

Philco Radio & Television Corp.

	Model: 39-25	Chassis:	Year: Pre August 1939
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		

Resources

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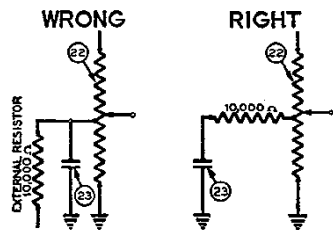
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Philco 39-25

A few of the early production Model 39-25 Philco receivers had the bass-compensating condenser in the volume-control circuit improperly connected.



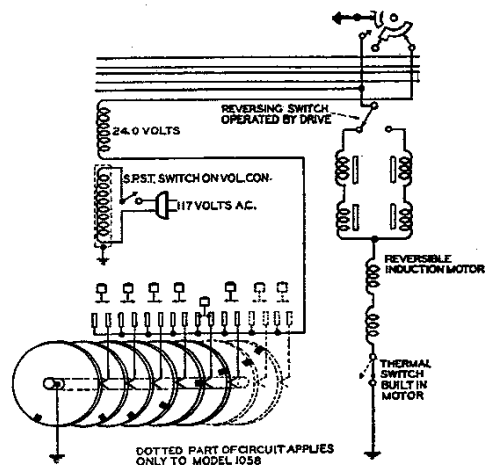
If a Philco 39-25 lacks high notes at low settings of the volume control, check to see how the bass-compensating condenser is connected. These partial schematics tell the story.

connected. The indication of such incorrect connection is a lack of high notes at low settings of the volume control. Above is shown the incorrect and the correct connections. The schematic of this receiver shown on page 10-9 of *Rider's Volume X* shows the correct connections.

Majestic 11056, 11057, 11058

Models 11056 and 11058 are found on pages 9-8 to 9-10 of *Rider's Volume IX*. The data given there also apply to Model 11057. A new electric tuning system has been incorporated in later runs of all these receivers, and is illustrated in Fig. 1. The procedure for indexing the tuning system for desired stations is as follows:

- (1) Set receiver to Standard Broadcast band.
- (2) Place "Manual-Electric" lever in "Manual" position, which is extreme counter-clockwise. Be sure the tone control is in the "Normal" position as shown by the indicator.



A new electric tuning system has been incorporated in later runs of Majestic models 11056, 11057, and 11058, the schematic being shown at the left. Note that the dotted portion of the drawing applies only to the last named model number.

- (3) Pull out Indexing Rod located at the center bottom half of the escutcheon. This rod has numbers on it which correspond to the push buttons (counting from left to right).
- (4) Set Indexing Rod so that the number on the rod corresponding to the push button you wish to index is in line with the escutcheon plate.
- (5) Turn tuning knob until the pointer has covered the entire dial. This is essential to engage the tuning disc.
- (6) Tune in the desired station accurately, using the tuning eye.
- (7) Push Indexing Rod all the way in, and that particular station will always be tuned in automatically when that particular button is depressed while the "Manual-Electric" lever is in the "Electric" position.

To index more than one station, go through steps (3) to (6) for each station desired and when finished, push the Indexing Rod back as far as it will go.

Caution: When using electric tuning, do not depress more than one button at a time. Depressing two buttons will cause the motor to run continuously or until the automatic thermal switch operates to prevent the motor from burning out. If this happens it may take fifteen minutes for the motor to become cool enough for the electric tuning to become operative again.

Philco 620

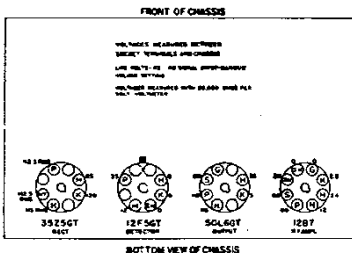
Certain oscillator trimmers are incorrectly numbered on pages 6-26 and 6-27 of *Rider's Volume VI* (early Model 620 Philco). In the parts list on page 6-26, the reference numbers should be changed as follows: Change 13 to 16; change 14 to 17; change 16 to 13; change 17 to 14. The same changes should be made on page 6-27 in Fig. 2 and in the alignment instructions located below this figure. These changes must be made so that the

reference numbers will agree with those shown on the schematic which appears on page 6-25. Do NOT alter the numbers on the schematic.

