



# ZOMBIE RAID

## Operating Manual



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# 1. SPECIFICATIONS



**POWER**

Domestic 120VAC 3Amps @ 60Hz

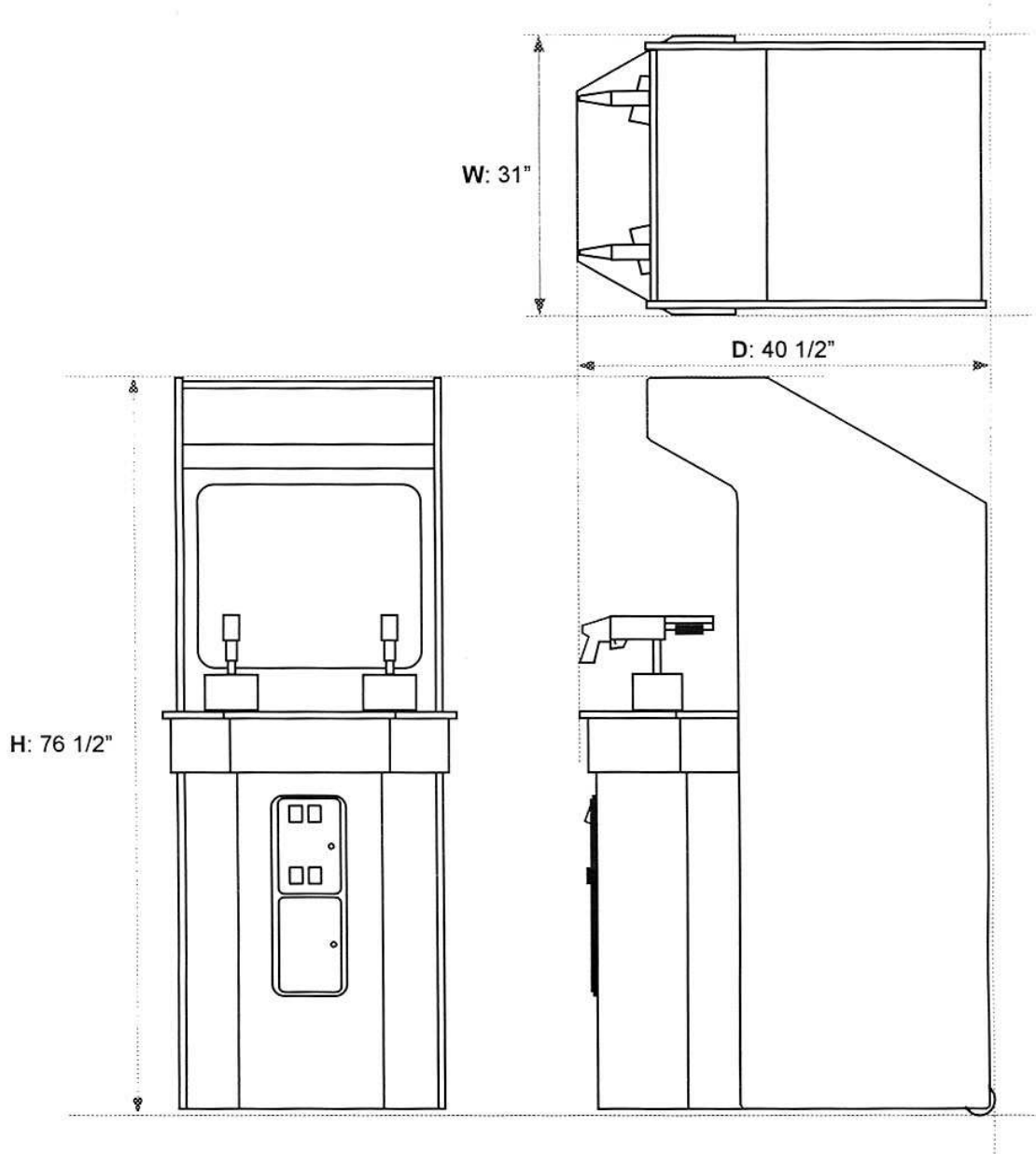
**DIMENSIONS**

Width: 31" (Approx.)  
Height: 76 1/2" (Approx.)  
Depth: 40 1/2" (Approx.)

\* Outside carton measurement: W: 33 3/4" x H: 79" x D: 43 1/2"

**WEIGHT**

400 lbs. (Approx.)





