Manual No. 6504

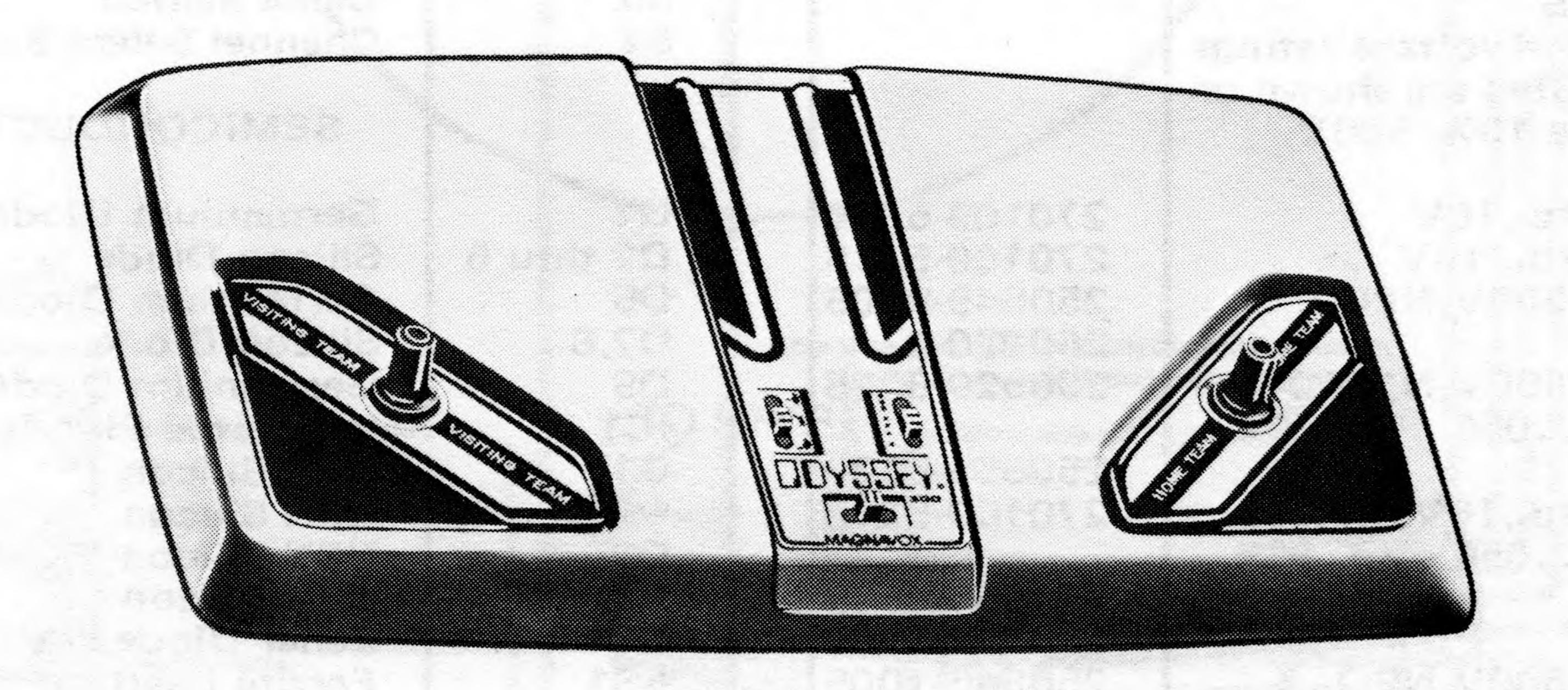
Magnavox SERVICE MANUAL

THE MAGNAVOX COMPANY . SERVICE DEPARTMENT

File: Volume 12
Miscellaneous Section
First Issue: October, 1976

BG7500 ODYSSEY

Scanned by Sly DC (2018)



GENERAL INFORMATION

The BG7500 can be powered by either 6 "C" Cells or an optional AC to DC 9 volt adaptor.

The BG7500 features games of Hockey, Tennis and Smash, and as an extra challenge has switchable skill levels of Novice, Intermediate and Expert which automatically adjusts the player size, speed of the ball and deflection of the ball.

Automatic features include "on-screen" scoring which

awards a point to the appropriate player or team each time the ball leaves the playing area. Automatic serve will return the ball into play from the side that was awarded the point. After either side has scored 15 points the ball will continue to be served but neither player will be able to return it.

During play a different audio tone is generated each time the ball hits a player, a wall, or a point is scored. No provisions are made to turn the sound on or off.

SERVICE ADJUSTMENTS

2 MHz Oscillator Adjustment

1. Connect a frequency counter to Pin 17 of IC1 and adjust C4 for 2.01 MHz ± 1%.

Channel 3 and 4 RF Oscillator Adjustment

- 1. Connect the Odyssey to an operating TV and defeat the TV AFT.
- 2. Place the TV Channel Selector to Channel 3, mechanically center the fine tuning, and set the Odyssey Channel Select switch to Channel 3.

