

SUPREME
MODEL 580 SIGNAL GENERATOR
DELUXE SERIES

OPERATING DATA

SUPREME INSTRUMENTS CORPORATION
GREENWOOD, MISSISSIPPI
U. S. A.

STOCK #7864

ISSUED 11/4/36

MODEL 580 SIGNAL GENERATOR
 DELUXE SERIES
 PACKING LIST

ISSUED 11/4/36

ACCESSORIES INCLUDED IN ORIGINAL MODEL 580 SIGNAL GENERATOR SHIPMENTS.

QUANTITY: INCLUDED:	STOCK : NUMBER:	DESCRIPTION	:PACKER'S :CHECK
1	: 7864	: BOOKLET, MODEL 580 OPERATING DATA	: ✓
1	: 6725	: CARD, 3" X 5" REGISTRATION	: ✓
1	: 6288	: CHART, SAMPLE ANALYSIS	: ✓
1	: 8001	: CHART, OSCILLATOR CALIBRATION	: ✓
1	: 7999-A	: CONNECTOR, 6-FT. SHIELDED ANTENNA	: ✓
1	: 8146-A	: SCREEN, CALIBRATED IN KILOCYCLES OFF : RESONANCE	: ✓

THE ABOVE LIST OF ITEMS HAS BEEN CHECKED BY THE UNDERSIGNED WHO IS RESPONSIBLE FOR THE COMPLETION OF THIS PACKAGE.

325

 (SERIAL NUMBER)

(SIGNED) *Ford*

SUPREME INSTRUMENTS CORPORATION
 GREENWOOD, MISSISSIPPI
 U. S. A.

PANEL LAYOUT OF MODEL 580 SIGNAL GENERATOR

PROPER PART NAME (USED IN INSTRUCTIONS)	FUNCTION	LOCATION ON PANEL																																																
FULL VISION DIRECT READING TUNING DIAL	<p>SCALE</p> <table border="0"> <tr> <td>(A)</td> <td>125</td> <td>K.C.</td> <td>-</td> <td>350</td> <td>K.C.</td> </tr> <tr> <td>(B)</td> <td>350</td> <td>K.C.</td> <td>-</td> <td>850</td> <td>K.C.</td> </tr> <tr> <td>(C)</td> <td>850</td> <td>K.C.</td> <td>-</td> <td>2200</td> <td>K.C.</td> </tr> <tr> <td>(D)</td> <td>2100</td> <td>K.C.</td> <td>-</td> <td>5700</td> <td>K.C.</td> </tr> <tr> <td>(E)</td> <td>5.5</td> <td>M.C.</td> <td>-</td> <td>15</td> <td>M.C.</td> </tr> <tr> <td>(F)</td> <td>11</td> <td>M.C.</td> <td>-</td> <td>30</td> <td>M.C.</td> </tr> <tr> <td>(G)</td> <td>16.5</td> <td>M.C.</td> <td>-</td> <td>45</td> <td>M.C.</td> </tr> <tr> <td>(H)</td> <td>22</td> <td>M.C.</td> <td>-</td> <td>60</td> <td>M.C.</td> </tr> </table>	(A)	125	K.C.	-	350	K.C.	(B)	350	K.C.	-	850	K.C.	(C)	850	K.C.	-	2200	K.C.	(D)	2100	K.C.	-	5700	K.C.	(E)	5.5	M.C.	-	15	M.C.	(F)	11	M.C.	-	30	M.C.	(G)	16.5	M.C.	-	45	M.C.	(H)	22	M.C.	-	60	M.C.	CENTER OF PANEL
(A)	125	K.C.	-	350	K.C.																																													
(B)	350	K.C.	-	850	K.C.																																													
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(G)	16.5	M.C.	-	45	M.C.																																													
(H)	22	M.C.	-	60	M.C.																																													
"RANGE SELECTOR" SWITCH	<p>SCALES (A), (B), (C), (D) AND (E) CALIBRATED AT FUNDAMENTALS. SCALES (F), (G) AND (H) ARE HARMONIC RELATIONS OF SCALE (E)</p>	CENTER LEFT SIDE OF PANEL																																																
"AUDIO FREQUENCY SELECTOR" VARIABLE CAPACITOR	SCALE 50 TO 10,000 CYCLES	UPPER LEFT SIDE OF PANEL																																																
"EXT. MOD." JACK	PHONE JACK FOR EXTERNAL MODULATION OR HETRODYNING PURPOSES	EXTREME LOWER LEFT SIDE OF PANEL																																																
"OUTPUT SELECTOR" SWITCH	COMPLETES THE PROPER CONNECTIONS FOR MAKING AVAILABLE AT THE OUTPUT CIRCUITS OF THE SIGNAL GENERATOR AN AUDIO FREQUENCY, FREQUENCY MODULATED AND AMPLITUDE MODULATED OUTPUT	LOWER LEFT SIDE OF PANEL																																																
"400-CYCLE OUTPUT" PIN JACKS	AT THESE TWO PIN JACKS IS AVAILABLE A 400-CYCLE ALTERNATING CURRENT SOURCE; WHEN THE "MOD.-OFF" SWITCH IS SET AT THE "MOD" POSITION AND THE "OUTPUT SELECTOR" IS SET AT THE 400-CYCLE MOD. POSITION	ON OUTER LEFT EDGE OF PANEL																																																
"MOD-OFF" SWITCH	AFFORDS A MEANS FOR OBTAINING AT THE TWO "R.F. OUTPUT" SOCKETS AN AMPLITUDE MODULATED OR AN UNMODULATED OUTPUT	TO LEFT OF TUNING DIAL CONTROL KNOB																																																
"ON-OFF" SWITCH	A. C. POWER SUPPLY SWITCH	TO RIGHT OF TUNING DIAL CONTROL KNOB																																																
"TIME BASE" PIN JACKS	OUTPUT JACKS FOR A NON-LINEAR "TIME BASE" FOR USE WITH FREQUENCY MODULATED OUTPUT AND CATHODE RAY EQUIPMENT FOR VISUAL ALIGNMENT WORK	DIRECTLY BELOW TUNING DIAL																																																
"MULTIPLIER" SWITCH	SCALES - "1", "10", "100" AND "1,000". UTILIZED IN CONJUNCTION WITH ATTENUATOR FOR CONTROLLING THE OUTPUT OF THE SIGNAL GENERATOR	UPPER RIGHT OF PANEL																																																
"ATTENUATOR" POTENTIOMETER	SCALE GRADUATED FROM 0 TO 50 IN DIVISIONS OF APPROXIMATELY 5 MICROVOLTS FOR USE AS VERNIER CONTROL OF R. F. OUTPUT IN CONJUNCTION WITH THE MULTIPLIER SWITCH	RIGHT CENTER OF PANEL																																																
"HIGH R. F. OUTPUT" SOCKET	HIGHEST POINT OF R. F. POTENTIAL NOT CONTROLLABLE THROUGH ATTENUATOR NET WORK	BELOW AND TO LEFT OF ATTENUATOR ON LEFT SIDE OF PANEL																																																
"LOW R. F. OUTPUT" SOCKET	RADIO FREQUENCY OUTPUT CONTROLLED THROUGH ATTENUATOR NET WORK	BELOW AND TO RIGHT OF ATTENUATOR ON LEFT SIDE OF PANEL																																																
"AUDIO OUTPUT" PIN JACKS	AT THESE TWO PIN JACKS IS AVAILABLE AN AUDIO FREQUENCY OUTPUT; WHEN THE "OUTPUT SELECTOR" IS SET AT THE "AUDIO" POSITION AND THE MAIN TUNING DIAL AND "RANGE SELECTOR" ARE SET AS EXPLAINED IN THE INSTRUCTIONS	ON OUTER RIGHT EDGE OF PANEL																																																

! I M P O R T A N T !

UNLESS THIS PARAGRAPH IS COMPLETED WITH, THE GUARANTEE POLICY ON YOUR SUPREME INSTRUMENT IS NOT APPLICABLE !