## 2. CONNECTOR TABLES

JAMMA CONNECTOR					
SOLDER SIDE			COMPONENT SIDE		
FUNCTION	COLOR	PIN #	PIN #	COLOR	FUNCTION
GROUND	BLK	A	1	BLK	GROUND
GROUND	BLK	B	2	BLK	GROUND
(+)5VDC	RED	C	3	RED	(+)5VDC
(+)5VDC	RED	D	4	RED	(+)5VDC
		E	5		
(+)12VDC	BLU	F	6	BLU	(+)12VDC
KEY		H	7		KEY
COIN METER B		J	8	BLU/BRN	COIN METER A
COIN LOCKOUT B		K	9		COIN LOCKOUT A
SPEAKER(-)	BLK	L	10	WHT/BLK	SPEAKER(+)
		M	11		
VIDEO GREEN	GRN	N	12	RED	VIDEO RED
VIDEO SYNC	WHT	P	13	BLU	VIDEO BLUE
SERVICE CREDIT SWITCH	BRN/WHT	R	14	BLK	VIDEO GROUND
		S	15	WHT/GRY	TEST SWITCH
COIN SWITCH B		T	16		COIN SWITCH A
2P START BUTTON		U	17		1P START BUTTON
		V	18		
		W	19		
		X	20		
		Y	21		
2P GUN TRIGGER		Z	22		1P GUN TRIGGER
2P GUN PUMP SWITCH		a	23		1P GUN PUMP SWITCH
		b	24		
		c	25		
		d	26		
GROUND	BLK	e	27	BLK	GROUND
GROUND	BLK	f	28	BLK	GROUND

CN2 - 8 PIN SUB CONNECTOR		
PIN #	COLOR	FUNCTION
1	RED	+5VDC
2		1P GUN POT [X]
3		1P GUN POT [Y]
4		2P GUN POT [X]
5		2P GUN POT [Y]
6		1P SOLENOID COIL OUTPUT
7		2P SOLENOID COIL OUTPUT
8	BLK	GROUND