- 3. While observing the game display, adjust L1 for optimum response.
- 4. Change the TV and the Odyssey to Channel 4 operation.
- 5. While observing the game display, adjust L1 & C14 for optimum response. (Note very little change will be noticed while adjusting C14).
- 6. Repeat Steps 2 thru 5 until Channel 3 and 4 game displays are equal in quality.

TYPICAL OPERATION (TENNIS)

Connect the 300 ohm twin lead from the Antenna/Game switch to the 300 ohm antenna terminals of a properly adjusted and operating television receiver. Connect the game cord cable from the Odyssey unit to the Antenna/Game switch and place the Game/TV switch in the "Game" position.

Place the Channel switch on the Odyssey to either Channel 3 or 4 and the television VHF Channel Selector to the same channel.

Set the Game switch to the center position and Skill switch to the desired skill level. Move the Power/Reset switch to the center position and fine tune the television if necessary. When play is ready to begin, move the Power/Reset switch to the Reset position and allow it to return to the center position. The score is now set to zero and the game begins. When either contestant reaches 15 points the players will be unable to return the ball and a new game will have to be started.

BG7500 REPLACEMENT PARTS LIST

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Note: When ordering replacement parts please specify the part number as shown in this list including Description, Chassis, and Model Number. Complete information will help expedite the order. Replacement parts may occasionally differ in part number or value from the Factory installed part. In either event the replacement part has been chosen to provide equal or improved performance.

REF.	DESCRIPTION	PART NO.	REF.	DESCRIPTIO
L1 L2 L3 L4 T1	COILS & TRANSFORMERS Oscillator Coil Peaking Coil, 100 uh Peaking Coil, 12 uh Peaking Coil, 1 mh Bandpass Transformer CAPACITORS Values, tolerances and voltage ratings for capacitors not listed are shown on	361495-2 361444-1015 361425-120 361444-1029 361467-2	R8 R10 S1 S2 S3 S4	CONTROLS & SWITCH 500K, Right Player Constant
C1 C2 C3 C4 C5 C8 C9 C10 C14 C15 C16 C17 C19 C20	the schematic, or are 10%, 500V. Electrolytic, 470 mfd., 16V Electrolytic, 470 mfd., 16V Ceramic, 82 pf.,5%,500V,NPO Trimmer, 6-38 pf. Ceramic, 82 pf.,5%,500V,N1500 Metalized Polyester, .056 mfd.,10%, 250V Electrolytic, 470 mfd.,16V Metalized Polyester, .056 mfd.,10%, 250V Trimmer, 3-15 pf. Ceramic, 10 pf.,5%,500V,NPO Ceramic,10 pf.,5%,500V,NPO Ceramic,2.2 pf.,10%,500V,NPO Ceramic,33 pf.,5%,500V,NPO Ceramic,27 pf.,5%,500V,NPO RESISTORS	270109-5215 270109-5215 250549-8205 260220-2 250529-8205 250655-5639 270109-5215 250546-1005 250546-1005 250546-2297 250546-3305 250546-2705	D1 D2 thru 5 D6 D7,8 D9 IC1 Q1 Q2 Q3 Q4 Z1 FB1 J1	Germanium Diode Silicon Diode Germanium Diode Silicon Diode Germanium Diode Germanium Diode Integrated Circuit NPN Silicon NPN Silicon NPN Silicon NPN Silicon Zener Diode, TV Ferrite Bead External Power Jack Game Cable Assembly Battery Connector Speaker, 214" Speaker Holding Stra
	Values, tolerances, and wattages for resistors not listed are shown on the schematic, or are 5%, ¼W.			

REF.	DESCRIPTION	PART NO.
R8 R10 S1 S2 S3 S4	CONTROLS & SWITCHES 500K, Right Player Control 500K, Left Player Control On-Off/Reset Switch Skill Switch Game Switch Channel Select Switch	220337-3 220337-3 160546-5 160546-4 160556-1
D1 D2 thru 5 D6 D7,8 D9 IC1 Q1 Q2 Q3 Q4 Z1 FB1 J1	Germanium Diode Silicon Diode Germanium Diode Silicon Diode Germanium Diode Germanium Diode Integrated Circuit NPN Silicon NPN Silicon NPN Silicon NPN Silicon Zener Diode, TV Ferrite Bead External Power Jack Game Cable Assembly Battery Connector Speaker, 2¼" Speaker Holding Strap	530105-1001 530181-1001 530105-1001 530105-1001 530105-1001 612114-1 610224-1 610139-2 610232-2 610139-2 530073-1039 364005-1 181139-2 461218-4 181096-3 580108-1 143856-1

