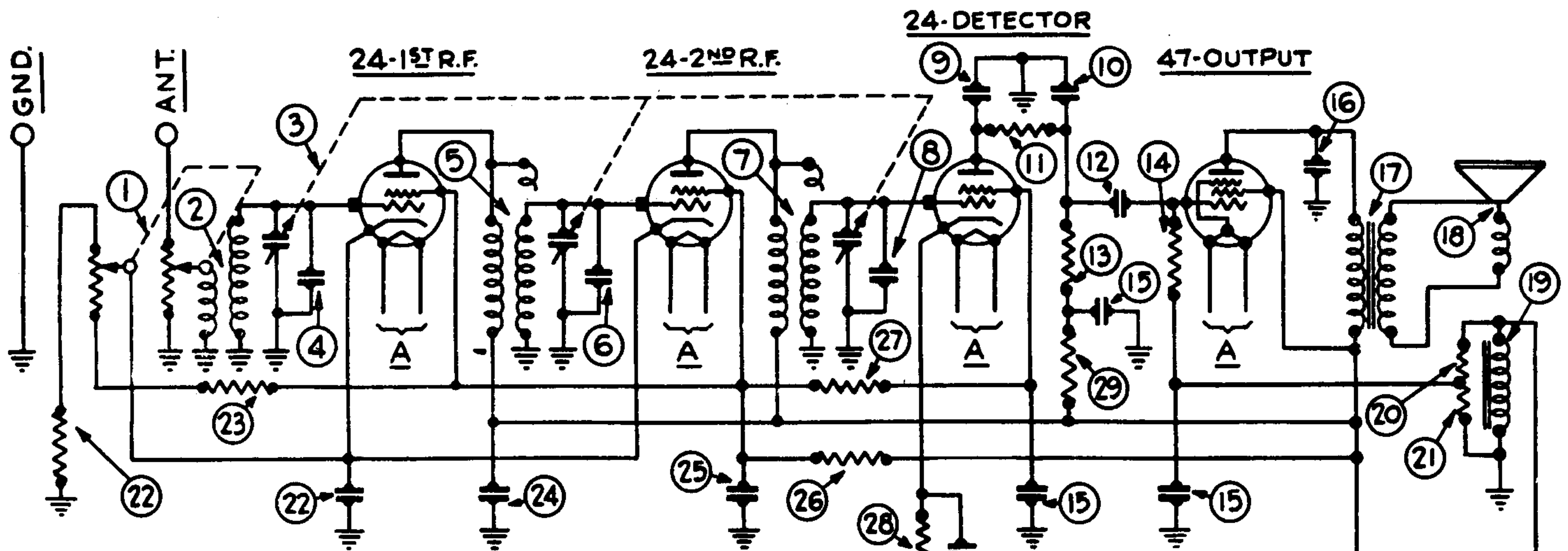




Philco Radio & Television Corp.

	Model: 51	Chassis:	Year:
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
RCC PHILCO 10			
Riders 2 (II) PHILCO 2-11			
Riders 2 (II) PHILCO 2-12			
Riders 2 (II) PHILCO 2-13			



9	10	.00025	22	150 and .05
12	18	.01	11	10,000
25	25	.05	25	15,000
22	22	.05 and 150 Ohm resistor	26	25,000
15	15	.1, .15, .25, 2-5 (50-60 cycles)	28	32,000
24	24	.05, .15, .25, 2-5 (25-40 cycles)	29	99,000
33	33	.05	21	160,000
24	24	(50 to 60 cycles) 6.	13	240,000
24	24	(25 to 40 cycles) 10.	20	490,000
24	24	6.		

Tube	Plate Volts	Screen Grid Volts	Control Grid Volts	Cathode Volts	Plate Milli-amperes
1st R.F.	245	90	2.5	3.0	4.5
2nd R.F.	250	90	2.5	3.0	5.5
Det.	100	42	8.0	8.0	0
Output	175*	190*	1.0*	...	2.7*

● I.R.F.