### 3. DIP SWITCH TABLE



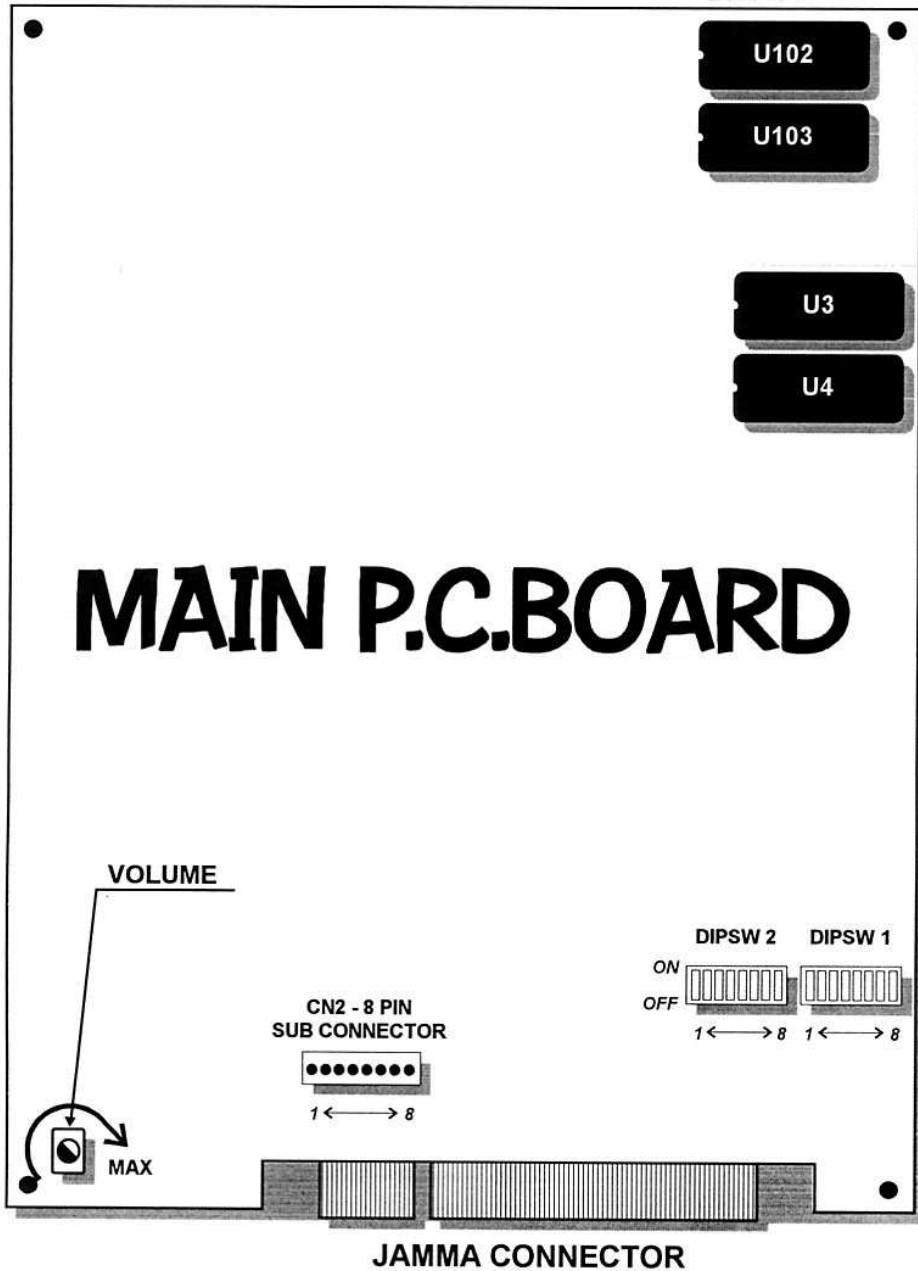
## ZOMBIE RAID

DIP SWITCH 1		SWITCH POSITIONS							
FUNCTIONS	SETTING	1	2	3	4	5	6	7	8
COIN CHUTE 1	<b>1 COIN 1 CREDIT</b>	OFF	OFF	OFF					
	2 COINS 1 CREDIT	ON	OFF	OFF					
	3 COINS 1 CREDIT	OFF	ON	OFF					
	1 COIN 2 CREDITS	ON	ON	OFF					
	1 COIN 3 CREDITS	OFF	OFF	ON					
	1 COIN 4 CREDITS	ON	OFF	ON					
	1 COIN 5 CREDITS	OFF	ON	ON					
	1 COIN 6 CREDITS	ON	ON	ON					
COIN CHUTE 2	<b>1 COIN 1 CREDIT</b>				OFF	OFF	OFF		
	2 COINS 1 CREDIT				ON	OFF	OFF		
	3 COINS 1 CREDIT				OFF	ON	OFF		
	1 COIN 2 CREDITS				ON	ON	OFF		
	1 COIN 3 CREDITS				OFF	OFF	ON		
	1 COIN 4 CREDITS				ON	OFF	ON		
	1 COIN 5 CREDITS				OFF	ON	ON		
	1 COIN 6 CREDITS				ON	ON	ON		
DISCOUNT to CONTINUE	<b>NO DISCOUNT</b>								OFF
	START 2 COINS CONTINUE 1 COIN								ON
NOT USED									

DIP SWITCH 2		SWITCH POSITIONS							
FUNCTIONS	SETTING	1	2	3	4	5	6	7	8
MONITOR SETTING 1	<b>NORMAL</b>	OFF							
	REVERSE VERTICAL	ON							
MONITOR SETTING 2	<b>NORMAL</b>		OFF						
	REVERSE HORIZONTAL		ON						
ATTRACT SOUND	<b>ON</b>			OFF					
	OFF			ON					
DIFFICULTY LEVEL	<b>NORMAL</b>				OFF	OFF			
	EASY				ON	OFF			
	HARD				OFF	ON			
	HARDEST				ON	ON			
CONTINUE	<b>CONTINUE MODE</b>								OFF
	NO CONTINUE								ON
NOT USED									
TEST MENU	<b>NORMAL GAME</b>								OFF
	TEST MENU								ON

**"FACTORY INSTALLED" SETTING**

LAY-OUT OF MAIN P.C.BOARD



## 4. GAME PLAY



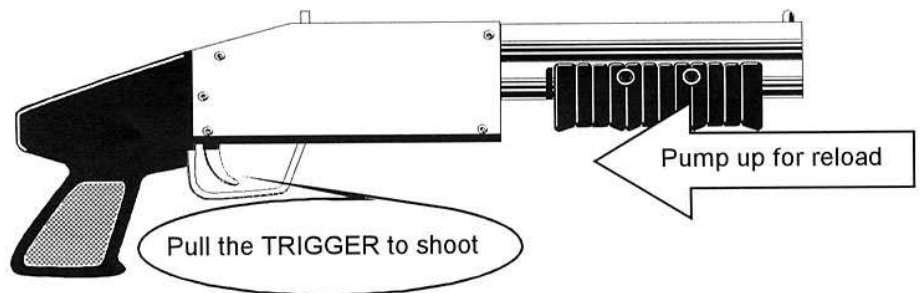
### HOW TO PLAY

- Insert coin(s).
- Press the 1P or 2P Start Button.
- Enter your initials then start the game.
- Defeat all monsters with gun.
- Do not shoot hostages.
- Get special weapons.
- Shoot to get items listed below.