ANTENNA/GAME SWITCH REPLACEMENT PARTS LIST

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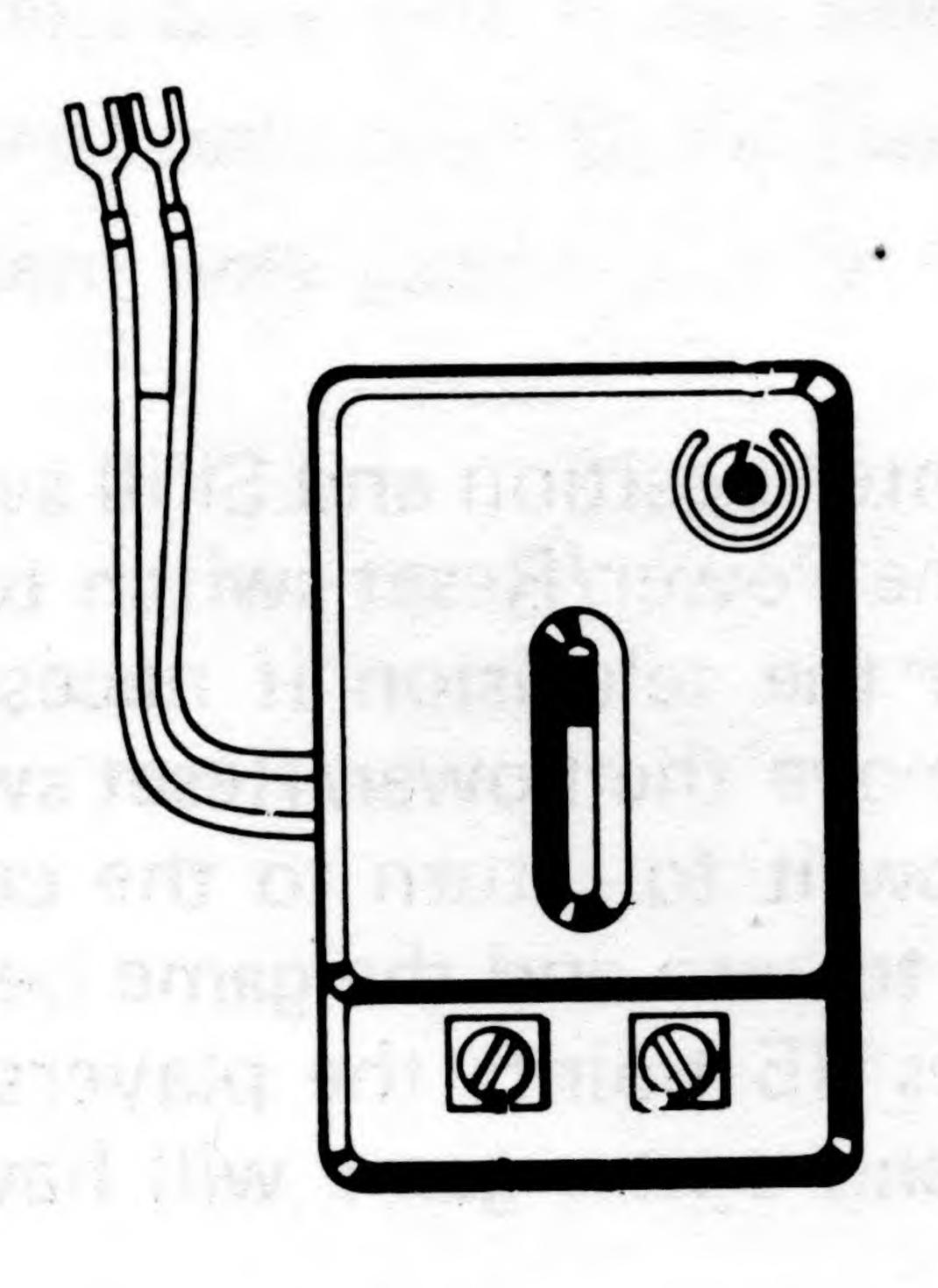
DESCRIPTION	PART NO.
Case Top	143676-1
Case, Bottom	143674-1
Plastic Hook	143719-1
Screw Terminal (2 used)	200495-1
Solderless Terminal (2 used)	200517-1
Phono Socket	180902-4
Antenna/Game Switch	160499-3
Antenna Balun	361108-2
Game Cable Assembly	461218-3
Complete Antenna/Game Sw. Ass'y.	701702-2