REGISTRATION. THE RETURN REGISTRATION CARD, WHICH IS INCLUDED WITH EACH TESTER SHIPMENT SHOULD BE COMPLETED WITH THE PROPER INFORMATION AND MAILED IMMEDIATELY AFTER THE USER'S RECEIPT OF THE TESTER. IT IS THE PURPOSE OF THE RETURN REGISTRATION CARD (1) TO APPLY THE GUARANTEE POLICY IN FAVOR OF THE OWNER OF THE TESTER, AND (2) TO ASSURE THE USER'S RECEIPT OF ANY ADDITIONAL DATA WHICH MAY BE ISSUED WITH REFERENCE TO THE USE OF THE TESTER. THE ISSUANCE OF NEW DATA MAY NOT BE NECESSARY BUT IN CASE NEW DATA BE ISSUED, THE USER IS ENTITLED TO IT AND HE WILL RECEIVE SUCH NEW DATA IF HIS OWNERSHIP OF THE TESTER IS REGISTERED BY MEANS OF THE RETURN REGISTRATION CARD. THE GUARANTEE POLICY IS NOT APPLICABLE UNLESS THE TESTER IS REGISTERED WITHIN TEN DAYS AFTER ITS RECEIPT, AND THE SERIAL NUMBER OF THE TESTER SHOULD BE MENTIONED IN ALL CORRESPONDENCE.

LOCATION OF MODEL NUMBER ON PANEL. THE MODEL NUMBER OF THIS TESTER IS LOCATED DIRECTLY ABOVE THE MAIN TUNING DIAL ON THE PANEL.

MENTION THIS NUMBER IN ALL CORRESPONDENCE.

LOCATION OF SERIAL NUMBER ON PANEL. THE SERIAL NUMBER OF THIS TESTER IS LOCATED DIRECTLY BELOW THE MAIN TUNING DIAL CONTROL KNOB.

MENTION THIS NUMBER IN ALL CORRESPONDENCE.

GENERAL. THE MODEL 580 SIGNAL GENERATOR IS DESIGNED TO MEET THE DEMAND FOR A COMPLETELY SHIELDED GENERATOR WITH A RADIO FREQUENCY OUTPUT WHICH MAY BE FULLY CONTROLLED AND ONE WHICH HAS IN CONJUNCTION WITH THE ORDINARY SIGNAL GENERATOR FUNCTIONS, FACILITIES FOR PROVIDING A FREQUENCY MODULATED OUTPUT OF CONSTANT BAND WIDTH FOR USE IN VISUAL ALIGNMENT WORK, AS WELL AS AN AUDIO FREQUENCY OSCILLATOR OF THE BEAT FREQUENCY TYPE FOR AUDIO TEST PURPOSES. THIS GENERATOR IS THE RESULT OF MANY MONTHS OF INTENSIVE EXPERIMENTAL DEVELOPMENT IN AN EFFORT TO PRODUCE A GENERATOR WHICH WILL PROVIDE A MAXIMUM DEGREE OF UNCHANGING AND UNVARYING SERVICE CHARACTERISTICS WITH A MINIMUM OF OBSOLESCENCE PROBABILITIES. AMONG THE OUTSTANDING FEATURES OF THIS GENERATOR ARE:

1. CIRCUIT, R. F. AN ELECTRON-COUPLED CIRCUIT IS UTILIZED IN THE RADIO FREQUENCY GENERATOR STAGE, OFFERING EXCELLENT DYNAMIC STABILITY.
2. CIRCUIT, A. F. BEAT FREQUENCY OSCILLATOR CIRCUIT, ONE STAGE OF AUDIO AMPLIFICATION AND AN R. F. FILTER. RANGE 50 CYCLES TO 10,000 CYCLES WITH A HARMONIC CONTENT WHICH DOES NOT EXCEED 5%.
3. CIRCUIT, FREQUENCY MODULATION. A FIXED FREQUENCY OSCILLATOR EMPLOYING AN IRON CORED INDUCTOR IN THE TANK CIRCUIT, THE INDUCTANCE OF WHICH IS VARIED BY MEANS OF A SATURATING CURRENT. AS A RESULT THE FREQUENCY IS VARIED OVER A BAND WIDTH OF 24 KILOCYCLES, THE OUTPUT IS MIXED WITH THAT OF A VARIABLE FREQUENCY OSCILLATOR, MAKING AVAILABLE AT THE R. F. OUTPUT SOCKETS A FREQUENCY MODULATED BEAT NOTE WHICH IS CONSTANT IN BAND WIDTH AND CONTINUOUSLY VARIABLE OVER THE BAND OF FREQUENCIES WHICH LIE BETWEEN 125 KILOCYCLES AND 60 MEGACYCLES FOR USE IN VISUAL ALIGNMENT OF RECEIVERS IN CONJUNCTION WITH CATHODE RAY EQUIPMENT.
4. FREQUENCY RANGE. CARRIER FREQUENCY OF 125 KILOCYCLES TO 60 MEGACYCLES. FROM 125 KILOCYCLES TO 15 MEGACYCLES AT FUNDAMENTALS; EXTENSION OF THE BAND IS ACCOMPLISHED BY UTILIZING HARMONICS OF THE FIFTH FUNDAMENTAL BAND.
5. INTERNAL MODULATION. SELF-CONTAINED 400-CYCLE OSCILLATOR CAPABLE OF MODULATING THE RADIO FREQUENCY CARRIER 30% AND ARRANGED IN A UNIQUE MANNER TO PREVENT CARRIER "WOBBULATION".
6. EXTERNAL MODULATION. PROVISIONS FOR EXTERNAL AMPLITUDE MODULATION OF THE CARRIER IN ORDER THAT THE GENERATOR MIGHT MEET ALL MODERN TEST REQUIREMENTS.
7. ATTENUATOR. LADDER ATTENUATOR AND MULTIPLIER WHICH IS APPROXIMATELY CALIBRATED IN MICROVOLTS.
8. COUPLING TO ATTENUATOR CIRCUIT. COUPLING BETWEEN RADIO FREQUENCY GENERATING STAGE AND ATTENUATOR CIRCUIT PURELY ELECTRONIC.
9. TIME BASE. A NON-LINEAR TIME BASE IS PROVIDED WHICH IS AUTOMATICALLY ELECTRICALLY SYNCHRONIZED WITH THE FREQUENCY MODULATED OUTPUT OF THE GENERATOR.
10. 400-CYCLE OUTPUT. THE 400-CYCLE OUTPUT OF THE MODULATOR STAGE IS MADE AVAILABLE FOR USE IN AUDIO TESTS WHICH REQUIRE A FIXED FREQUENCY OF 400 CYCLES AND IS SINUSOIDAL IN WAVE FORM.
11. HIGH R. F. OUTPUT. ACCESS TO MAXIMUM RADIO FREQUENCY OUTPUT OF SIGNAL GENERATOR FOR USE IN ALIGNMENT OF RECEIVERS WHICH ARE BADLY OUT OF LINE.
12. LOW R. F. OUTPUT. AT THE LOW R. F. OUTPUT SOCKETS IS AVAILABLE THE RADIO FREQUENCY OUTPUT OF THE SIGNAL GENERATOR WHICH MAY BE CONTROLLED BY MEANS OF THE ATTENUATOR CIRCUIT.

13. STABILITY. THE CALIBRATION OF THE SIGNAL GENERATOR IS INDEPENDENT OF USUAL VARIATIONS OF PLATE POTENTIALS AND EXTERNAL LOADS.

TUNING RANGES. A TUNING "RANGE SELECTOR" IS PROVIDED FOR SELECTING ANY DESIRED TUNING RANGE BETWEEN 125 KILOCYCLES AND 60 MEGACYCLES. THIS ARRANGEMENT ENABLES COMPLETE COVERAGE OF ALL SUPER-HETERODYNE INTERMEDIATE FREQUENCIES, STANDARD AMERICAN BROADCAST FREQUENCIES, POLICE TUNING BANDS, AND ALL SHORT-WAVE BANDS DOWN TO 5 METERS, WHICH INCLUDES THE POPULAR 80-METER, 40-METER, 20-METER AND 5-METER AMATEUR BANDS. EACH TUNING RANGE IS COVERED BY A VARIABLE BALL-BEARING TUNING CAPACITOR CONTROLLED BY A SIX-INCH DIRECT READING AIRPLANE TYPE FRICTION DRIVE TUNING DIAL.