FRONT

1931-32

PHILCO MODELS 50 AND 50-A

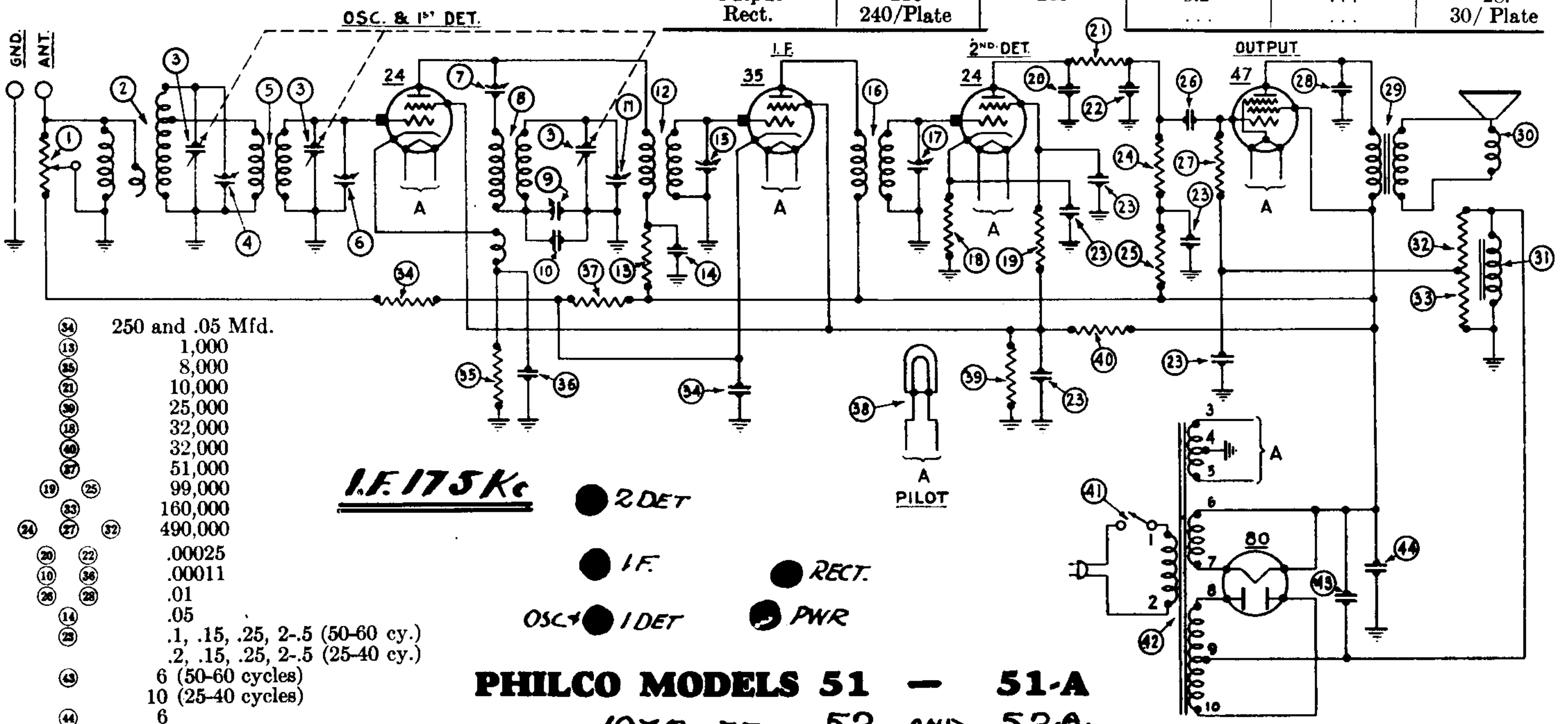
● 2 R.F.

● RECT

● DET

● P.W.R.

Tube	Plate Volts	Screen Grid Volts	Control Grid Volts	Cathode Volts	Plate Milli-amperes
Osc. & 1st Det.	220*	85*	9.0*	9.0*	...
I.F.	210	85	3.0	3.0	6.2
2nd Det.	75	54	5.2	5.2	0
Output Rect.	210**	240**	0.2**	...	28.**
	240/Plate	...	...	...	30/Plate



250 and .05 Mfd.

I.F. 175 Kc

● 2 DET

● I.F.

● RECT.

OSC ● 1 DET

● P.W.R.

PHILCO MODELS 51 - 51-A

1932-33

52 AND 52-A.

Printed in Canada

DATA SHEET

—Courtesy Philco Products Ltd. of Canada

PHILCO-10

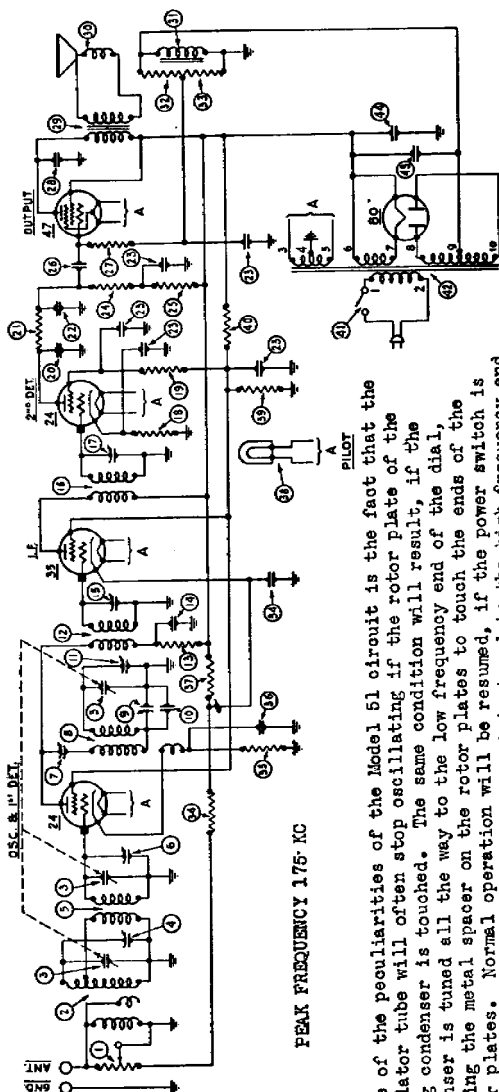
PHILCO RADIO & TELEVISION CORP.

