SERVICING
by
SIGNAL SUBSTITUTION

Twelfth Edition

IMPORTANT NOTE

This copy of "Servicing by Signal Substitution" contains special hand calibration data for THIS INSTRUMENT ONLY and must be kept with it at all times.

Series E-200-C Serial # 40567

Precision Apparatus Company, Inc.

Elmhurst, L. I., New York

Price 40 Cents

middial	MAX RF
A, B, & C	1.5 v pp
D	1 v pp
E	.5 v pp
F, F_2, F_4	.3 v pp

INSTRUCTIONS AND GUIDE FOR OPERATION OF THE

PRECISION SERVICE-LABORATORY SIGNAL GENERATOR

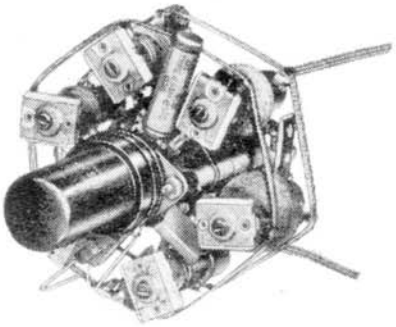
SERIES E-200-C

FEATURING THE PRECISION METHOD OF

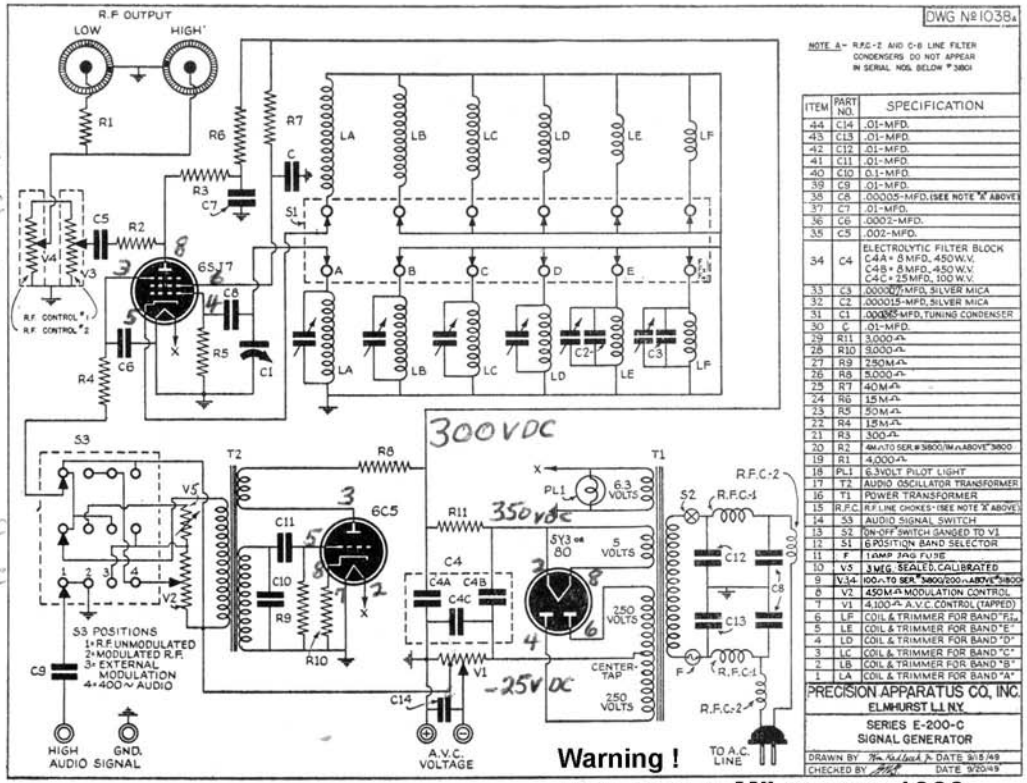
DYNAMIC RECEIVER ANALYSIS

"SERVICING BY SIGNAL SUBSTITUTION"