ACCURACY OF CALIBRATION. EACH GENERATOR IS ACCURATELY CALIBRATED IN TERMS OF FOUR ESPECIALLY DESIGNED FREQUENCY STANDARDS WHICH ARE CHECKED PERIODICALLY AGAINST WWV, THE BUREAU OF STANDARDS STATION LOCATED IN WASHINGTON, D. C., TO INSURE MAXIMUM PRECISION.

INTERNAL AMPLITUDE MODULATION. INTERNAL AMPLITUDE MODULATION OF THE SIGNAL GENERATOR CARRIER IS ACCOMPLISHED BY UTILIZING A TYPE 6F7 TUBE IN A WELL DESIGNED CIRCUIT WHICH IS COUPLED TO THE R. F. GENERATING STAGE SO THAT "WOBBULATION" OF THE CARRIER IS GREATLY REDUCED. THE MODULATOR STAGE IS TUNED AT 400 CYCLES. THIS FREQUENCY PRODUCES A PLEASING NOTE, AND ONE TO WHICH ANY ORDINARY OUTPUT METER IS VERY RESPONSIVE. THIS CIRCUIT IS SO DESIGNED AS TO EFFECT A MODULATION PERCENTAGE OF 30% WHICH IS THE ACCEPTED STANDARD PERCENTAGE FOR MODULATION OF THE CARRIER FREQUENCY OF THE SIGNAL GENERATOR FOR RECEIVER TEST PURPOSES. IF STRONG R. F. SIGNALS ARE APPLIED TO A SENSITIVE RADIO BY A POORLY MODULATED OSCILLATOR, IT IS POSSIBLE TO OVERLOAD THE DETECTOR WITH R. F. ENERGY WITHOUT HAVING AN APPRECIABLE LOUDSPEAKER OUTPUT OF A. F. ENERGY. IT IS, THEREFORE, OBVIOUS THAT PROPER PERFORMANCE OF THE RECEIVER UNDER TEST IS GREATLY DEPENDENT UPON THE INTRODUCTION OF A PROPERLY MODULATED RADIO FREQUENCY SIGNAL. PROVISIONS HAVE ALSO BEEN INCORPORATED FOR OBTAINING AT EITHER OUTPUT SOCKET AN UNMODULATED R. F. CARRIER. THIS IS AN IMPORTANT FEATURE WHEN CHECKS ARE BEING MADE BY THE HETERODYNE OR "ZERO BEAT" METHOD, AS RECOMMENDED IN THE SERVICE LITERATURE OF A NUMBER OF RADIO MANUFACTURERS.

EXTERNAL AMPLITUDE MODULATION. THERE HAS ALSO BEEN INCORPORATED IN THE SIGNAL GENERATOR FACILITIES FOR EXTERNAL MODULATION OF THE R. F. CARRIER. THE INPUT CIRCUITS OF THIS FUNCTION ALLOW AMPLITUDE MODULATION FROM 30 CYCLES UP TO AND INCLUDING 10,000 CYCLES, THUS RENDERING IT IDEALLY SUITED FOR CHECKING THE OVERALL AUDIO FREQUENCY RESPONSE OF ALL MODERN HIGH FIDELITY RECEIVERS.

FREQUENCY MODULATION. FREQUENCY MODULATION OF THE SIGNAL GENERATOR IS ACCOMPLISHED ELECTRICALLY AND WITHOUT THE USE OF ANY MECHANICAL DEVICES. THE MODULATOR CONSISTS OF A FIXED FREQUENCY OSCILLATOR UTILIZING THE TYPE 6F7 TUBE WHICH IS FREQUENCY MODULATED BY VARYING THE PERMEABILITY OF THE IRON CORED INDUCTOR EMPLOYED IN THE TANK CIRCUIT, THE VARIATION OF THE FREQUENCY BEING LINEAR AS A RESULT OF A VERY CAREFUL DESIGN OF THE IRON CORED INDUCTOR SO THAT IT OPERATES ON THE STRAIGHT LINE PORTION OF THE PERMEABILITY CURVE. THE OUTPUT OF THE FIXED FREQUENCY OSCILLATOR IS MIXED WITH THAT OF THE VARIABLE OSCILLATOR, THE RESULTING SIGNAL BEING A FREQUENCY MODULATED BEAT, VARIABLE OVER THE BAND OF FREQUENCIES WHICH LIE BETWEEN 125 KILOCYCLES AND 60 MEGACYCLES WITH A FIXED BAND WIDTH OF 24 KILOCYCLES. THERE IS ALSO PROVIDED A TIME BASE TO BE UTILIZED IN CONJUNCTION WITH THE FREQUENCY MODULATED OUTPUT SIGNAL GENERATOR AND WHICH IS ELECTRICALLY SYNCHRONIZED THUS DOING AWAY WITH THE NECESSITY OF HAVING AN IMPULSE GENERATOR OR SIMILAR EQUIPMENT FOR PROVIDING A TIME BASE WHICH IS SYNCHRONIZED WITH THE FREQUENCY MODULATED SIGNAL FOR USE IN VISUAL ALIGNMENT OF RECEIVERS.

FIXED FREQUENCY 400-CYCLE OUTPUT. THE 400-CYCLE OUTPUT OF THE MODULATED STAGE OF THE RADIO FREQUENCY GENERATOR, IS MADE AVAILABLE BY MEANS OF TWO PIN JACKS DESIGNATED AS "400-CYCLE OUTPUT".

VARIABLE AUDIO OUTPUT. IN ORDER TO FURTHER EXTEND THE UTILITY OF THIS UNIT, AN AUDIO OSCILLATOR OF THE BEAT FREQUENCY TYPE HAVING A RANGE OF FREQUENCIES WHICH ARE CONTINUALLY VARIABLE FROM 50 CYCLES TO 10,000 CYCLES HAS BEEN INCORPORATED.

THE VARIABLE AUDIO FREQUENCY OUTPUT IS OBTAINED FROM HETERODYNING TWO VOLTAGES OF SLIGHTLY DIFFERENT RADIO FREQUENCIES. THE OUTPUT FREQUENCY IS VARIED BY CHANGING THE FREQUENCY OF ONE OF THE OSCILLATORS BY MEANS OF A VARIABLE CAPACITOR IN ITS OSCILLATING CIRCUIT. IN ORDER TO PREVENT ANY TENDENCY WHICH THE TWO OSCILLATORS MIGHT HAVE TO PULL INTO STEP WHEN GENERATING LOW AUDIO FREQUENCIES, A TYPE 6F7 TUBE IS UTILIZED, CONNECTED SO THAT THE TRIODE SECTION SERVES AS AN R. F. OSCILLATOR AND THE PENTODE SECTION AS A BUFFER AMPLIFIER. INCORPORATION OF THE OSCILLATOR BUFFER AMPLIFIER COMBINATION ABSOLUTELY PREVENTS ANY POSSIBILITY OF AUTOMATIC SYNCHRONIZATION OF THE TWO OSCILLATORS.