These errors in numbering also appear in the parts list for the late Model 620 Philco. Therefore the reference numbers on page 7-90 of *Rider's Volume VII* must be changed as follows: Change 13 to 16; change 14 to 17; change 16 to 13; change 17 to 14.

G.E. H-400

The final service bulletin on this receiver was not available at the time *Rider's Volume X* went to press and the preliminary schematic, chassis layout, and alignment notes were run on page 10-45. The final service notes show no changes in any of these data. Herewith will be found the socket layout showing the voltages. Make a



Socket layout and voltages for the General Electric model H-400.

note on the schematic that the power consumption of this receiver is 25 watts and that the impedance at 400 cycles of the voice coil is 3.5 ohms.

Emerson CF-255

Two different type speakers have been used during production of this receiver. In the specifications listed on page 10-23 of *Rider's Volume X*, mention is made of a 4-inch magnetic speaker, but in some chassis a permanent magnet dynamic speaker has been used. In those chassis which employ the latter, the condenser, C-10, in the output circuit, has been changed to 0.024 mf. When the magnetic speaker is used, C-10 is 0.005 mf.

On receivers having serial numbers above 2,637,480, the detector coil, T2, has been changed. The part number is now 6FT-462A.

PHILCO RADIO & TELEV. CORP.

MODEL 39-25, Code 121
Schematic

I.F. = 470 KC.

