

RE-ISSUE JANUARY 1937

SERVICE NOTES AND PARTS LIST

Grunow Radio

CHASSIS TYPE 9A

RECEIVER MODELS 901 & 902

This supersedes manual of previous date

GENERAL HOUSEHOLD UTILITIES CO.

Printed in U. S. A.

Part 40049

Chicago, U. S. A.

Alignment Procedure

If alignment is found necessary, use a calibrated signal-generator and an output meter. (It is necessary that the signal-generator have an output of approximately 0.5 volt in order to actuate the A.V.C. circuit to point of distortion.) Allow chassis and signal-generator to warm-up at least 15 minutes.

ALIGNING I. F. STAGES AT 262kc.

Connect the ground lead of the signal-generator to the chassis sub-panel. Connect an .05 mfd. condenser in series with the signal lead and connect it to the grid clip of the 78 - 1st Det. tube. Connect the output meter in accordance with instructions accompanying it. Turn tuning shaft until condenser plates are fully meshed and turn volume full-on. Set signal-generator to 262 kc. and adjust I.F. trimmers A1, A2, A3, and A4 to maximum output. To insure accurate setting of these trimmers, repeat the adjustments, using the lowest signal output that will give a readable deflection of the output meter.

A.V.C. TRANSFORMER ALIGNMENT

Connect a shunt across output meter or disconnect it. Increase the output of the signal-generator to the point at which the receiver distorts. Reduce the volume to a low value by means of the receiver volume control and remove the shunt from the output meter, or reconnect it.

Turn the A.V.C. trimmer screw A5 in a clockwise direction to the point of minimum capacity. Gradually turn this screw counter-clockwise while watching the action of the output meter. As the capacity of the trimmer is increased, an output peak is reached, followed by a drop-off to a minimum value. Further increase in trimmer capacity causes the output to rise to a new peak, after which, occurs a drop to a low value and further rotation has no effect upon the output. The correct setting of this trimmer is the point of minimum output between the two high output peaks. Be very careful when making this adjustment that the trimmer is set between the two output peaks rather than the minimum output obtained by either a high or low capacity setting. (See Fig. 2A).

SHORT - WAVE ALIGNMENT

Be certain to align S. W. before broadcast. Change signal-generator setting to 3.5 megacycles. Connect a 400 ohm carbon resistor in series with the signal lead and connect this lead to the antenna post. Set range switch on Short-Wave position. Check setting of dial by turning until condenser rotor plates are fully meshed. The last mark on the short-wave calibration should coincide exactly with the vertical line on the tuning indicator. If correction is required, loosen the three screws

which fasten the tuning dial to the hub and set dial correctly. Turn dial to 3.5 megacycles and adjust Osc. trimmer A6 to maximum output. It will be noted that there are two settings at which the signal will be received; use the setting of least capacity, that is, the setting at which the trimmer screw is farthest out.

1400 kc. ALIGNMENT

Change signal-generator to 1400 kc. Turn dial to 1400 kc. Remove 400 ohm resistor from signal-lead and connect a 200 mmf. condenser in its place. Set range switch on broadcast. Adjust the 1400 kc. trimmer A7, Det. trimmer A8 and Ant. trimmer A9 and Bi-selector trimmer A10 to maximum output. These should be adjusted in rotation at least three times.

600 kc. ALIGNMENT

Change signal-generator to 600 kc. and tune in signal to maximum. Adjust the 600 kc. padder A11 while rocking the condenser gang slightly in direction of signal increase until no further improvement in out-put can be obtained. Check Osc. trimmer A6 at 3.5 mc. and readjust if calibration has changed; then recheck at 600 kc.

Caution:

On all of the above operations always use the lowest signal-generator output that will give a readable deflection of the output meter (except A.V.C. Alignment) in order to prevent the A.V.C. from levelling the output as adjustments are made.

DIAL CALIBRATION

If it is found necessary to correct dial calibration mechanically, loosen the three screws which fasten the dial disc to the drive hub and reset. Do not loosen the two set screws which hold the hub on the condenser drive shaft.