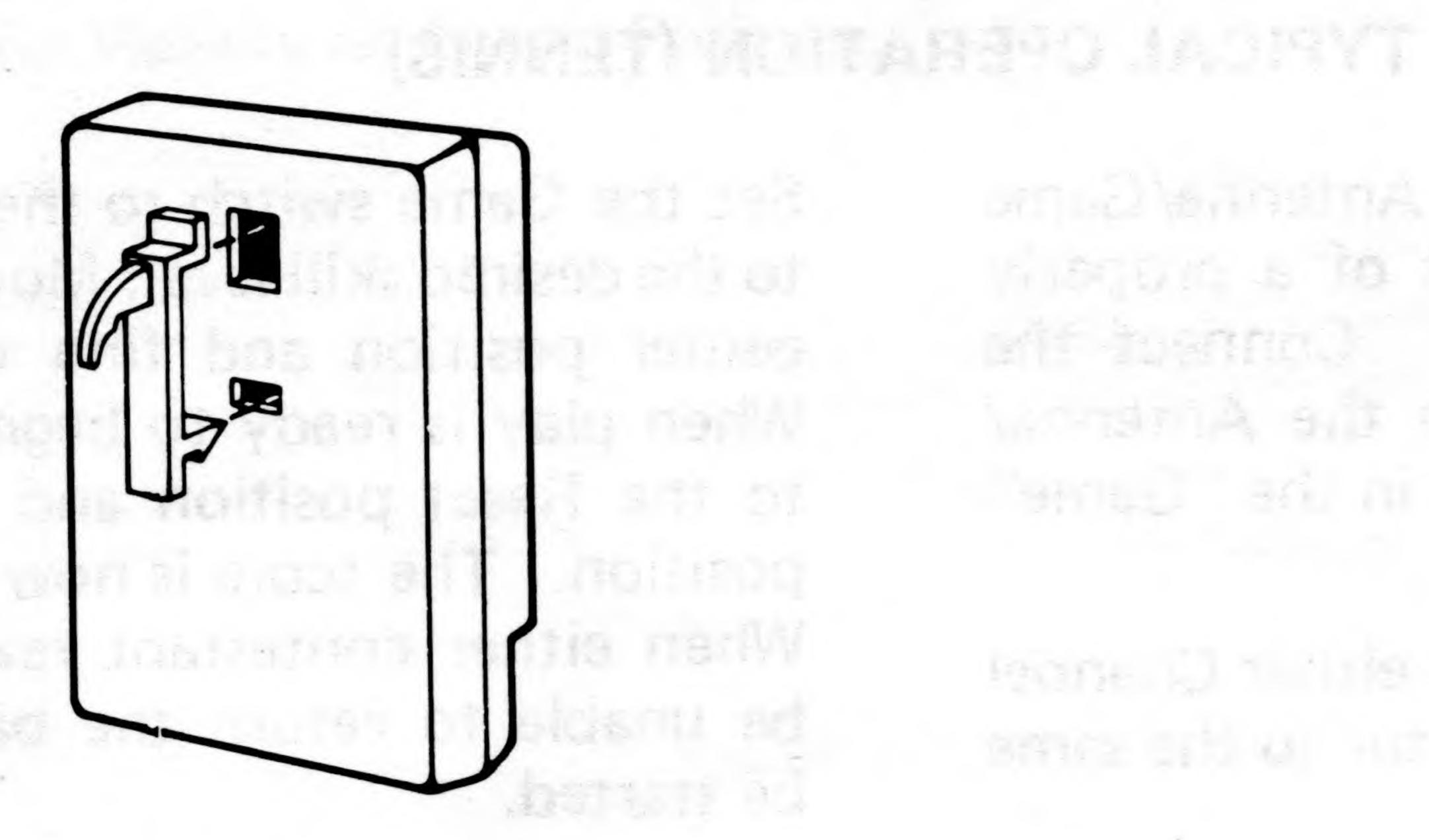
CABINET REPLACEMENT PARTS LIST

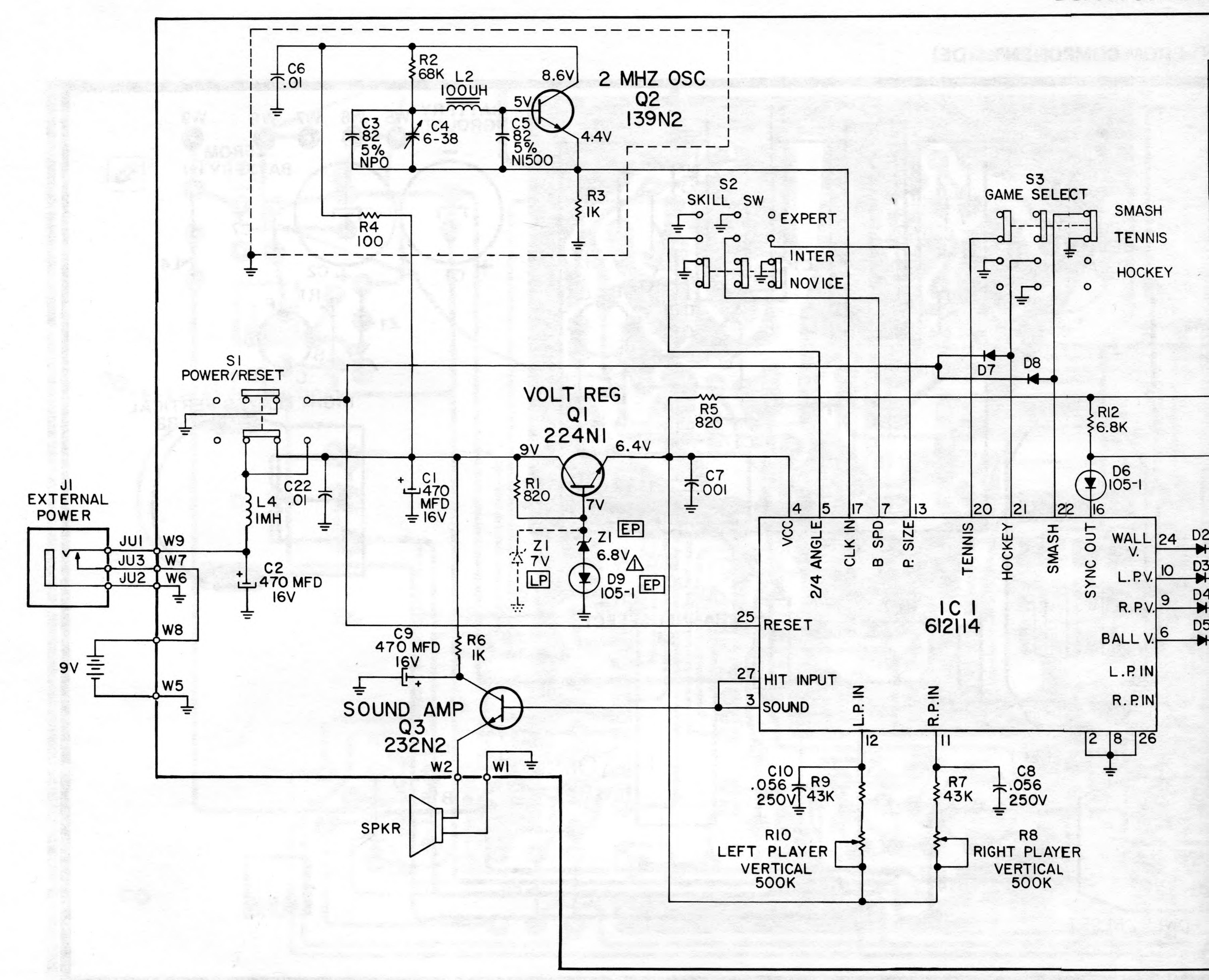
DESCRIPTION	PART NO.
Foot, Black	141737-3
Battery Holder	142658-1
Bottom Case	143669-5
Top Case	143670-4
Knob, Black	143689-5
Bezel, Control (Visiting Team)	143854-2
Bezel, Control (Home Team)	143854-1
Inlay, Visiting Team	151484-1