OPERATION OF THE VARIABLE AUDIO FREQUENCY OSCILLATOR. THE PROPER PROCEDURE FOR UTILIZING THE AUDIO FUNCTIONS OF THIS GENERATOR ARE AS FOLLOWS:

- I. INSERT THE A. C. ATTACHMENT PLUG INTO A CONVENIENT OUTLET.
- II. SET THE "ON-OFF" TUMBLER SWITCH AT THE "ON" POSITION.
- III. SET THE "MOD-OFF" TUMBLER SWITCH AT THE "MOD" POSITION.
- IV. SET THE "OUTPUT SELECTOR" ROTARY SWITCH AT THE "AUDIO" POSITION.
- V. SET THE "RANGE SELECTOR" SWITCH AT THE "A" POSITION.
- VI. ROTATE THE TUNING DIAL CONTROL KNOB UNTIL THE POINTER ON THE MAIN R. F. OSCILLATOR DIAL IS DIRECTLY OVER THE HAND-CALIBRATED MARK ON THE "A" BAND OF THE DIAL. BEFORE ATTEMPTING TO USE THE AUDIO FUNCTIONS, THE GENERATOR SHOULD BE ALLOWED TO REACH ITS MAXIMUM OPERATING TEMPERATURE WHICH USUALLY REQUIRES FROM THREE TO FIVE MINUTES.
- VII. THE DESIRED FREQUENCY OF THE AUDIO OUTPUT IS SELECTED BY MEANS OF THE "AUDIO FREQUENCY SELECTOR" LOCATED IN THE UPPER LEFT SIDE OF PANEL.

AFTER THE ABOVE INSTRUCTIONS ARE FOLLOWED THE AUDIO OSCILLATOR IS NOW READY FOR USE. THE UNIT TO BE TESTED IS CONNECTED BY MEANS OF A SET OF TEST LEADS TO THE TWO PIN JACKS DESIGNATED AS "AUDIO OUTPUT" LOCATED ALONG THE OUTER RIGHT EDGE OF THE PANEL. CARE SHOULD BE EXERCISED IN MAKING THE CONNECTIONS INASMUCH AS THE PIN JACKS LOCATED BELOW AND TO THE RIGHT OF THE "ATTENUATOR" IS AT A GROUND POTENTIAL. THE FAILURE TO PROPERLY CONNECT THE GENERATOR WITH RESPECT TO GROUND WILL RESULT IN SHORT-CIRCUITING THE OUTPUT OF THE AUDIO AMPLIFIER. THIS FUNCTION IS DESIGNED TO WORK INTO A 500 OHM LINE FOR MAXIMUM POWER OUTPUT.

HETERODYNE TESTS. USING THE GENERATOR FOR HETERODYNE TESTS, THAT IS, THE DETERMINATION OF THE FREQUENCY OF AN UNKNOWN SIGNAL IN TERMS OF THE CALIBRATED R. F. OUTPUT SIGNAL GENERATOR A PAIR OF HEAD PHONES AND A STANDARD PHONE PLUG IS ALL THE ADDITIONAL EQUIPMENT REQUIRED. THE PROPER CONNECTIONS ARE AS FOLLOWS:

- I. INSERT THE SHIELDED ANTENNA CONNECTOR IN THE SOCKET DESIGNATED AS "HIGH R. F. OUTPUT".
- II. CONNECT THE R. F. UNDER STUDY (THE FREQUENCY OF WHICH IS UNKNOWN AND IS TO BE DETERMINED) TO THE TWO ALLIGATOR CLIPS OF THE SHIELDED ANTENNA CONNECTOR, BEING CAREFUL TO MAKE THE CONNECTIONS WITH PROPER RESPECT TO GROUND. IF THERE IS A D. C. POTENTIAL AT THE POINT OF CONNECTION WITH RESPECT TO GROUND IT SHOULD BE ISOLATED FROM THE OUTPUT CIRCUIT OF THE SIGNAL GENERATOR BY MEANS OF A FIXED CAPACITOR. THE VALUE OF THE CAPACITOR SHOULD BE SO CHOSEN THAT IT WILL OFFER A MINIMUM IMPEDANCE TO THE SIGNAL UNDER STUDY, OR IN OTHER WORDS, THE VALUE OF THE CAPACITOR FOR LOW FREQUENCY TESTS SHOULD BE COMPARATIVELY LARGE, FOR EXAMPLE, A SIGNAL OF 125 KILOCYCLES WILL REQUIRE A CAPACITOR HAVING A CAPACITY OF APPROXIMATELY 0.02-MFD. IN ORDER TO INSURE AMPLE SIGNAL STRENGTH; FOR HIGH FREQUENCY TESTS THE VALUE OF THE CAPACITOR EMPLOYED FOR COUPLING PURPOSES MAY BE CONSIDERABLY SMALLER.
- III. INSERT THE HEAD PLUG INTO THE "EXTERNAL MOD." PHONE JACK LOCATED ON THE RIGHT CENTER OF THE FRONT PANEL.
- IV. SET THE "MOD-OFF" SWITCH TO THE "OFF" POSITION.
- V. WITH THE R. F. FREQUENCY OF THE SIGNAL GENERATOR SET AT THE LOWEST FREQUENCY SETTING, VARY THE MAIN TUNING DIAL UNTIL AN AUDIBLE BEAT NOTE IS HEARD IN THE PHONES. IF NO SOUND IS HEARD AT ANY SETTING, SELECT A HIGHER RANGE AND REPEAT THE PROCEDURE. IF CARE IS NOT EXERCISED, A FALSE FREQUENCY DETERMINATION WILL OCCUR. IF, FOR EXAMPLE, A VARIABLE OSCILLATOR, IN THIS CASE THE SIGNAL GENERATOR, IS SET AT THE SECOND HARMONIC OF THE SIGNAL UNDER STUDY, THE DIAL INDICATION WILL BE THAT OF THE SECOND HARMONIC AND NOT THE FUNDAMENTAL. A FALSE DETERMINATION WILL NOT OCCUR IF THE OPERATOR REMEMBERS THAT THE CORRECT SETTING OF THE SIGNAL GENERATOR IS THE LOWEST FREQUENCY CALIBRATION OF THE SIGNAL GENERATOR AT WHICH THE BEAT NOTE OCCURS. THERE IS ONE OTHER POINT TO REMEMBER WHICH WILL ALSO AID IN OBTAINING ACCURATE RESULTS AND THAT IS, AS A GENERAL RULE, THE INTENSITY OF THE BEAT NOTE AS HEARD IN THE HEAD PHONES WILL INCREASE AS THE SETTING OF THE MAIN TUNING CONTROL NEARS THAT OF THE CORRECT FREQUENCY OF THE SIGNAL UNDER STUDY. THIS STATEMENT IS BASED ON THE ASSUMPTION THAT THERE IS NOT PRESENT IN THE SIGNAL GENERATOR CIRCUITS OR COUPLING CIRCUITS A RESONANT CIRCUIT DUE TO DISTRIBUTED CAPACITY AND INDUCTANCE; FOR IF SUCH A CONDITION DOES EXIST, THERE WILL BE A DECIDED DECREASE IN THE AMPLITUDE OF THE BEAT NOTE AT THE SETTING OF THE GENERATOR WHICH CORRESPONDS TO THE RESONANT FREQUENCY OF THE TUNED CIRCUIT.
- VI. AFTER THE PROPER AUDIBLE NOTE HAS BEEN DETECTED, THE MAIN TUNING DIAL OF THE SIGNAL GENERATOR IS VARIED UNTIL "ZERO" BEAT IS OBTAINED. THE FREQUENCY OF THE SIGNAL UNDER STUDY MAY THEN BE READ DIRECTLY FROM THE CALIBRATED DIAL OF THE GENERATOR. THEREFORE, FREQUENCY CHECKS MAY EASILY BE MADE BETWEEN 125 KILOCYCLES AND 15 MEGACYCLES.