### HOW TO CONTROL

#### 1P & 2P GUN



## 5. TEST MENU



### Entering the TEST MENU

If you need to check the condition of the game circuitry and controls, you can use the TEST MENU. Turn ON "DIP SWITCH 2, #8" and re-power on the game. The game will go into TEST MENU (Diagnostics) and the screen appears as follows:

### Select TESTs

Use this screen to choose which of the 7 screens you want to see. Move cursor using the TRIGGER or the PUMP UP switch.

Then press the 1P Start Button to enter the test.

### Returning to GAME MODE

Turn OFF "DIP SWITCH 2, #8" and re-power on the game. The game will go back to GAME MODE.

### 1. COLOR TEST

Use this screen to check the color of monitor. The color blocks in the center should be four bands (White, Red, Green, and Blue from top to bottom), each with a color scale from bright to dark, left to right. If the screen does not match this description, adjust the Monitor as described in the Monitor's manual.

- \* Pull the TRIGGER or the PUMP UP Switch. You will exit and go back to the TEST MENU screen.
- \* Press the 1P Start Button or the 2P Start Button.  
You can go to next test (CROSS HATCH).

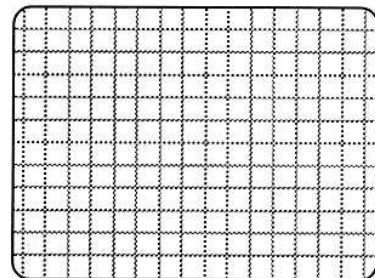
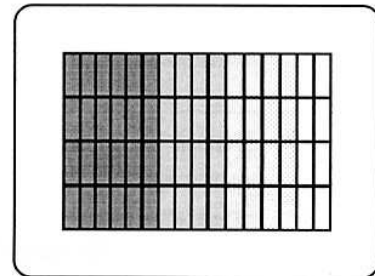
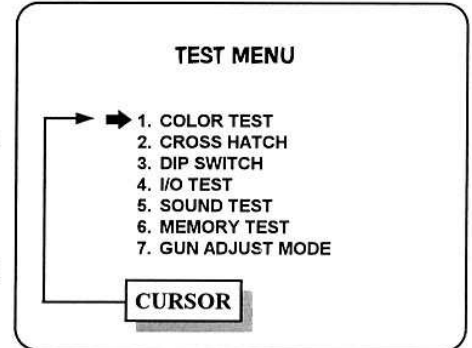
### 2. CROSS HATCH

Use this screen to check the size of picture. The CROSS HATCH test pattern has a White grid on a Black background. Check following:

- The grid line should be straight, and the lines should not have excessive pincushion or barrel distortion.
- "Out" line of grid line is the same size as "Out" line of game screen. So, "Out" line should be able to be seen with no overflow of grid lines on screen.

If these are not as above, adjust the Monitor as described in the Monitor's manual.

- \* Pull the TRIGGER or the PUMP UP Switch or the 2P Start Button.  
You can exit and go back to the TEST MENU screen.
- \* Press the 1P Start Button. You can go to next test (DIP SWITCH).







### 3. DIP SWITCH

Use this screen to see how all the DIP Switches are set.  
 You can view and change the coinage and game options on this screen.  
 The coinage and game option setting are explained on the DIP SWITCH TABLE.  
 (Page 3) To change a setting, slide the appropriate toggle on the DIP Switch to ON or OFF. The screen will immediately display those changes.

**DIP SWITCH**

COIN CHUTE A : 1 COIN 1 CREDIT  
 COIN CHUTE B : 1 COIN 1 CREDIT  
 HALF COIN : OFF  
 CONTINUE : OFF  
 SCREEN FLIP : OFF  
 MIRROR : OFF  
 DEMO SOUND : OFF  
 GAME LEVEL : NORMAL  
                   12345678  
 DIP SW 1 : 11111111 <0:ON, 1:OFF>  
 DIP SW 2 : 11111110

NEXT 1P START BUTTON  
 EXIT 2P START BUTTON

### 4. I/O TEST

Use this screen to check the volume X & Y, the coin switches and any other switches in this game. To check the functioning of each switch, activate it and watch the corresponding OFF letters change to ON.  
 (You can check the function of solenoid coil on this screen. The solenoid coil will move by pulling the TRIGGER; SHOT 1 letters change OFF to ON.)  
 If the ON and OFF letters do not appear correctly, check the Harness connections and Switches.

**I/O TEST**

VOLUME	1P	2P
X	: 0000	0000
Y	: 0000	0000
BUTTON		
SHOT 1	: OFF	OFF
SHOT 2	: OFF	OFF
START	: OFF	OFF
SERVICE	: OFF	OFF
COIN A	: OFF	
COIN B	: OFF	

NEXT 1P & 2P START BUTTON

### 5. SOUND TEST

Use this screen to check all game sounds. Choose a sound with the TRIGGER of the 1P Gun. Then pull the PUMP UP switch. You can check each sound in this game.