Inlay, Visiting Fourity Inlay, Home Team	151484-2
Inlay, Center	151483-1
Dust Barrier f/Game Switch	151449-3
Dust Barrier f/Power Switch	151449-5
Dust Barrier f/Skill Switch	151449-3
Stud, Cover Holding	732953-2
Spring Lock Nut f/Stud	103235-1
"O" Ring f/Stud	103082-4

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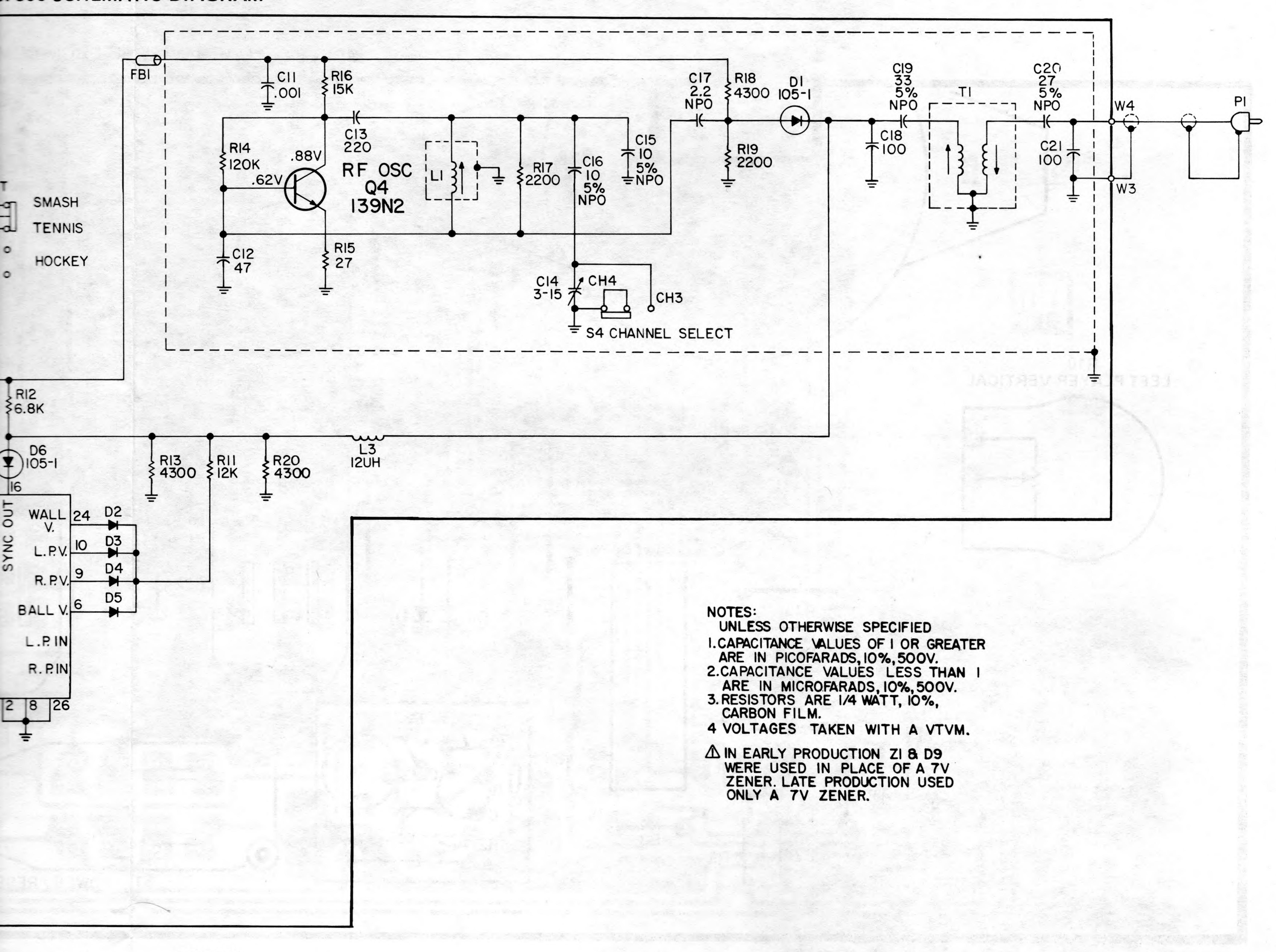