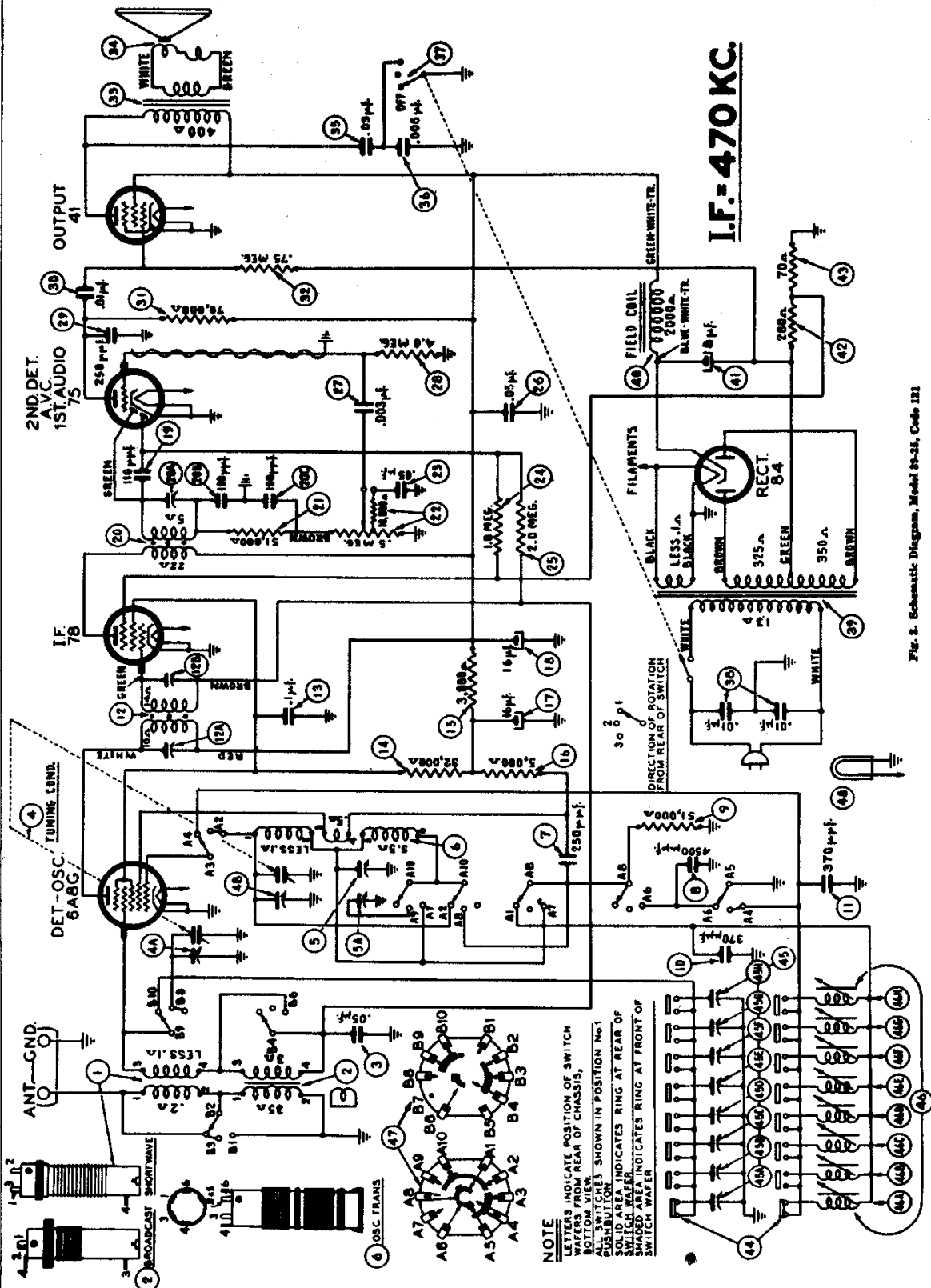


Fig. 2. Schematic Diagram, Model 39-25, Code 121

MODEL 39-25

Code 121

Alignment, Chassis
Tuner Data

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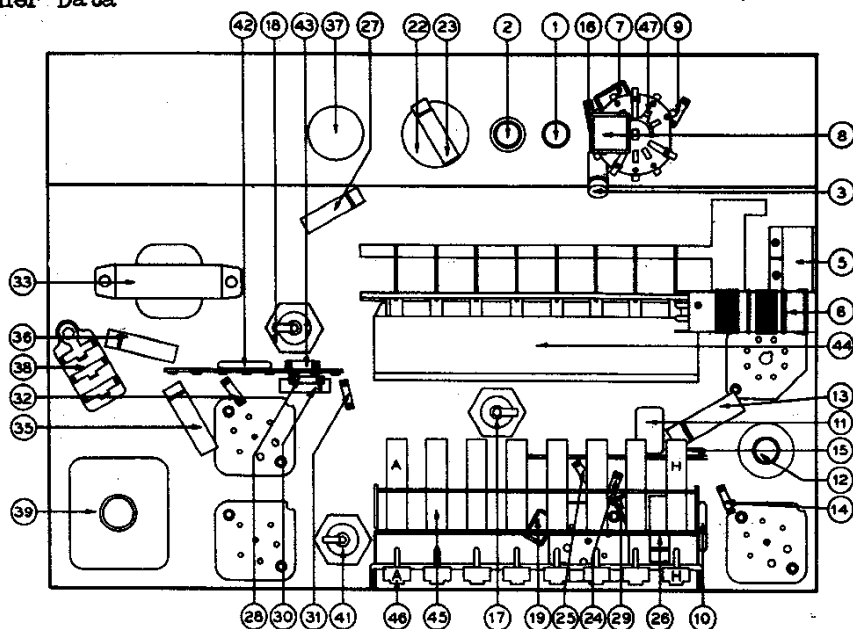


Fig. 2. Part Locations, Underside of Chassis

TUNING MECHANISM: Pulley and cable drive for Manual tuning. Electric Push-Button for Automatic tuning.