MODEL 51, 51-A
Schematic

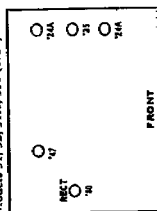
ARRANGEMENT OF WIRES

The placing of certain wires in the receiver will effect the operation to a marked extent. The red wire from the primary of the first I. F. transformer (Fig. 1 and 2, in the .05 mfd. condenser (9), Figs. 1 and 2, must come straight down to the corner of the I. F. tube socket, then straight up to the condenser lug.

The wire from the plate of the detector-oscillator tube to the coupling compensating condenser (3), Figs. 1 and 2, must lie away from the chassis at the spot.



Models 51, 52, 51A, 551 (1932)



One of the peculiarities of the Model 51 circuit is the fact that the oscillator tube will often stop oscillating if the rotor plate of the tuning condenser is touched. The same condition will result, if the condenser is tuned all the way to the low frequency end of the dial, allowing the metal spacer on the rotor plates to touch the ends of the stator plates. Normal operation will be resumed, if the power switch is snapped off and on again, or if the set is tuned to the high frequency end of the dial. An insulated wire is placed around the metal spacer on one set of rotor plates to prevent them from touching the stator. Later model 51s have a small fibre insulator of special design to replace the wire.

The coupling condenser and the two i-f trimmer condensers are located at the rear of the chassis, near the combination 1st detector-oscillator tube. Reading from left to right, facing the rear of the chassis, the condensers are "coupling", "2nd i-f" and "1st i-f".

MODEL 51, 51-A
Voltage
Electrical
Data

PHILCO RADIO & TELEVISION CORP.

Model 51 Receivers are for operation on 100-130 volt, 50-60 cycle AC line
Model 51-A Receivers are for operation on 100-130 volt, 25-40 cycle AC line

Table 1—Tube Socket Readings Taken with AC Set Tester AC Line—115 volts

Tube		Filament Volts	Plate Volts	Screen Grid Volts	Control Grid Volts	Cathode Volts	Plate Milli-amperes
Type	Circuit						
24	Osc. & 1st Det.	2.2	220*	85*	9.0*	9.0*	
35	I.F.	2.2	210	85	3.0	3.0	6.2
24	2nd Det.	2.2	75	54	5.2	5.2	0
47	Output	2.2	210**	240**	0.2**		28.**
80	Rect.	5.0	240/Plate				30/Plate

Note—Volume Control on full, Station Selector turned to Low Frequency End.

*These readings must be taken from the underside of the chassis, using a suitable high resistance D.C. voltmeter equipped with test prods and leads.

**These readings must likewise be taken from the underside of the chassis unless the set tester is especially equipped for testing pentode tubes.

Table 2—Power Transformer Voltages

Terminals	A.C. Volts	Connection	Color
1-2	105 to 125	Primary	Black (Small Gauge)
3-5	2.5	Filament of 24, 35 and 47	Black
6-7	5.	Filament of 80	Light Blue
8-10	700.	Plates of 80	Yellow
4	...	Center Tap of 3-5	Black, Yellow Tracer
9		Center Tap of 8-10	Yellow, Green Tracer

Table 3—Condenser Data

Nos. on Figs. 1 and 2	Capacity Mfd.	Container
(30) (32)	00025	Yellow
(10) (34)	00011	Blue and Golden Yellow
(16) (36)	.01	Black Bakelite Container
(14) (38)	.05	Black Bakelite Container
(26)	.1, .15, .25, 2-5 (50-60 cy.)	Metal Container
(40)	.2, .15, .25, 2-5 (25-40 cy.)	Metal Container
(42)	6 (50-60 cycles)	Electrolytic
(44)	10 (25-40 cycles)	Electrolytic
	6	Electrolytic

Table 4—Resistor Data

Nos. on Figs. 1 and 2	Power (Watts)	Resistance (Ohms)	Color		
			Body	Tip	Dot
(32)	.5	250 and .05 Mfd.	Brown	Black Bakelite Container	Red
(34)	.5	1,000	Grey	Black	Red
(36)	.5	8,000	Brown	Black	Orange
(38)	1.	10,000	Red	Green	Orange
(40)	.5	25,000	Orange	Red	Orange
(42)	1.	32,000	Orange	Red	Orange
(44)	2.	32,000	Green	Brown	Orange
(46)	.5	51,000	White	White	Orange
(48)	.5	99,000	Brown	Blue	Yellow
(50)	.5	160,000	Yellow	White	Yellow
(52)	.5	490,000			