**SOUND TEST**

SOUND CODE  
 00H  
 xxxx STOP SOUND xxxx

SELECT : TRIGGER  
 START : STOCK

NEXT 1P START BUTTON  
 EXIT 2P START BUTTON

### 6. MEMORY TEST

Use this screen to check RAM and ROM on the Main P.C.B. The Main P.C.B. will automatically check them when you enter this screen. If no problems, the letters of **OK** will appear on screen.  
 If you get the letters of **ERROR**, check the mounting of RAMs or ROMs on the Main P.C.B. and also if **ERROR** reappears, it needs to be replaced.

**MEMORY TEST**

WORK RAM : OK  
 OBJ RAM : OK  
 COLOR RAM : OK  
 ROM(EVEN) : OK  
 ROM(ODD) : OK

NEXT 1P START BUTTON  
 EXIT 2P START BUTTON

## 7. GUN ADJUST MODE

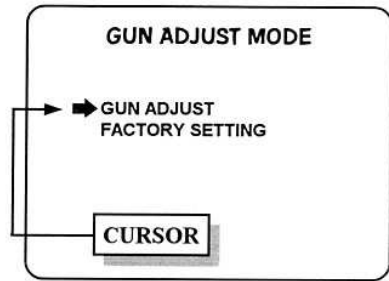
Use this screen to adjust the GUNs. Choose setting style with the cursor. Move the cursor with the TRIGGER or the PUMP UP switch and press the 1P or 2P Start Button.

### - GUN ADJUST

When you choose **GUN ADJUST**, you go to next screen which is manual adjustment. (See below "HOW TO MANUALLY ADJUST THE GUN")

### - FACTORY SETTING

When you choose **FACTORY SETTING**, the GUNs will adjust automatically. After setting, screen will show "GOOD LUCK TO YOU!!".



## HOW TO MANUALLY ADJUST THE GUN

1: Aim at lower left corner with the 1P GUN and pull the TRIGGER.

**GUN ADJUST MODE**

AIM AT  
**LOWER LEFT SIGHT**  
AND PULL TRIGGER

PLAYER 1	PLAYER 2
<b>SIGHT 1</b>	SIGHT 1
X : 0000	X : 0000
Y : 0000	Y : 0000
<b>SIGHT 2</b>	SIGHT 2
X : 0000	X : 0000
Y : 0000	Y : 0000

Shoot here with the 1P GUN

2: Aim at upper right corner with the 1P GUN and pull the TRIGGER.

**GUN ADJUST MODE**

AIM AT  
**UPPER RIGHT SIGHT**  
AND PULL TRIGGER

PLAYER 1	PLAYER 2
<b>SIGHT 1</b>	SIGHT 1
X : 0000	X : 0000
Y : 0000	Y : 0000
<b>SIGHT 2</b>	SIGHT 2
X : 0000	X : 0000
Y : 0000	Y : 0000

Shoot here with the 1P GUN

3: Aim at lower left corner with the 2P GUN and pull the TRIGGER.

