN-MARKED		
		2	1	SM-B-249066	FRAME ASSY		11
		1	1	SM-B-283279	COIL ASSY		11
A_4	SWE. PART NO.	ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTES

LIST OF MATERIAL — ~~COLLINS PART NO. 558 0437 004~~ A_6

				DRAWN	CHECKED	APPROVED
				HAMER		
				UNLESS OTHERWISE SPECIFIED: DECIMAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY ±.005 FRACTIONAL DIMENSIONS INCLUDING HOLE SIZES MAY VARY 1/64 MACHINED ANGLES MAY VARY 2.1° SHEARED ANGLES MAY VARY ±.25° BROKEN ANGLES MAY VARY 21.1° CONCENTRICITY 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.		
		SM-345629	SC-DL-248775			
~~558 0453 004~~	1	SM-D-249084	SC-DL-248775			
~~COLLINS NO.~~	QTY	NEXT ASSY	USED ON			
APPLICATION						

COLLINS RADIO CO. CEDAR RAPIDS, IOWA — 14214-PH-51-93
SIGNAL CORPS
REVIEWED PME
APPROVED HLY PME
DATE 14 FEB 56 SCALE 2/1

COIL ASSY-ANT

DEPARTMENT OF THE ARMY SIGNAL CORPS ENGINEERING LABORATORIES
FORT MONMOUTH NEW JERSEY
SM-D-249 086

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

FD-774—876-2071-13—A4765—320597