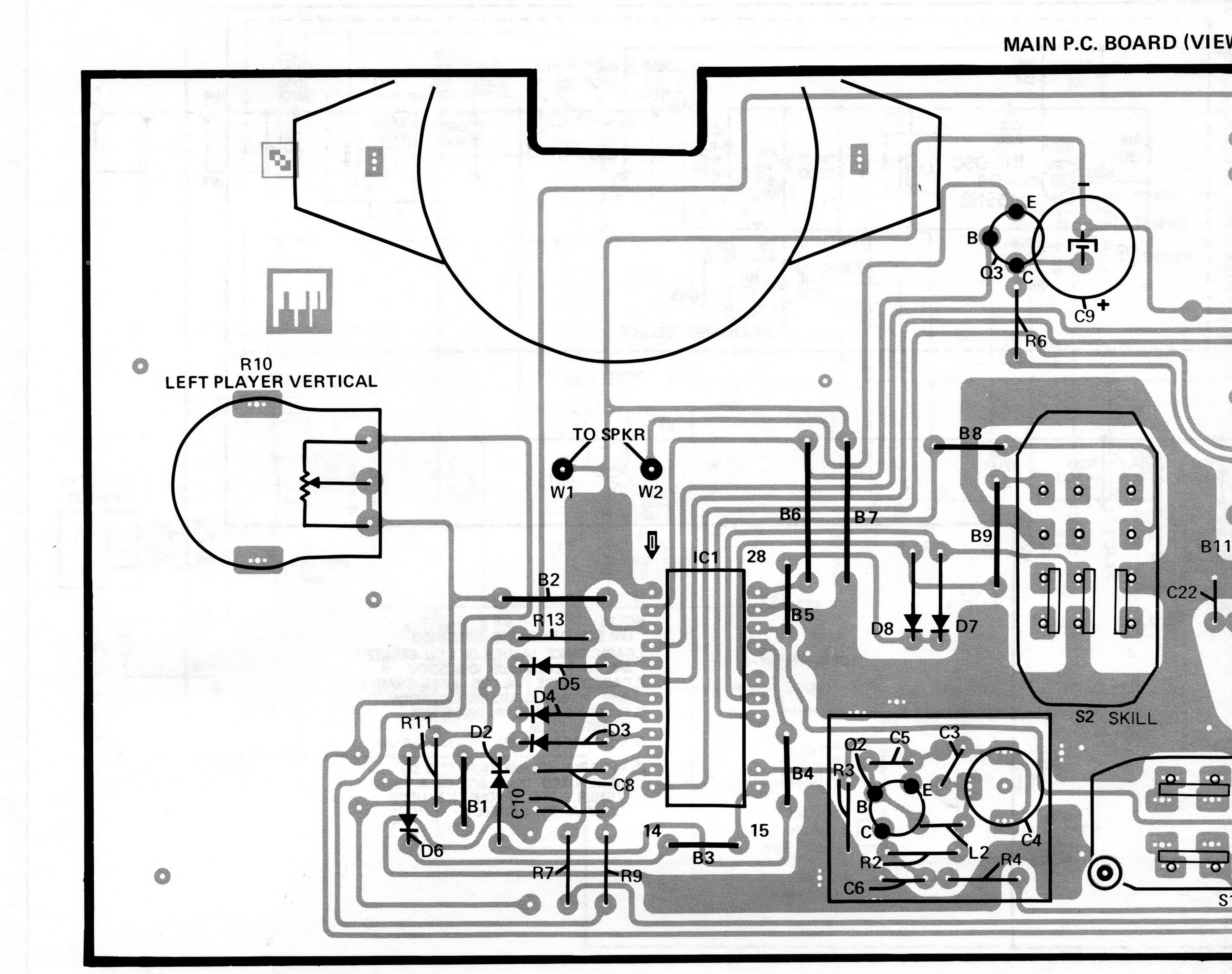
	IC1 VOLTAGE CHART				
PIN	VOLTAGE	NOTE	PIN	VOLTAGE	NOTE
1	Not Used		15	Not Used	
2	Ground		16	5.8V	
3	Sound		17	4.4 \	
4	6.4V		18	Not Used	
5	6.4V	1	19	Not Used	
6	B. Video		20	6.2V	6
7	6.4V	2	21	6.2V	7
8	Ground		22	6.2V	8
9	R.P. Video		23	Not Used	
10	L.P. Video		24	W. Video	
11	1.2V to 5.4V	3	25	6.2V	
12	1.2V to 5.4V	4	26	Ground	
13	6.2V	5	27	Sound	
14	Not Used		28	Not Used	