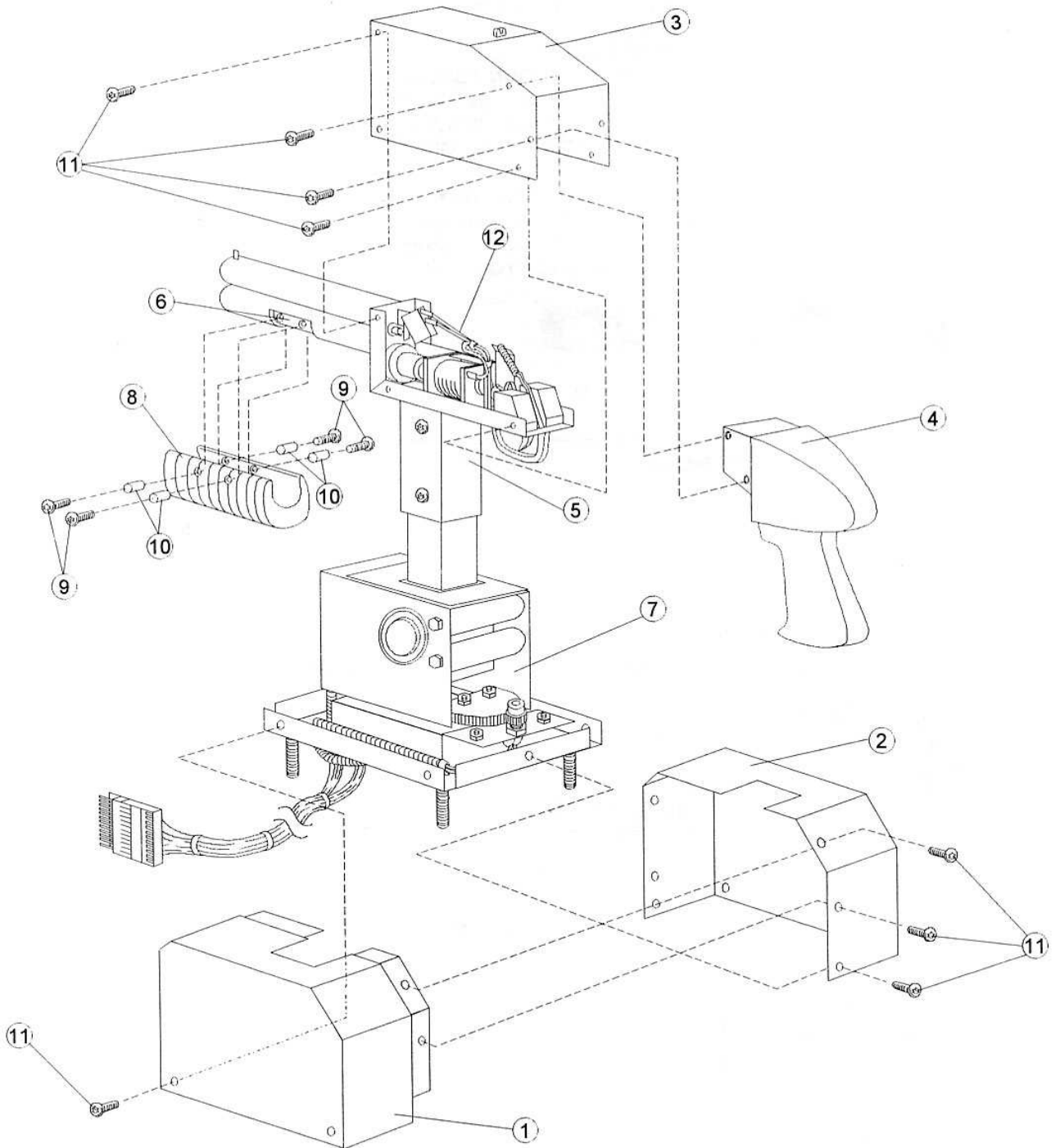
4: Aim at upper right corner with the 2P GUN and pull the TRIGGER.

5: After setting, the screen will show "GOOD LUCK TO YOU!!".

**GOOD LUCK TO YOU!!**

6: Turn back to OFF the "DIP SWITCH 2, #8" and re-power on the game. The game will go back to the GAME SCREEN.

# 6. GUN ASSEMBLY



<b>ITEM</b>	<b>DESCRIPTION</b>
①	Base Housing, Left
②	Base Housing, Right
③	Gun Cover Housing Fish Paper
④	Gun Grip
⑤	Gun Body Ass'y Trigger Spring, Trigger Microswitch, Trigger Mounting Block Solenoid Coil Plunger Spring, Plunger Microswitch, Pump Plastic Nub
⑥	Pump Shaft Pump Actuator Spring, Pump Spacer, Pump Bushing
⑦	Potentiometer Gear, Segment, 32P Gear, Segment, Hubless Gear, Spur
⑧	Pump handle Pump handle adaptor
⑨	T-15 Trex Wrench Screw
⑩	Spacer, Pump Handle
⑪	T-20 Trex Wrench Screw
⑫	Wiring Harness, Upper

## 7. PARTS LIST



PART NUMBER	DESCRIPTION
20 - 10 - 001	Main P.C.Board
20 - 20 - 030	Solenoid Interface Board
20 - 30 - 111	Marquee
20 - 30 - 311	Manual
20 - 30 - 370	Front Glass
20 - 50 - 300	Gun Ass'y
20 - 50 - 301	Gun Grip
20 - 50 - 302	Gun Pump Handle
20 - 70 - 351	Half Mirror