SERIES E-200-C SIGNAL GENERATOR



PRECISION "UNIT-OSCILLATOR" CONSTRUCTION



6SJ7

PIN 6 180VDC

PIN 8 200VDC

PIN 3 -20VDC

6C5

PIN 8 15VDC

PIN 3 295VDC

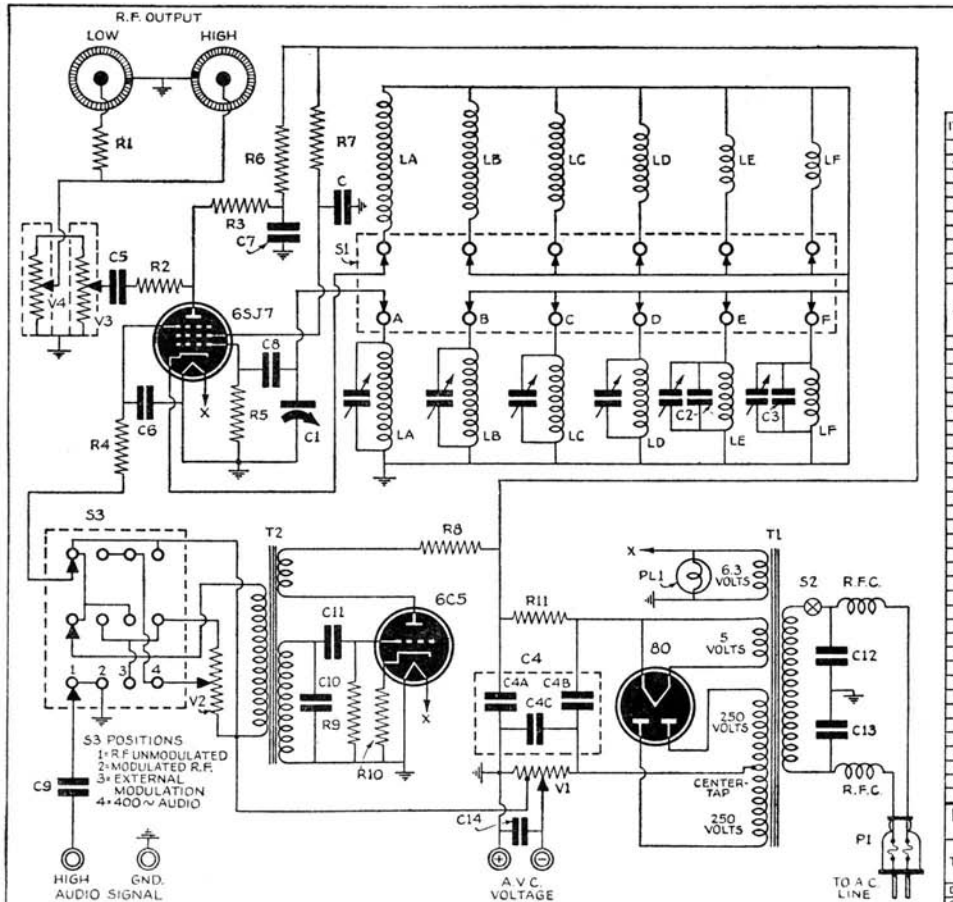
350VDC has 2VAC RMS

300VDC has .1VAC RMS

-25VDC has 1VAC RMS

Warning !