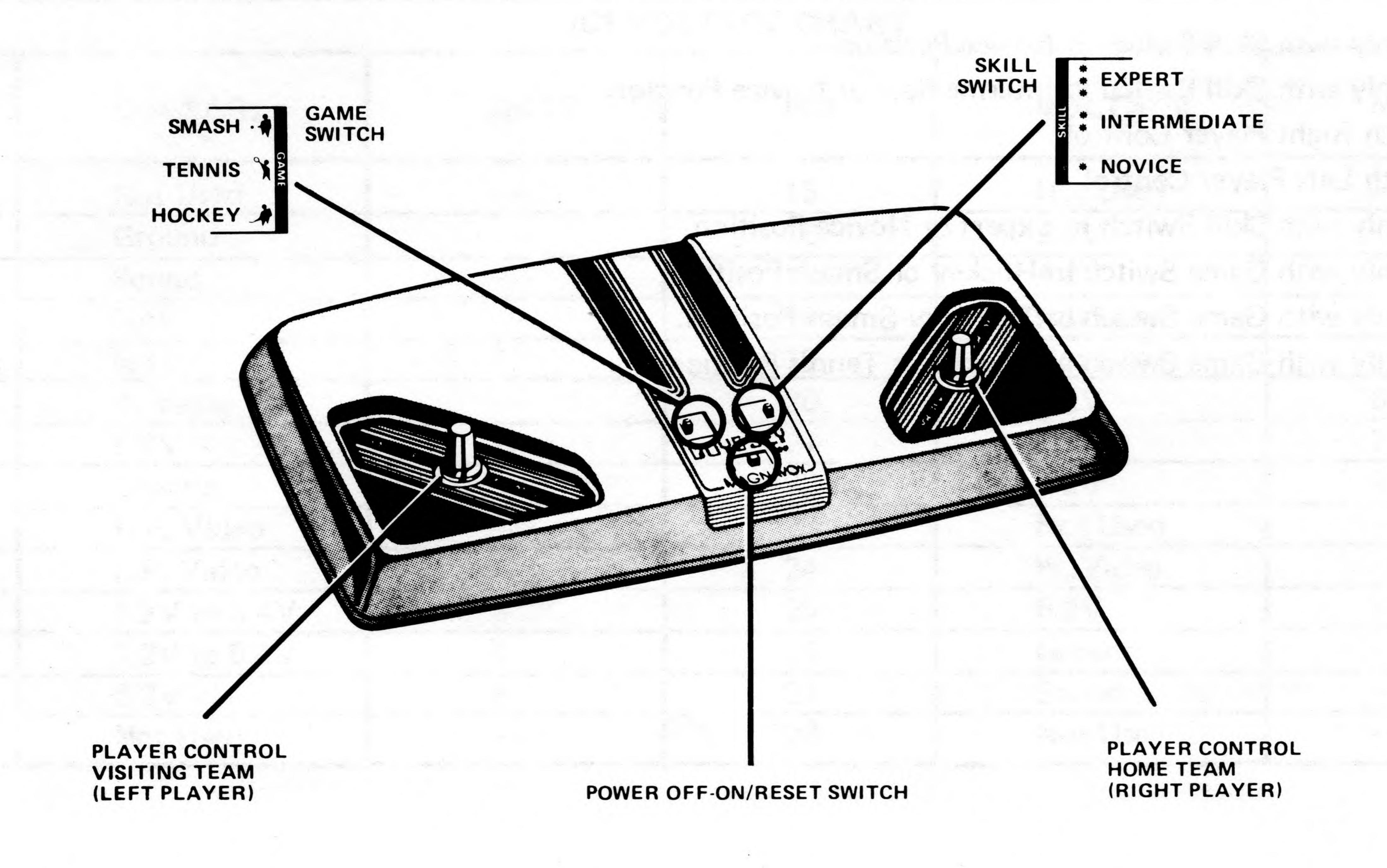
7500 SCHEMATIC DIAGRAM



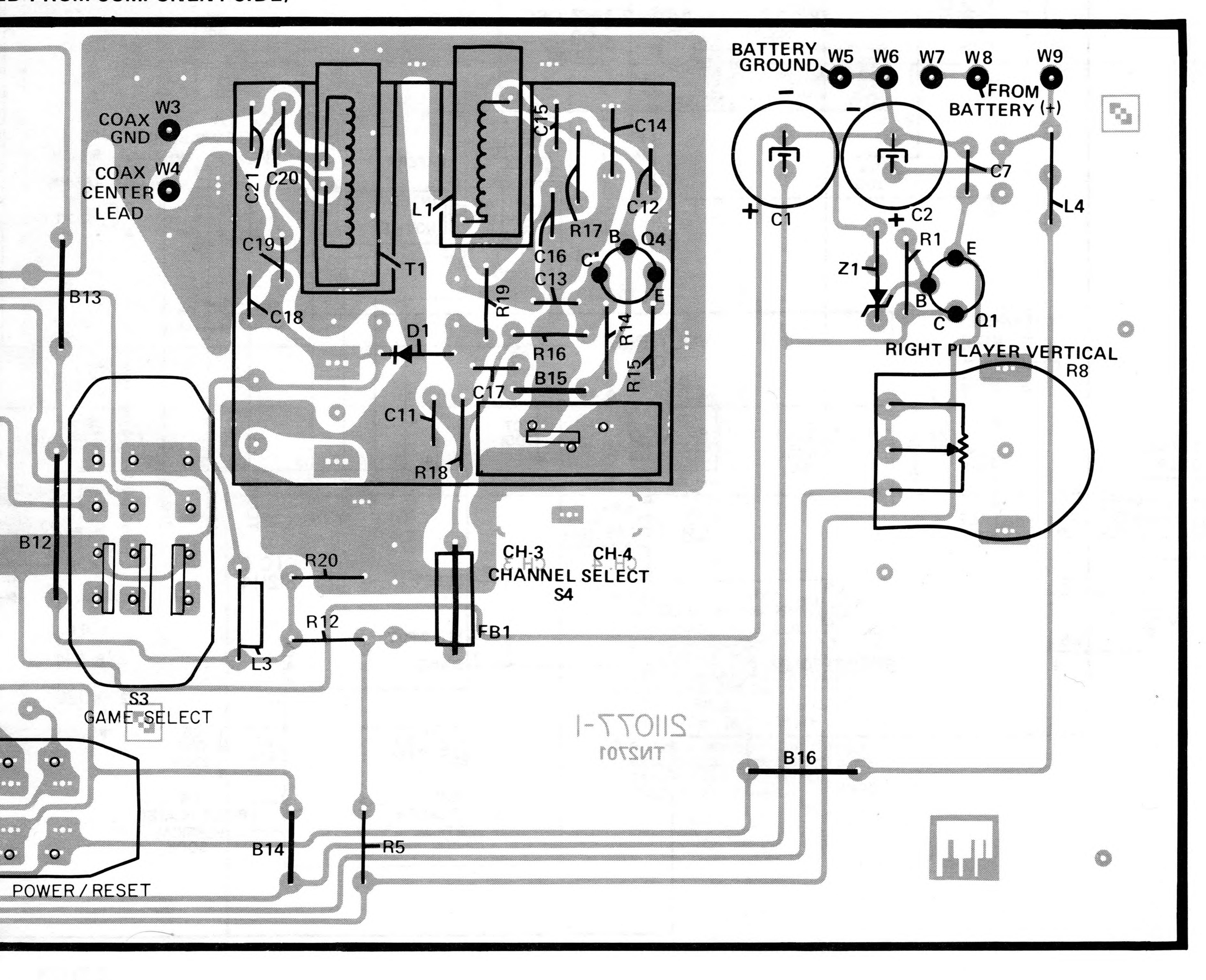
NOTES:

- 1. Present only with Skill Switch in Novice Position.
- 2. Present only with Skill Switch in Intermediate or Novice Position.
- 3. Varies with Right Player Control.
- 4. Varies with Left Player Control.
- 5. Present only with Skill Switch in Expert or Novice Position.
- 6. Present only with Game Switch in Hockey or Smash Position.
- 7. Present only with Game Switch in Tennis or Smash Position.
- 8. Present only with Game Switch in Hockey or Tennis Position.





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SERVICE NOTES