## 8. TROUBLE SHOOTING



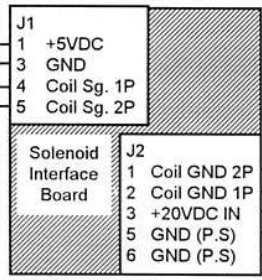
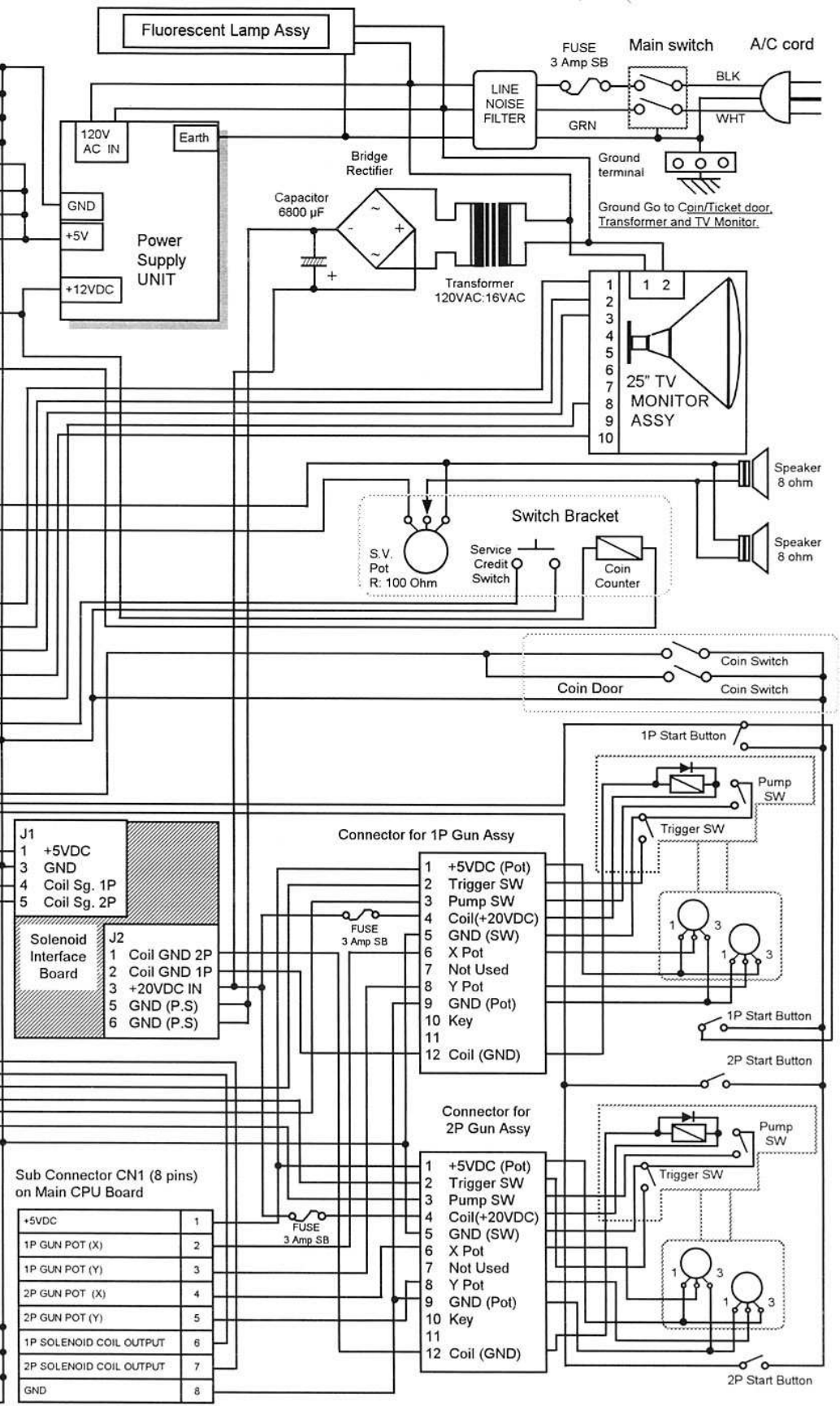
Problem	Suggested Action
<b>Gun Assy Problem</b> * If the solenoid Coil does not work	a) Check the fuse near the Solenoid Interface Board b) Check the voltage of the Solenoid Coil on the Coil and the Solenoid Interface Board. c) Check the wiring from Sub connector of the Main P.C.B. to the Solenoid Interface Board. d) Check the wiring from the Solenoid Interface Board to the Gun Assy.
* If the bullets are not reloaded	a) Check the Micro switch for Pump or Trigger.
* If the bullet does not shoot	b) Check the wiring of Micro switch for Pump or Trigger.
* If the bullets do not always shoot in the same position	a) Check the X-Y Pot. of Gun Assy in the TEST MENU.
<b>Coin Mechanism Problem</b>	a) Check the wiring to the coin switch and coin counter. b) Test the coin switch with the I/O TEST screen in the TEST MENU.
<b>Game Play Problem</b>	a) Check the harness and connectors of the control panel. b) Perform the I/O TEST. c) Check the voltage levels on the Main P.C.B.
<b>Sound Problem</b>	a) Is the speaker volume turned up ? (Volume can be adjusted on the Main P.C.B.) b) Check the voltage levels on the Main P.C.B. edge connector. c) Check the wiring from the Main P.C.B. to the speaker. d) Check the voltage level to the Main P.C.B. e) Replace the speaker.
<b>Monitor Problem</b>	
* If the screen area wavers or is too small	a) Check the correct power voltage to the Monitor P.C.B.. b) Check the correct high power voltage to the Monitor P.C.B..
* If the picture is wavy	a) Is the monitor ground connected to the monitor ? b) Is the SYNC input connected properly ?
* Convergence, purity or color problems	a) Use the screen in the TEST MENU to adjust the Monitor.
* If the picture is not centered	
* If the screen is dark	a) Check the line (Main) fuse. b) Check that the brightness on the Monitor is turned up. c) Is the JAMMA connector on the Main P.C.B. tightly connected ? d) Check all of the items below. If you answer no to any question, you have a problem with the Monitor, not with the game circuitry. See your Monitor service manual. * Do you have power to the Monitor ? * Are the Monitor's filaments lit ? * Do you have high voltage to the Monitor ? e) Are the voltage levels to the Monitor P.C.B. correct ? (Power voltage is 120 VAC, depending on the type of Monitor. Video signal voltage is 0.5 to 3.5 Volts.) If the level is not correct, check the connectors and the harness.