CABINETS: Types "T" and "XF."

Alignment of Compensators

EQUIPMENT REQUIRED: (1) Signal Generator; Philco Model 077 Signal Generator which has a fundamental frequency range from 115 to 36,000 K. C. is the correct instrument for this purpose. (2) Output meter, Philco Model 027 Circuit Tester, incorporates a sensitive output meter and is recommended. (3) Philco Fiber Handle Screw Driver, part No. 27-7059, and Fiber Wrench, part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate and cathode terminals of the Type 41 tube. Set the meter to use the 0-50 volt scale. After connecting the output meter adjust compensators in the order as given below.

Operations in Order	Signal Generator			Receiver		Special Instructions
	Output Connections to Receiver	Dummy Antenna (Note A)	Dial Setting	Control Settings	Adjust Compensators in Order	
1	6A8G Grid	.1 mf.	470 KC	Vol. Cont. max.	(20A) (12B) (12A)	
2	Ant. Ter.	100 mmf.	180 MC	Vol. Cont. max.	(4B)	See Note B
3	Ant. Ter.	100 mmf.	1550 KC	Vol. Cont. max.	(5) (4A)	
4	Ant. Ter.	100 mmf.	580 KC	Vol. Cont. max.	(5A)	
5	Ant. Ter.	100 mmf.	1550 KC	Vol. Cont. max.	(5)	

NOTE A: The "Dummy Antenna" consists of a condenser connected in series with the signal generator output lead (high side). Use the capacity as specified in each step of the above procedure.

These detailed instructions have been prepared to make sure the correct procedure is followed in setting the stations on the Philco Electric Push-Button Tuning models. The work requires the use of a Philco Model 077 Station Setter and a part No. 27-7059 Insulated Screw Driver.

(A) Select eight of the most popular stations received in the locality and remove their call letters from the call letter sheets supplied. Place the call letters in the windows above the buttons, making sure that each respective button covers the frequency of the station for which it is to be used. The frequency range of the circuits are as follows:

Circuits	Frequency Range
1 and 2	540 to 1030 kilocycles
3 and 4	670 to 1160 kilocycles
5 and 6	900 to 1470 kilocycles
7 and 8	1170 to 1600 kilocycles

These numbers are stamped on the unit as seen from the rear. Looking at the front of the cabinet the numbers read from left to right.

(B) Connect the aerial and ground to the "ANT" and "GND" terminals of the receiver.

NOTE B: DIAL CALIBRATION: In order to adjust the receiver correctly the dial must be set to the correct frequency. To do this, the dial pointer on the extreme left index line at the low frequency end of the dial must be adjusted.

(C) Turn the receiver Tuning Range Selector to position two ("Manual Tuning") and tune the receiver to the station to be set on the first button.

(D) Plug the output leads of the Station Setter into the "High" and "Grid" jacks, and turn the output controls to maximum. Turn the modulation control to "Modulation Off." Connect the output lead of the Station Setter to the "ANT" and "GND" terminals of the receiver and tune to the frequency of the station being received. As the indicator is slowly tuned through the frequency of the station there will be two points at which a high pitched swish will be heard, one above and one below the frequency of the station. When the indicator is on the frequency of the station, minimum high pitched swish will be heard.

(E) Set the modulation control of the Station Setter for "Modulation On." The modulated signal of the Station Setter will then be heard through the receiver.

(F) Turn the receiver Tuning Range Selector to position one (Automatic Tuning) and push in the first button. Using the Part No. 27-7059 Insulated Screw Driver, turn the number 1 "OSC" screw until the modulated signal of the Station Setter is tuned in to maximum volume. Then adjust the number 1 "ANT" screw for maximum signal.

(G) Remove the output lead of the Philco Station Setter from the "ANT" terminal of the receiver and turn its indicator off the frequency of the station. The program of the desired station will then be heard on the receiver.