On parts list "M" means 1000, not 1,000,000



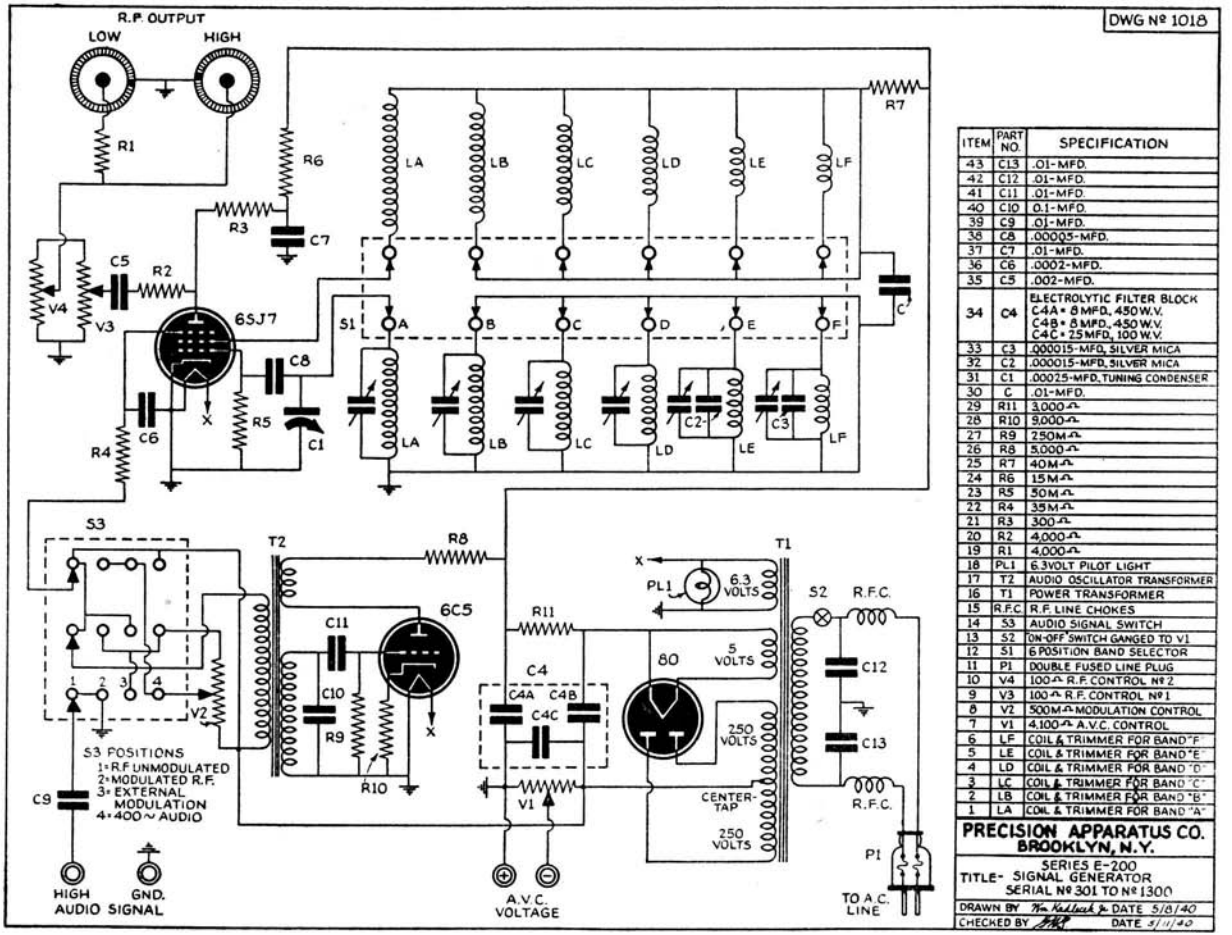
DWG Nº 1028

ITEM	PART NO.	SPECIFICATION
44	C14	.01-MFD.
43	C13	.01-MFD.
42	C12	.01-MFD.
41	C11	.01-MFD.
40	C10	0.1-MFD.
39	C9	.01-MFD.
38	C8	.00005-MFD.
37	C7	.01-MFD.
36	C6	.0002-MFD.
35	C5	.002-MFD.
34	C4	ELECTROLYTIC FILTER BLOCK C4A = 8 MFD., 450 W.V. C4B = 8 MFD., 450 W.V. C4C = 25 MFD., 100 W.V.
33	C3	.000015-MFD. SILVER MICA
32	C2	.000015-MFD. SILVER MICA
31	C1	.00075-MFD. TUNING CONDENSER
30	C	.01-MFD.
29	R11	3,000 Ω
28	R10	9,000 Ω
27	R9	250M Ω
26	R8	5,000 Ω
25	R7	40M Ω
24	R6	15M Ω
23	R5	50M Ω
22	R4	15M Ω
21	R3	300 Ω
20	R2	4,000 Ω
19	R1	4,000 Ω
18	PL1	6.3 VOLT PILOT LIGHT
17	T2	AUDIO OSCILLATOR TRANSFORMER
16	T1	POWER TRANSFORMER
15	R.F.C.	R.F. LINE CHOKES
14	S3	AUDIO SIGNAL SWITCH
13	S2	ON-OFF SWITCH GANGED TO V1
12	S1	6 POSITION BAND SELECTOR
11	P1	DOUBLE FUSED LINE PLUG
10	V4	100 Ω R.F. CONTROL Nº 2
9	V3	100 Ω R.F. CONTROL Nº 1
8	V2	500M Ω MODULATION CONTROL
7	V1	4,100 Ω A.V.C. CONTROL (TAPPED)
6	LF	COIL & TRIMMER FOR BAND "F"
5	LE	COIL & TRIMMER FOR BAND "E"
4	LD	COIL & TRIMMER FOR BAND "D"
3	LC	COIL & TRIMMER FOR BAND "C"
2	LB	COIL & TRIMMER FOR BAND "B"
1	LA	COIL & TRIMMER FOR BAND "A"

PRECISION APPARATUS CO.
BROOKLYN, N.Y.

SERIES E-200 SIGNAL
TITLE-GENERATOR-SECOND SERIES-
STARTING WITH SERIAL Nº 1301

DRAWN BY [illegible] DATE 5/27/40
CHECKED BY [illegible] DATE 6/29/40



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36	C6	.0002-MFD.
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34	C4	ELECTROLYTIC FILTER BLOCK C4A • 8 MFD. 450 W.V. C4B • 8 MFD. 450 W.V. C4C • 25 MFD. 100 W.V.
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31	C1	.00025-MFD. TUNING CONDENSER
30	C	.01-MFD.
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2	LB	COIL & TRIMMER FOR BAND "B"
1	LA	COIL & TRIMMER FOR BAND "A"

PRECISION APPARATUS CO.
BROOKLYN, N.Y.

SERIES E-200
TITLE- SIGNAL GENERATOR
SERIAL Nº 301 TO Nº 1300

DRAWN BY W. Kadlick Jr. DATE 5/8/40
CHECKED BY [illegible] DATE 5/11/40