SHIELDED ANTENNA CONNECTIONS. THE SHIELDED ANTENNA CONNECTOR SHOULD BE UTILIZED FOR COUPLING THE SIGNAL GENERATOR TO A RADIO IN THE FOLLOWING MANNER:

- I. INSERT THE SHIELDED ANTENNA PLUG IN THE "HIGH R. F. OUTPUT" SOCKET IF THE MAXIMUM R. F. OUTPUT FOR SIGNAL GENERATOR IS DESIRED. IF THE ATTENUATOR CIRCUITS ARE TO BE USED FOR CONTROLLING THE OUTPUT OF THE SIGNAL GENERATOR IT WILL BE NECESSARY THAT THE SHIELDED CONNECTOR PLUG BE INSERTED IN THE "LOW R. F. OUTPUT" SOCKET. THE SIGNAL IS THEN COMPLETELY CONTROLLABLE DOWN TO 1/2 MICROVOLT WHICH IS QUITE AMPLE ATTENUATION FOR SERVICING ALL MODERN RECEIVERS EMPLOYING HIGHLY SENSITIVE AVC CIRCUITS.
- II. ATTACH THE ANTENNA CLIP TO THE "ANTENNA" BINDING POST OF THE RADIO, OR TO THE CIRCUIT SPECIFIED BY THE RADIO MANUFACTURER.
- III. ATTACH THE GROUND CLIP TO THE "GROUND" BINDING POST OR TO SOME CONVENIENT POINT ON THE RECEIVER CHASSIS. BOTH RECEIVER AND SIGNAL GENERATOR SHOULD BE BROUGHT TO A GROUND POTENTIAL BY ATTACHING THE RECEIVER TO A GOOD GROUND CONNECTION BEFORE ATTEMPTING ALIGNMENT OR OTHER ADJUSTMENTS. THE ABOVE CONNECTIONS ARE FOR OVERALL ALIGNMENT ADJUSTMENT; IT IS SUGGESTED THAT THE USER OF THE INSTRUMENT SHOULD READ VERY CAREFULLY THE CONNECTIONS AS RECOMMENDED BY THE RECEIVER

MANUFACTURERS FOR SUCH ADJUSTMENTS AS I. F., R. F., DETECTOR AND OSCILLATOR, INASMUCH AS THERE ARE A NUMBER OF METHODS OF MAKING THESE ADJUSTMENTS. THEREFORE, IT WOULD BE IMPOSSIBLE TO WRITE A UNIVERSAL SET OF INSTRUCTIONS WHICH WOULD GIVE ALL THE NECESSARY DATA. THERE ARE, HOWEVER, A NUMBER OF PUBLICATIONS WHICH GIVE DETAIL INSTRUCTIONS COVERING ALIGNMENT PROCEDURE ON ALL MODERN RECEIVERS, SOME OF WHICH ARE LISTED UNDER THE HEADING "RECOMMENDED RADIO PUBLICATIONS", WHICH CAN BE FOUND ON THE LAST PAGES OF THIS INSTRUCTION BOOKLET.

DETERMINING THE PROPER SETTING. THE MAIN R. F. TUNING DIAL FOR USE OF THE FREQUENCY MODULATED OUTPUT OF THE SIGNAL GENERATOR. CALIBRATION OF THE MAIN R.F. TUNING DIAL OF THE SIGNAL GENERATOR IS IN TERMS OF THE AMPLITUDE MODULATED OUTPUT RATHER THAN BEING IN TERMS OF FREQUENCY MODULATED BEAT, THEREFORE, IT IS NECESSARY, WHEN UTILIZING THE FREQUENCY MODULATED OUTPUT FOR VISUAL ALIGNMENT OF RECEIVERS THAT A SIMPLE MENTAL CALCULATION BE MADE IN ORDER TO DETERMINE THE PROPER SETTING OF THE MAIN R.F. DIAL. THIS CALCULATION INVOLVES ONLY ADDITION; FOR EXAMPLE IF IT IS DESIRED TO UTILIZE THIS FUNCTION OF THE GENERATOR FOR DETERMINING THE PASS BAND OF AN INTERMEDIATE FREQUENCY CHANNEL WHICH IS RESONATED AT 175 KILOCYCLES THE CORRECT SETTING OF THE MAIN TUNING DIAL OF THE GENERATOR IS 775 KILOCYCLES, WHICH IS THE SUM OF THE DESIRED FREQUENCY (175 KILOCYCLES AND 600 KILOCYCLES THE MEAN FREQUENCY) OF THE FREQUENCY MODULATED BEAT. THE UNDERLYING PRINCIPLE IS THE SAME AS THAT OF THE PRESENT DAY SUPERHETRODYNE RECEIVER AND SHOULD OFFER NO DIFFICULT PROBLEM AT ALL TO THE RADIO SERVICE ENGINEER.

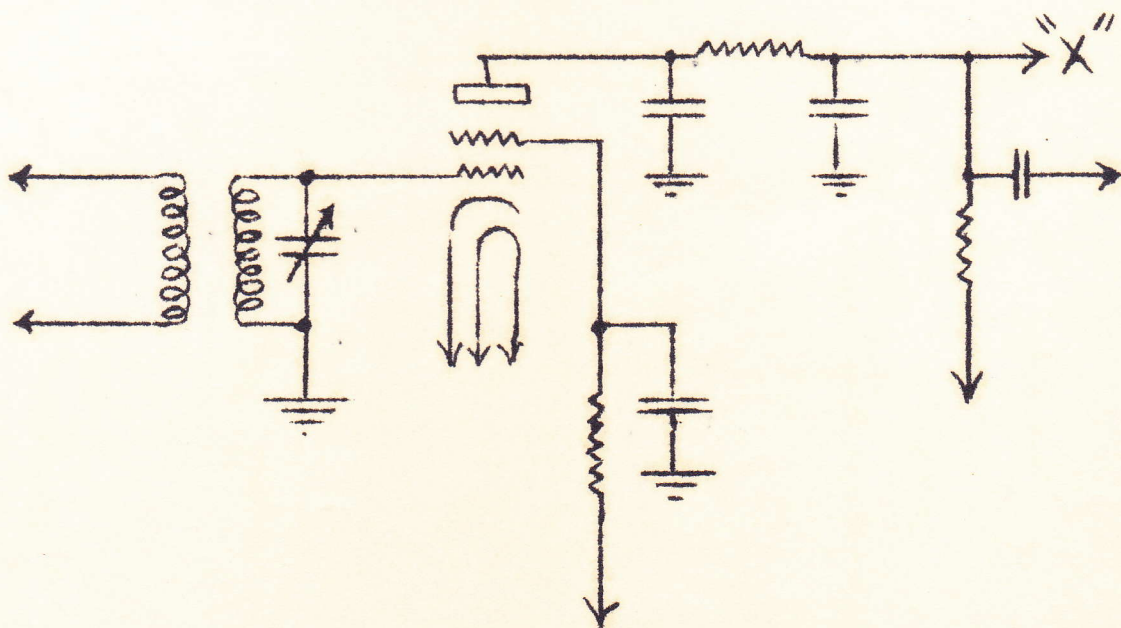
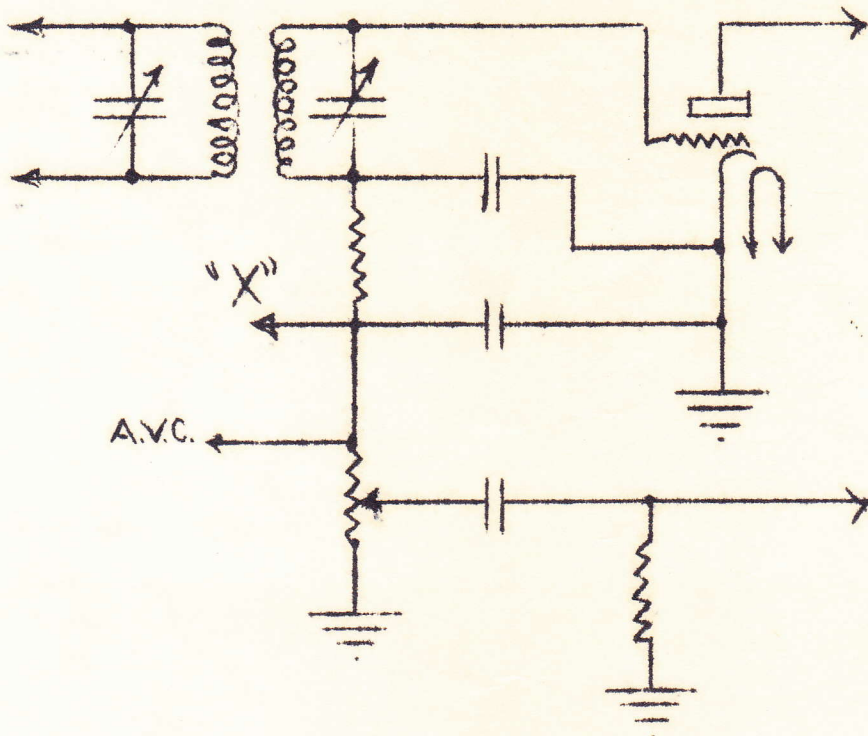
OPERATION OF THE FREQUENCY MODULATED OUTPUT. THE FREQUENCY MODULATED OUTPUT OF THE MODEL 580 SIGNAL GENERATOR IS USED IN CONNECTION WITH THE MODEL 545 CATHODE RAY UNIT OR A SIMILAR UNIT FOR VISUAL ALIGNMENT OF RECEIVERS. THE PROPER PROCEDURE IS AS FOLLOWS:

- I. INSERT THE MALE ATTACHMENT PLUG INTO A CONVENIENT A.C. POWER OUTLET.
- II. SET THE "ON-OFF" TUMBLER SWITCH AT THE "ON" POSITION.
- III. SET THE "OUTPUT SELECTOR" SWITCH TO THE "FREQ. MOD." POSITION, SET THE "MOD-OFF" TUMBLER SWITCH TO THE "MOD" POSITION.
- IV. INSERT THE SHIELDED ANTENNA CONNECTOR IN THE "HIGH R. F. OUTPUT" SOCKET IF MAXIMUM OUTPUT IS DESIRED, OR, IN THE "LOW R. F. OUTPUT" SOCKET IF IT IS DESIRED THAT THE SIGNALS BE ATTENUATED. ATTENUATION OF THE R.F. BEAT OUTPUT, THAT IS, THE FREQUENCY MODULATED R.F. OUTPUT, IS ACCOMPLISHED BY UTILIZING THE MULTIPLIER IN CONJUNCTION WITH THE VARIABLE ATTENUATOR.
- V. INSERT A PAIR OF TEST LEADS INTO THE "TIME BASE" PIN JACKS AND CONNECT DIRECTLY TO THE HORIZONTAL AMPLIFIER CIRCUITS OF THE CATHODE RAY OSCILLOSCOPE WITH PROPER RESPECT TO GROUND. THE "TIME BASE" PIN JACK LOCATED TO THE LEFT OF THE MAIN TUNING DIAL SHOULD BE CONNECTED TO THE GROUND TERMINAL OF THE CATHODE RAY OSCILLOSCOPE. A FAILURE OF THE TIME BASE TRACE TO APPEAR ACROSS THE SCREEN OF THE CATHODE RAY TUBE WOULD BE AN INDICATION OF AN IMPROPER PHASE RELATION EXISTING BETWEEN THE UNITS. IF SUCH A CONDITION IS INCOUNTERED DURING ALIGNMENT TEST IT MAY BE EASILY CORRECTED BY REVERSING THE ATTACHMENT PLUGS OF THE RADIO, OSCILLOSCOPE OR SIGNAL GENERATOR. UNDER SOME CONDITIONS IT MIGHT BE FOUND NECESSARY TO REVERSE THE ATTACHMENT PLUG OF TWO OF THE UNITS. AFTER THE PROPER PHASE RELATION BETWEEN THE UNITS HAS BEEN DETERMINED, THE SWEEP POTENTIAL TRACE SHOULD BE ADJUSTED SO THAT IT PROJECTS ONE QUARTER OF AN INCH BEYOND OUTERMOST FREQUENCY CALIBRATIONS OF THE CELLULOID BAND PASS SCREEN.
- VI. FOR OVERALL R.F. ALIGNMENT THE SHIELDED ANTENNA ALLIGATOR CLIPS ARE CONNECTED TO THE ANTENNA AND GROUND POSTS OF THE RECEIVER OR TO THE CONNECTIONS SPECIFIED BY THE RECEIVER MANUFACTURER. THE VERTICAL DEFLECTING PLATES OF THE CATHODE RAY OSCILLOSCOPE ARE THEN CONNECTED ACROSS THE DIODE LOAD OF THE RECEIVER. (SEE PICTORIAL DIAGRAM OF CONNECTIONS SHOWN IN BACK OF BOOKLET.)
- VII. FOR INTERMEDIATE FREQUENCY ADJUSTMENT THE PROCEDURE IS EXACTLY THE SAME AS OUTLINED BY THE MANUFACTURER OF THE RECEIVER FOR CONNECTION OF THE OUTPUT OF THE SIGNAL GENERATOR. THE CONNECTIONS FOR THE VERTICAL DEFLECTING PLATES ARE AT ALL TIMES DURING I. F., R.F., OSCILLATOR AND DETECTOR ALIGNMENT MADE DIRECTLY ACROSS THE DIODE LOAD OF THE RECEIVER.

IT IS BEYOND THE SCOPE OF THIS INSTRUCTION BOOKLET TO GIVE FULL DETAILED INFORMATION REGARDING VISUAL ALIGNMENT OF RADIO RECEIVERS, AND IT IS SUGGESTED THAT THE USER REFER TO "AN HOUR A DAY WITH RIDER ON RESONANCE AND ALIGNMENT", AND "THE CATHODE RAY TUBE AT WORK", WRITTEN BY JOHN F. RIDER AND OBTAINABLE FROM THE JOHN F. RIDER PUBLISHERS, 1440 BROADWAY, NEW YORK CITY.

VERNIER MOVEMENT TUNING DIAL. EACH TUNING RANGE IS COVERED BY A VARIABLE TUNING CAPACITOR CONTROLLED BY A SIX-INCH FULL VISION PRECISION SLOW-MOTION TUNING DIAL. PROTECTED AGAINST ANY POSSIBILITY OF THE USER FORCING THE DIAL BEYOND ITS LIMIT THEREBY AFFECTING THE ACCURACY OF THE CALIBRATION BY UTILIZING A FRICTION TYPE DRIVE. THIS FEATURE ALSO PROVIDES AN EXCELLENT MEANS FOR PLOTTING THE CHARACTERISTIC CURVES OF THE I. F. AND ALSO AN OVERALL SELECTIVITY CURVE OF RADIO RECEIVERS BY THE USUAL OUTPUT METER METHOD. BY CAREFUL MANIPULATION OF THE SLOW-MOTION TUNING DIAL THE USER WILL FIND VERY LITTLE DIFFICULTY IN COMPILING THIS DATA INASMUCH AS THE FREQUENCY OF THE SIGNAL GENERATOR MAY BE VARIED IN STEPS AS SMALL AS 1 KILOCYCLE.

FREQUENCY STABILITY. HERETOFORE THE MOST UNDESIRABLE FEATURE OF THE A.C. OPERATED OSCILLATOR HAS BEEN THE INHERENT FREQUENCY SHIFT DUE TO VARIATIONS IN PLATE AND FILAMENT POTENTIALS WHICH



TRANSPORTATION DAMAGES. THE OFFICE OF ORIGIN OF THE TRANSPORTATION AGENCY WHICH ACCEPTED THIS TESTER FOR THE ORIGINAL SHIPMENT ASSURED THE SHIPPER AGAINST EXTERNAL AND CONCEALED DAMAGES IN TRANSIT. IF THE TESTER BE RECEIVED IN A DAMAGED CONDITION, OR IF SOME PART OF THE TESTER BE DAMAGED IN TRANSIT, THE USER OF THE TESTER SHOULD ASK THE TRANSPORTATION AGENCY, WHICH DELIVERED THE TESTER, FOR A "CONCEALED DAMAGE REPORT" WHICH SHOULD BE FORWARDED TO THE FACTORY, WITH THE RETURN REGISTRATION CARD, FOR FACTORY INSTRUCTIONS AS TO THE PROCEDURE WHICH SHOULD BE FOLLOWED FOR EFFECTING THE NECESSARY REPAIRS OR REPLACEMENTS. IF THE DESTINATION OFFICE OF THE TRANSPORTATION AGENCY REFUSES TO FURNISH A "CONCEALED DAMAGE REPORT", THAT FACT SHOULD BE REPORTED IN A LETTER TO THE FACTORY WITH THE RETURN OF THE REGISTRATION CARD.