(H) With the volume of the receiver low, slowly turn the number 1 "OSC" back and forth until maximum output is received. Repeat the same procedure for the number 1 "ANT" screw.

After setting up the first station, the same procedure given under (C) to (H) is used for the other stations.

PHILCO RADIO & TELEV. CORP.

MODEL 39-25
Code 121
Socket, Trimmers
Voltage, Parts

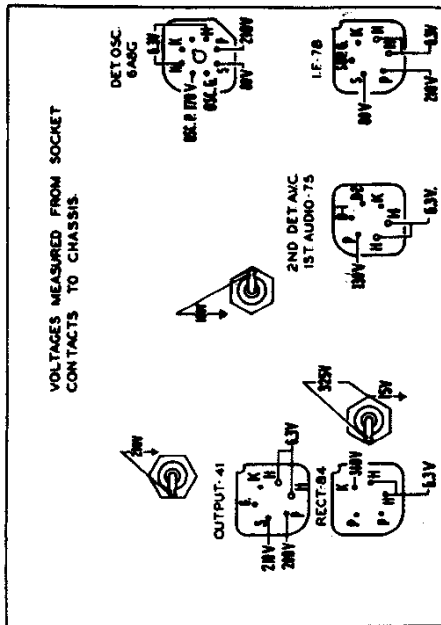


Fig. 1. Socket Voltage—Underside of Chassis
The voltages indicated by arrows were measured with a Philco 027 Circuit Tester, which contains a sensitive voltmeter. Volume Control at minimum—Tuning Condenser set for no signal—line voltage 115 A. C.

