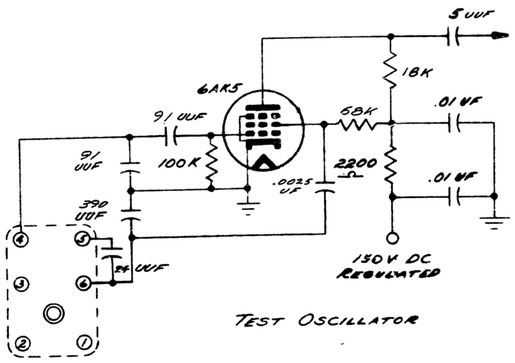
NOTICE: WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

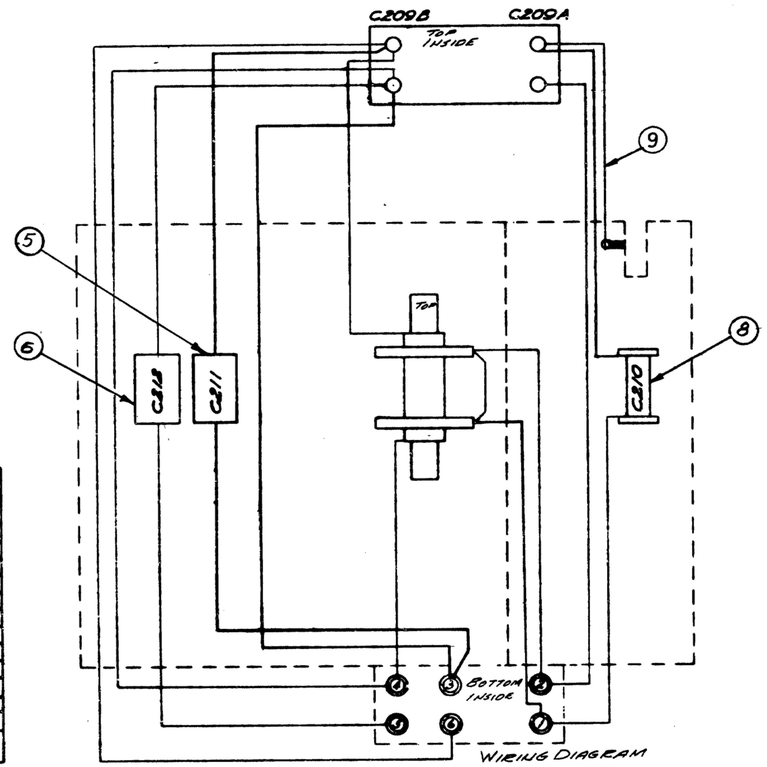
THIS DOCUMENT HAS BEEN PREPARED BY THE GOVERNMENT AND MAY BE REPRODUCED AND USED IN CONNECTION WITH ANY GOVERNMENT PROCUREMENT OR MAINTENANCE OPERATION.

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

SYM	REVISION	SYM	DESCRIPTION	DATE	APPROVAL
	PE10042-13	A_6	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-MIL-C-20 WAS JAN-C-20. A_6-ADDED APPL. SM-D-343629.	20 NOV 59	42128-R-59 1-11-59 REV'D PME
B_1	CA84674	B_1	B_1-ITEM 8 DESCRIPTION WAS CAPACITOR-VARIABLE	20 APRIL 60	42128-PC-59 REV'D PME
C	CA84968	C	(1)-ADDED NOTE 13.	16 MAY 60	42128-PC-59 REV'D PME
		D_1	±1% WAS ±.1%	24 MAR 1965	21282-PC-61 REVD PME

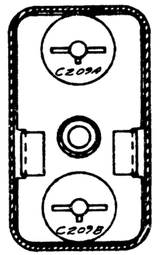


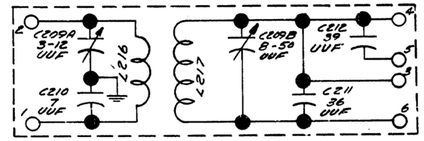
TEST OSCILLATOR



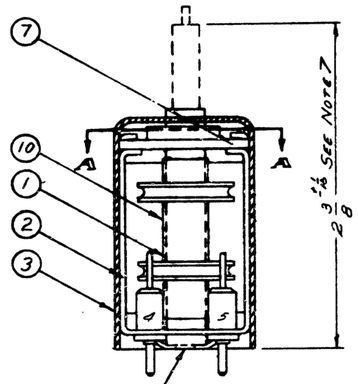
WIRING DIAGRAM

SECTION A-A





SCHEMATIC DIAGRAM OF COIL ASSY.



SEE NOTE 2

CORE POSITION INCHES ±.0002	TEST OSC FREQ MC	FREQ TOL KC	EFFECTIVE PARALLEL RESISTANCE (OHMS) ±2%
-0.0300	4.075	20	
0.0000	4.0	15	18000
≠ 0.0800	3.8	≠	
0.1600	3.6	15	
0.2400	3.4	15	
0.3200	3.2	15	
0.4000	3.0	15	22000
0.4800	2.8	15	
0.5600	2.6	15	
0.6400	2.4	15	
≠ 0.7200	2.2	≠	
0.8000	2.0	15	26000
0.8300	1.925	20	

≠ ALIGNMENT POINTS SEE NOTE 6

NOTES:

1. SOFT SOLDER PER SPEC MIL-S-6872 USING ROSIN CORE SOLDER (11) COM. SN60.
2. COIL FORM OF COIL ASSY (1) TO BE CONCENTRIC WITH .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. TYPE S NO. 22 DRAWN AND 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 (7) TOP WITH BONDING AGENT (10) *R-313 AS SUPPLIED BY CARL H. BIGGS CO., LOS ANGELES, CAL., 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 SC-D-16286. UPON COMPLETION OF THE HUMIDITY CYCLES THE UNIT SHALL BE ALLOWED TO DRY AT 25°C AMBIENT FOR 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

SYM	QTY	NEXT ASSY	USED ON
A_6		SM-D-343629	
~~550-0453-004~~	1	SM-D-249354	SC-DL-248775

~~GOV'T DWG NO.~~

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 ±1°
BENDED ANGLES MAY VARY ±.5°
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.

~~ORIGINATING CAGE CODE~~ ~~CAGE DRAWING NO.~~ 14214-PH-51-93

SIGNAL CORPS
REVIEWED PME
APPROVED HLY PME
DATE 20 FEB 56 SCALE 2/1

COIL ASSY-ANT

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

SM-D-249088

A_1	NOS130317-7	11	AS REQ'D.		SOLDER, SOFT	QQ-S-571	1
	NS130318-7	10	AS REQ'D.		BONDING AGENT		11
	305110643-39	9	AS REQ'D.	SM-D-249088-1	WIRE.	MIL-W-3861	5
B_1 A_5		8	1	CC20CH070C	CAPACITOR - FIXED	MIL-C-20	
		7	1	SM-C-283228-3	CAPACITOR - VARIABLE		11
		6	1	SM-C-283226-9	CAPACITOR - FIXED		
		5	1	SM-C-283226-8	CAPACITOR - FIXED		
A_2		~~4~~	AS REQ'D.	~~SM-B-249214~~	~~TUBING~~		~~4~~
A_3		3	1	SM-B-249139	CAN-MARKED		
		2	1	SM-B-249068	FRAME ASSY		11
A_4		1	1	SM-B-283285	COIL ASSY		11
A SWE PART NO.	ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	NOTE 5

LIST OF MATERIAL ~~COLLINS PART NO. 530-0435-004~~ C

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