SUPREME SERVICE STATIONS. FOR THE PURPOSE OF EFFECTING PROMPT REPAIR OF DAMAGES SUSTAINED BY INADVERTENT MISUSE, OR FOR ANY OTHER REASON, THE SERVICES OF THE SUPREME SERVICE STATIONS MAY BE UTILIZED INSTEAD OF RETURNING DAMAGED TESTERS TO THE FACTORY. A LIST OF THE SUPREME SERVICE STATIONS MAY BE OBTAINED FROM THE SUPREME FACTORY OFFICES. IF IT SHOULD BE NECESSARY TO SHIP A TESTER TO THE FACTORY OR TO A SUPREME SERVICE STATION, THE SHIPMENT SHOULD BE MADE VIA EXPRESS — NEVER VIA PARCEL POST — AND A LETTER SHOULD BE WRITTEN AND FORWARDED, SEPARATELY, ADVISING OF THE SHIPMENT AND INCLUDING COMPLETE INSTRUCTIONS AS TO THE DESIRED HANDLING AND DISPOSITION OF THE MERCHANDISE; OTHERWISE THE MERCHANDISE WILL BE REFUSED BY THE CONSIGNEE.

IF A SEPARATE LETTER IS RECEIVED BY THE FACTORY, AHEAD OF THE TESTER'S ARRIVAL, THE PROPER ACCEPTANCE FORMS WILL BE MADE OUT BY THE FACTORY, THE TESTER WILL BE RECEIVED AND USUALLY REPAIRS WILL BE EFFECTED AT ONCE AND THE TESTER RE-SHIPED. IF THE TESTER IS NOT WITHIN THE 90 DAY GUARANTEE PERIOD, REPAIRS WILL BE MADE UP TO \$5.00 WITHOUT SENDING THE USER AN ESTIMATE UNLESS WE RECEIVE SPECIFIC INSTRUCTIONS TO SEND AN ESTIMATE IN ANY CASE. IF THE NECESSARY REPAIR CHARGES TOTAL MORE THAN \$5.00, AN ESTIMATE WILL BE SENT IN ANY CASE, UNLESS THE FACTORY HAS RECEIVED SPECIFIC INSTRUCTIONS TO REPAIR THE TESTER REGARDLESS OF COST.

WHEN THE USER SENDS HIS REGISTRATION CARD TO THE FACTORY WITHIN 10 DAYS AFTER RECEIPT OF THE TESTER, HE WILL BE FURNISHED WITH A POCKET SIZE "GUARANTEE CARD" WHICH SHOULD BE INCLUDED WITH THE TESTER SHIPMENT TO EITHER THE FACTORY OR AN AUTHORIZED SERVICE STATION IF THE TESTER IS STILL WITHIN THE 90 DAY PERIOD.

WHEN REPAIRS ARE REQUESTED OF THE FACTORY OR A SERVICE STATION BY A CUSTOMER HAVING A "GUARANTEE CARD" AND INCLUDING SAME IN SHIPMENT, AND THE GUARANTEE IS FOUND TO BE STILL IN EFFECT, THE FACTORY OR AUTHORIZED SERVICE STATION WILL MAKE THE REPAIRS IN ACCORDANCE WITH THE GUARANTEE POLICY HEREIN STATED AND WILL RETURN THE TESTER TO THE USER WITHOUT CHARGE WITH THE EXCEPTION OF (1) AN INSTRUMENT RECTIFIER REPLACEMENT (INSTRUMENT RECTIFIERS ARE NOT GUARANTEED) AND (2) TRANSPORTATION CHARGES WHICH MUST BE BORNE BY THE CUSTOMER.

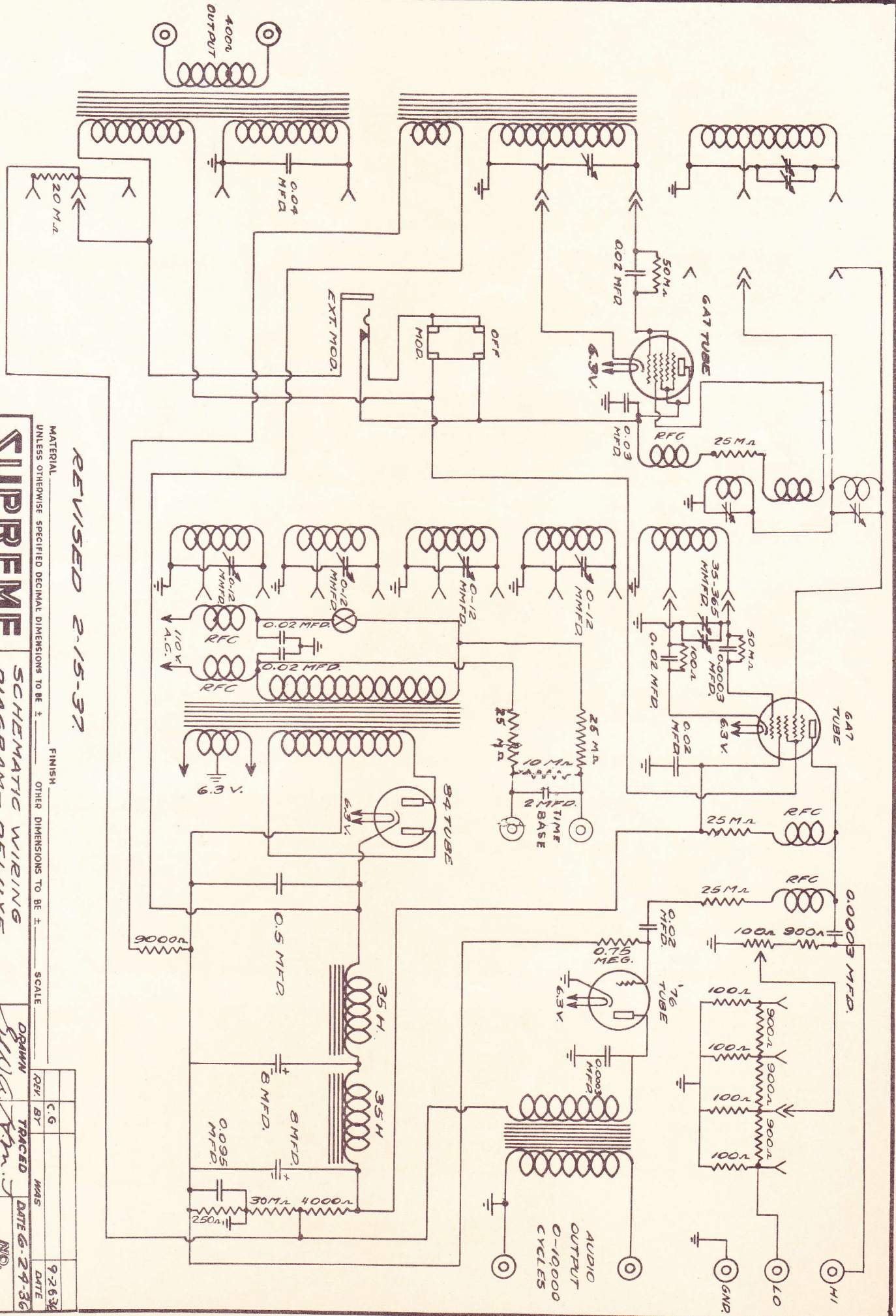
OUR SERVICE STATIONS ARE NOT AUTHORIZED TO MAKE NO-CHARGE REPAIRS ON SUPREME TESTERS UNLESS THE "GUARANTEE CARD" (FURNISHED THE USER BY THE FACTORY UPON THE RETURN OF THE USER'S REGISTRATION CARD) ACCOMPANIES THE TESTER AND THE TESTER IS RETURNED BEFORE THE EXPIRATION OF THE 90 DAY PERIOD.