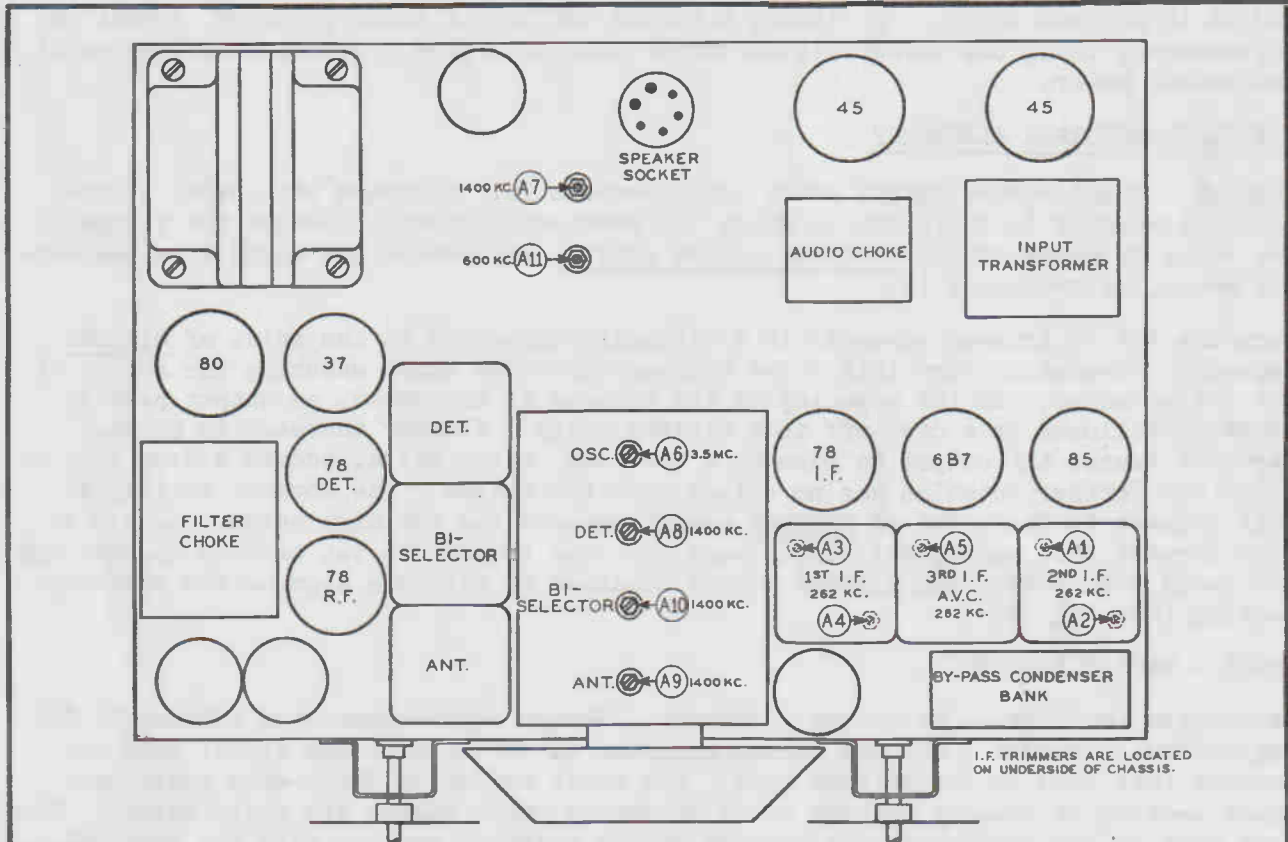


FIG.-1

TUBE LAYOUT AND TRIMMER LOCATIONS

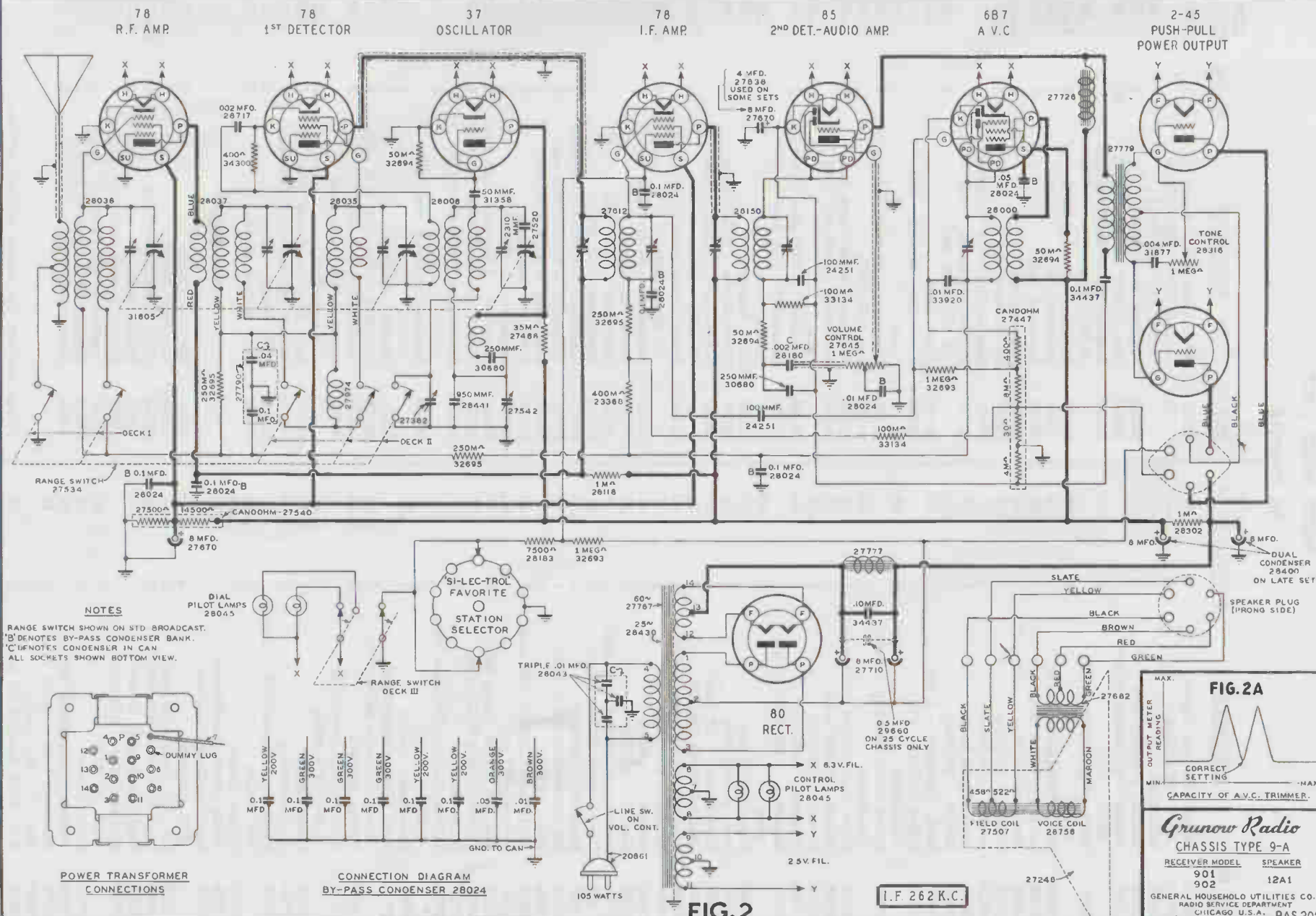


FIG. 2

I.F. 262 K.C.

Grunow Radio
CHASSIS TYPE 9-A
 RECEIVER MODEL
 901 902 12A1
 GENERAL HOUSEHOLD UTILITIES CO.
 RADIO SERVICE DEPARTMENT
 CHICAGO U.S.A.
 OT-JAN-37 RAS 201