IMPORTANT NOTE

RELATIVE TO SERIES E-200-C AND E-200 MODULATION CONTROLS

Page (27) of this book describes the use and setting of Series E-200-C "Modulation Control".

In models PREVIOUS to E-200-C this control is NOT direct reading in terms of percentage of modulation, but rather the settings MUST be made in accordance with the calibration chart which appears on the reverse side of this page. This chart lists internal modulation percentage versus "Modulation Control" settings and must be rigidly followed for best results.

If this control be set above 6.5, or above 100% modulation, the modulation tone may cut off as if the control were open. This is a direct result of overmodulation and is NOT a defect of the instrument.

The audio sections of Series E-200 and E-200-C are capable of delivering considerably greater audio signal voltage than is required for purposes of internal modulation of the R.F. signal. Accordingly, oversetting the "Modulation Control" quite understandably injects too great an audio signal into the R.F. amplifier-buffer section. This high audio output, however, is extremely desirable when employed for direct audio tests as described on page (28), page (82) and following.

Of course, when the audio test signal is to be employed for EXTERNAL usage, the "Audio Signal" switch is no longer set to "MOD. R.F.", but instead to "400 CYCLE AUDIO" position. Then the "Modulation Control" may be set to whatever level is required for the apparatus under test, bearing in mind the information contained in the note on page (28).

On Series E-200-C, percentage modulation settings are direct reading on the OUTSIDE set of numerals.

The INNER ring of numbers, 0-10, represent a purely

arbitrary set of figures for reference use when employing the same control for audio signal test purposes or for EXTERNAL modulation percentage control. In such cases the "AUDIO SIGNAL" switch would NOT be in the "Modulated R.F." position.

K4XL's  BAMA

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