ALL DISPUTES REGARDING REPAIR CHARGES SHOULD BE REFERRED TO THE "SERVICE ENGINEER" AT THE FACTORY.

REPLACEMENT PARTS, ETC. IF SOME PART OF THE TESTER BE DAMAGED IN SERVICE, OR IF THE USER SHOULD WANT TO ORDER CIRCUIT DRAWINGS, ANALYSIS CHARTS, TEST LEADS, OR OTHER ACCESSORIES, HIS ORDER SHOULD BE ACCOMPANIED BY A DEPOSIT AMOUNTING TO NOT LESS THAN FIFTY CENTS. SINCE AN ORDER AMOUNTING TO LESS THAN FIFTY CENTS CANNOT BE ASSEMBLED, PACKED AND SHIPPED WITHOUT FINANCIAL LOSS, A HANDLING CHARGE MAY BE MADE SO AS TO MAKE THE ORDER TOTAL FIFTY CENTS, INCLUDING TRANSPORTATION CHARGES. IF AN ORDER BE ACCOMPANIED BY A DEPOSIT WHICH DOES NOT COVER THE COST OF THE MERCHANDISE AND TRANSPORTATION CHARGES, THE SHIPMENT WILL BE MADE VIA EXPRESS C.O.D. FOR THE BALANCE DUE. A LIST OF REPLACEMENT PARTS MAY BE OBTAINED UPON REQUEST. WE DO NOT RECOMMEND THE INSTALLATION OF INSTRUMENT RECTIFIERS BY THE USER AS THIS INVARIABLY LEADS TO DIFFICULTIES WITH THE FACTORY. SERVICEMEN DO NOT HAVE PROPER CALIBRATION STANDARDS BY WHICH THE A. C. RANGES CAN BE CALIBRATED. INSTRUMENT RECTIFIERS ARE VERY LIABLE TO DAMAGE BY INEXPERIENCED REPAIR MEN AND ARE, THEREFORE, NOT GUARANTEED IN ANY MANNER, EVEN WHEN NEW. INSTRUMENT RECTIFIERS SHOULD BE REPLACED BY THE FACTORY OR AN AUTHORIZED SERVICE STATION.

GUARANTEE. THE TESTER IS NOT GUARANTEED UNLESS THE OWNERSHIP THEREOF IS PROPERLY REGISTERED. WHEN THE USER REGISTERS HIS OWNERSHIP OF THIS TESTER WITHIN 10 DAYS AFTER HE RECEIVES IT, HE WILL RECEIVE, IN RETURN, A "GUARANTEE CARD" STATING THAT THE TESTER WILL BE GUARANTEED TO BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP. ANY SUCH DEFECT IN MATERIAL OR WORKMANSHIP WILL BE CORRECTED, WITHOUT CHARGE, WHEN THE TESTER, TOGETHER WITH THE "GUARANTEE CARD", IS DELIVERED TO THE SUPREME INSTRUMENTS CORPORATION, GREENWOOD, MISSISSIPPI, OR TO AN AUTHORIZED SUPREME SERVICE STATION WITHIN 90 DAYS AFTER ITS RECEIPT BY THE USER; PROVIDED THAT (1) THE FREE REPAIR OR REPLACEMENT OF MATERIALS SHALL NOT INCLUDE THE COST OF THE INSTALLATION OF INSTRUMENT RECTIFIERS WHICH ARE INCAPABLE OF WITHSTANDING APPRECIABLE ELECTRICAL OVERLOADS AND ARE NOT, THEREFORE, GUARANTEED BY THE MANUFACTURERS, AND (2) THE USER ACCEPTS THE OBLIGATION OF THE PAYMENT OF ALL TRANSPORTATION COSTS INVOLVED IN THE CORRECTIONS EFFECTED UNDER THE CONDITIONS OF THIS GUARANTEE POLICY, IN ACCORDANCE WITH THE STANDARD PRACTICES OF THE RADIO MANUFACTURERS ASSOCIATION.

SUPREME INSTRUMENTS CORPORATION
GREENWOOD, MISSISSIPPI
U. S. A.



REVISED 2-15-37

MATERIAL _____ FINISH _____
 UNLESS OTHERWISE SPECIFIED DECIMAL DIMENSIONS TO BE ± _____ OTHER DIMENSIONS TO BE ± _____ SCALE _____

SUPREME
 INSTRUMENTS CORPORATION
 GREENWOOD, MISS. USA

SCHEMATIC WIRING
 DIAGRAM - DELUXE
 SIGNAL GENERATOR,
 MODEL 580

DATE	9-2-63
BY	C. G.
TRACED	DATE 6-29-36
NO.	1326-B
CHECKED	APPROVED
DATE	

RECOMMENDED RADIO PUBLICATIONS

"AN HOUR A DAY WITH RIDER" SERIES
RIDER'S MANUALS - JOHN F. RIDER
SERVICING SUPERHETRODYNES - JOHN F. RIDER
PUBLISHED BY - JOHN F. RIDER, PUBLISHER
1440 BROADWAY, NEW YORK CITY

ELEMENTS OF RADIO COMMUNICATION - JOHN H. MORECROFT
EXPERIMENTAL RADIO ENGINEERING - JOHN H. MORECROFT
PUBLISHED BY - JOHN WILEY & SONS, INC.
440 - 4TH AVENUE, NEW YORK CITY

RADIO PHYSICS COURSE - ALFRED GHIRARDI
MODERN RADIO SERVICING - GHIRARDI AND FREED
RADIO FIELD SERVICE DATA - GHIRARDI AND FREED
PUBLISHED BY - RADIO TECHNICAL PUBLISHING COMPANY
22 WEST 21ST STREET, NEW YORK CITY

SOUND MOTION PICTURES RECORDING & REPRODUCTION
SERVICING SOUND EQUIPMENT
PUBLIC ADDRESS SYSTEMS
BY JAMES R. CAMERON
PUBLISHED BY - CAMERON PUBLISHING COMPANY
WOODMONT, CONN.

PROJECTION SOUND PICTURES - AARON NADELL
PUBLISHED BY - MCGRAW-HILL BOOK COMPANY
330 WEST 42ND STREET, NEW YORK CITY

THE CATHODE RAY TUBE AT WORK - JOHN F. RIDER
PUBLISHED BY - JOHN F. RIDER, PUBLISHER
1440 BROADWAY, NEW YORK CITY

MODEL 580 ACCESSORIES ORDER
 TO
 SUPREME INSTRUMENTS CORPORATION
 GREENWOOD, MISSISSIPPI
 U. S. A.

PLEASE SHIP TO.....
 STREET ADDRESS.....
 P. O. & STATE.....

QUANTITY	STOCK NO.	DESCRIPTION	PRICE	TOTAL
.....	6288	CHART, ANALYSIS, PER PAD OF 50	0.25
.....	8001	CHART, BLANK OSCILLATOR CALIBRATION	0.15
.....	1325-B	DRAWING, MODEL 580 CIRCUIT	0.15
		TOTAL	

A DEPOSIT, AMOUNTING TO NOT LESS THAN FIFTY CENTS IS ENCLOSED HEREWITH; AND IT IS UNDERSTOOD THAT, IF THIS ORDER AMOUNTS TO LESS THAN FIFTY CENTS INCLUDING TRANSPORTATION COSTS, A HANDLING CHARGE WILL BE MADE SO AS TO MAKE THE ORDER TOTAL FIFTY CENTS. IF THE DEPOSIT IS INSUFFICIENT TO COVER THE COST OF THE MERCHANDISE AND TRANSPORTATION CHARGES, YOU ARE REQUESTED TO MAKE SHIPMENT VIA C.O.D. EXPRESS FOR THE BALANCE DUE. IT IS UNDERSTOOD THAT YOUR QUOTED PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

.....193..... (SIGNED)



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