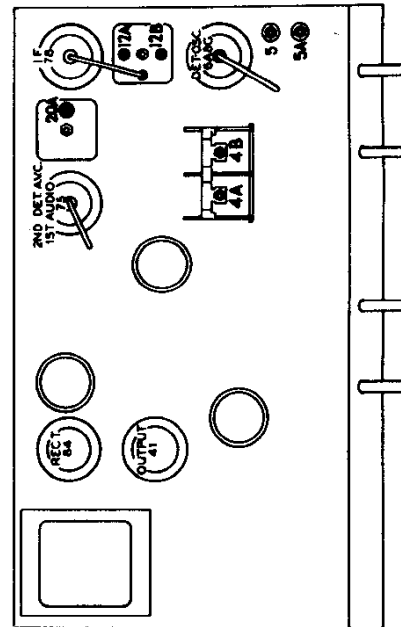


Fig. 4. Locations of Compensators

REPLACEMENT PARTS—MODEL 39-25, CODE 121

Schem. No.	Description	Part No.	Schem. No.	Description	Part No.
1	Antenna Transformer (short wave)	32-3027	42	Resistor (280 ohms, wire wound)	33-128431
2	Antenna Transformer (broadcast)	32-3026	43	Resistor (70 ohms, 1/2 watt)	33-070339
3	Tubular Condenser (.05 mf.)	30-4519	44	Push-Button Switch	42-1446
4	Tuning Condenser Assembly	31-2267	45	Compensator Strip Assembly	31-6256
5	Dual Padder Unit	31-6255	45A	Compensator, No. 1, 540-1030 K. C.	31-6274
6	Oscillator Transformer	32-3028	45B	Compensator, No. 2, 540-1030 K. C.	31-6274
7	Condenser (250 mmf., mica)	30-1032	45C	Compensator, No. 3, 670-1160 K. C.	31-6276
8	Condenser (4500 mmf., mica)	30-1109	45D	Compensator, No. 4, 670-1160 K. C.	31-6276
9	Resistor (51,000 ohms, 1/2 watt)	33-351339	45E	Compensator, No. 5, 900-1470 K. C.	31-6278
10	Condenser (370 mmf., silver plated mica)	30-1110	45F	Compensator, No. 6, 900-1470 K. C.	31-6278
11	Condenser (370 mmf., silver plated mica)	30-1110	45G	Compensator, No. 7, 1170-1600 K. C.	31-6280
12	1st I. F. Transformer Assembly	32-3018	45H	Compensator, No. 8, 1170-1600 K. C.	31-6280
13	Condenser (.1 mf., tubular)	30-4455	46	Electric Tuning Coil Assembly (complete)	32-3031
14	Resistor (32,000 ohms, 1/2 watt)	33-332339	46A	Osc. Coil, No. 1, 540-1030 K. C.	32-3042
15	Resistor (3000 ohms, 1/2 watt)	33-230339	46B	Osc. Coil, No. 2, 540-1030 K. C.	32-3042
16	Resistor (5000 ohms, 1/2 watt)	33-250339	46C	Osc. Coil, No. 3, 670-1160 K. C.	32-3042
17	Electrolytic Condenser (16 mf., 250 V.)	30-2331	46D	Osc. Coil, No. 4, 670-1160 K. C.	32-3042
18	Electrolytic Condenser (16 mf., 250 V.)	30-2331	46E	Osc. Coil, No. 5, 900-1470 K. C.	32-3041
19	Condenser (110 mmf., mica)	30-1031	46F	Osc. Coil, No. 6, 900-1470 K. C.	32-3041
20	2nd I. F. Transformer Assembly	32-3030	46G	Osc. Coil, No. 7, 1170-1600 K. C.	32-3041
21	Resistor (51,000 ohms, 1/2 watt)	33-351339	46H	Osc. Coil, No. 8, 1170-1600 K. C.	32-3041
22	Volume Control (500,000 ohms)	33-5289	47	Range Switch	42-1445
23	Condenser (.05 mf., tubular)	30-4444	48	Pilot Lamp	34-2210
24	Resistor (1 meg., 1/2 watt)	33-510339	49	Bezel Assembly	40-6365
25	Resistor (2 meg., 1/2 watt)	33-520339	50	Bezel Gasket	27-9175
26	Condenser (.05 mf., tubular)	30-4518	51	Bezel Screw	W-1834
27	Condenser (.003 mf., tubular)	30-4469	52	Cable (speaker)	41-3443
28	Resistor (4.0 meg., 1/2 watt)	33-540339	53	Cable (power)	L-2778
29	Condenser (250 mmf., mica)	30-1032	54	Dial Scale	27-5403
30	Condenser (.01 mf., tubular)	30-4572	55	Dial Spring	28-8908
31	Resistor (70,000 ohms, 1/2 watt)	33-370339	56	Dial Pointer	28-5941
32	Resistor (750,000 ohms, 1/2 watt)	33-475339	57	Dial Drive Cord Assembly	31-2269
33	Output Transformer	32-7978	58	Dial Drive Spring	28-8913
34	Voice Coil and Cone Assembly (for "T" Speaker, part No. 36-1439) (for "XF" Speaker, part No. 36-1437)	36-4087 36-4088	59	Dial Tuning Shaft Assembly	31-2260
35	Condenser (.03 mf., tubular)	30-4449	60	Dial Tuning Drum	31-2281
36	Condenser (.006 mf., tubular)	30-4445	61	Knob	27-4332
37	Tone Control and On-Off Switch	42-1443	62	Socket (5 Prong)	27-6035
38	Condenser (.01 mf., .01 mf., bakelite)	3903-DG	63	Socket (6 Prong)	27-6036
39	Power Transformer	32-7976	64	Socket (7 Prong)	27-6099
40	Field Coil for Speaker, part No. 36-1439		65	Pilot Lamp Socket Assembly	38-9607
41	Electrolytic Condenser (8 mf., 400 V.)	30-2330	66	Pushbutton	27-4759
			67	Speaker (T Cabinet)	36-1439
			68	Speaker (XF Cabinet)	36-1437
			69	Replace Speaker	