# 9. ELECTRICAL WIRING DIAGRAM



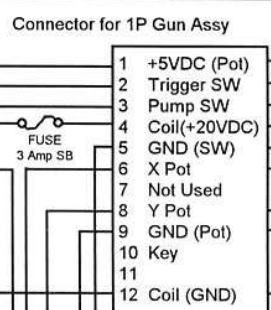
JAMMA Connector (56 pins)  
on Main CPU Board

GND	1
GND	A
GND	2
GND	B
+5VDC	3
+5VDC	C
+5VDC	4
+5VDC	D
	E
+12VDC	6
+12VDC	F
KEY	7
KEY	H
COIN METER A	B
COIN METER B	J
COIN LOCKOUT A	9
COIN LOCKOUT B	K
SPEAKER (+)	10
SPEAKER (-)	L
	11
	M
VIDEO RED	12
VIDEO GREEN	N
VIDEO BLUE	13
VIDEO SYNC	P
VIDEO GND	14
SERVICE CREDIT SWITCH	R
	15
	S
COIN SWITCH A	16
COIN SWITCH B	T
1P START BUTTON	17
2P START BUTTON	U
	18
	V
	19
	W
	20
	X
	21
	Y
1P GUN TRIGGER SWITCH	22
2P GUN TRIGGER SWITCH	Z
1P GUN PUMP SWITCH	23
2P GUN PUMP SWITCH	a
	24
	b
	25
	c
	26
	d
GND	27
GND	e
GND	28
GND	f



**Sub Connector CN1 (8 pins)  
on Main CPU Board**

+5VDC	1
1P GUN POT (X)	2
1P GUN POT (Y)	3
2P GUN POT (X)	4
2P GUN POT (Y)	5
1P SOLENOID COIL OUTPUT	6
2P SOLENOID COIL OUTPUT	7
GND	8



## Limited warranty, Repair and Return Policy

American Sammy Corporation warrants all products to be free from defective materials and workmanship for a period of thirty (30) days from the American Sammy Corporation invoice date unless otherwise specified in writing by American Sammy Corporation. The extent of this warranty applies to all electronic assemblies only, and does not include lamps and fuses.

This limited warranty is invalid for any product that upon examination, is deemed to have been subject to misuse, improper repair or installation, neglect or violation of specification or other instructions published by American Sammy Corporation.

There are no additional warranties which extend beyond those limited warranties described above. The limited warranties described above shall be in lieu of any other warranty, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose.

## Return Merchandise Authorization

1. Contact your authorized ASC distributor to receive a Return Merchandise Authorization for return.
2. You must obtain RMA numbers from American Sammy Corporation through an authorized ASC distributor. Please have your serial number available when calling for an RMA number.
3. All items must have an RMA number marked clearly on the outside of the package.
4. Products must be shipped prepaid. Products returned without an RMA number will not be accepted.
5. Credits to accounts are subject to inspection of products for damage and suitability for resale.

## F.C.C. Regulation Compliance

This equipment complies with the limits for a Class A digital device pursuant to Part 15 of the F.C.C. Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

## UL Listed

This game has been tested & listed by Underwriters Laboratory. This listing is subject to no modifications done by operator of this game. Any modifications not approved by American Sammy Corporation will void such U.L. listing.