PARTS PRICE LIST

9A CHASSIS

PART NO.	DESCRIPTION	NO. REQ.	LIST PRICE	PART NO.	DESCRIPTION	NO. REQ.	LIST PRICE
20141	Drive Drum Set Screw	2	.01	28006	Oscillator Coil	1	2.50
20861	Line Cord & Plug	1	.40	28011	Contact Plate Lug & Insu- lator (Si-Lec-Trol)	2	.25
20962	Grid Clip	5	.01	28015	Shifter Cam Plate	1	.75
22353	Antenna Binding Post	1	.10	28016	Sta. Finder Arm & Contact	10	.10
23187	Rubber Mtg. Washer 9/16" thick	4	.05	28017	Contact Plate Shifting Arm & Mtg. Hub	1	.50
23188	Rubber Mtg. Washer 3/8" thick	4	.05	28024	By-pass Condenser Bank	1	2.00
23558	Vert. Terminal - 1 lug	5	.10	28033	Resistor Panel	1	.20
23368	Resistor-400 M ohms 1/4 Watt	1	.15	28035	Detector Coil	1	.85
24251	Condenser - Mica - 100 mmf.	2	.20	28036	Antenna Coil	1	1.40
24754	Socket - 85 Tube	1	.10	28037	Bi-Selector Coil	1	1.20
26218	Socket - 78 Tube	3	.10	28038	Housing-Variable Condenser	1	.45
26256	Tube Shield Base	6	.05	28043	Triple Condenser - .01-.01- 01 mfd. (in can)	1	.80
26814	Socket - 80 Tube	1	.10	28045	Pilot Lamp	4	.15
27053	Vert. Terminal - 2 Lug	3	.10	28064	Pilot Lamp Socket - Vol. Cont.	1	.25
27254	Drive Spring - Var. Condenser	1	.05	28118	Resistor - 1M ohms 1 watt	1	.20
27259	Drive Shaft Bearing - Var. Condenser	1	.15	28150	2nd I.F. Coil	1	2.80
27260	Drive Shaft - Var. Condenser	1	.05	28172	Station Finder Clamp Nut	6	.02
27342	Shield - Pilot Lamp	2	.02	28180	Condenser -.002 mfd. (in can)	1	.40
27374	Socket - 37 Tube	1	.10	28183	Resistor - 7500 ohms 1 watt	1	.20
27382	Trimmer - 1400 kc.	1	.35	28302	Resistor - 1000 ohms - wire wound	1	.30
27447	Resistor - 400-5000-30-4000 ohms	1	.60	28316	Tone Control	1	.75
27453	Tube Shield Cap	5	.10	28326	Thumb Screw - Pilot Lamp	1	.05
27454	Tube Shield Body	5	.15	28400	Electrolytic Cond. - Dual 8 mfd.	1	2.40
27455	Tube Shield - 37 Tube	1	.15	28430	Power Transformer - 115V. 25-50 cycles	1	12.00
27465	Control Shaft Bracket	3	.15	28441	Condenser - Mica - 950 mmf.	1	.25
27468	Resistor - 35 M ohms 1 watt	1	.20	28532	Drive Cable	1	.20
27487	Socket - 6B7 Tube	1	.15	28717	Condenser - .002 mfd.	1	.30
27488	Socket - Speaker	1	.15	29660	Condenser - .5 mfd.	1	.40
27489	Socket - 45 Tube	1	.10	29831	Condenser - Mica - 1000 mmf.	1	.30
27490	Resistor - 1M ohms 1/4 watt	1	.15	30680	Condenser - Mica - 250 mmf.	2	.20
27492	Knob-Tone & Volume Cont.	2	.15	31358	Condenser - Mica - 50 mmf.	1	.20
27508	Knob-Sta. Selector	1	.20	31605	Variable Condenser	1	7.50
27520	Condenser-Mica-2310 mmf.	1	.50	31877	Condenser - .004 mfd.	1	.30
27534	Range Switch	1	5.50	32693	Resistor - 1 megohm - 1/2 Watt	2	.15
27540	Resistor-27,500-14,500 ohms	1	.65	32694	Resistor - 50 M ohms 1/2 Watt	3	.15
27542	Trimmer-600 kc.	1	.60	32695	Resistor - 250 M ohms 1/2 watt	3	.15
27614	Station Finder Clamp Nut	6	.02	33134	Resistor - 100 M ohms 1/2 watt	2	.15
27616	Contact Plate Shift Arm	1	.20	33920	Condser - .01 mfd.	1	.30
27617	Drive Drum	1	.50	34300	Resistor - 400 ohms 1/2 watt	1	.15
27645	Volume Control (Replace with 27687)	1	.20	34437	Condenser - 0.1 mfd.	2	.35
27667	Knob-Range Switch	1	.20	61054	Screw - Fillister Head (Si-Lec-Trol)	10	.01
27670	Dual Electrolytic Cond. 8 mfd. 350v. - 8mfd. 25v.	1	1.60	63001	Hex. Head Set Screw (Dial)	3	.02
27687	Volume Control	1	1.15	63829	Washer (Silectrol Finder Arm)	10	.01
27710	Electrolytic Condenser 8 mfd. 475 volts	2	1.15	63858	Felt Washer (Knob)	1	.01
27726	Audio Choke	1	1.75	63839	Felt Washer (Knob)	3	.01
27748	Dial Assembly	1	1.60				
27767	Power Transformer-115 volts 60 cycles	1	9.50				
27777	Filter Choke	1	2.65				
27779	Audio Input Transformer	1	3.00				
27790	Dual Condenser - .04-0.1 Mfd. (in can)	1	.60				
27812	1st I.F. Coil & Shield	1	2.10	20047	Terminal Strip	1	.10
27829	Dial Indicator & Bracket	1	.15	20048	Terminal Cover	1	.05
27832	Dial Pilot Lamp Socket	1	.25	27248	12A1 Speaker Complete	1	14.00
27838	Electrolytic Condenser 4 mfd. 25 volts	1	.50	27507	Field Coil	1	4.30
27887	Thumb Screw	1	.02	27682	Output Transformer	1	2.25
27974	Coupling Inductance Coil	1	.25	27839	Speaker Cable Plug	1	.35
27976	Volume & Tone Control Dial	2	.30	27841	Speaker Cable - Less Plug	1	.55
28000	3rd I.F. Coil (A.V.C.)	1	1.70	28756	Cone & Voice Coil	1	1.75
28002	R.F. Coil Shields (3 cans)	1	.85				

Prices subject to change without notice.