

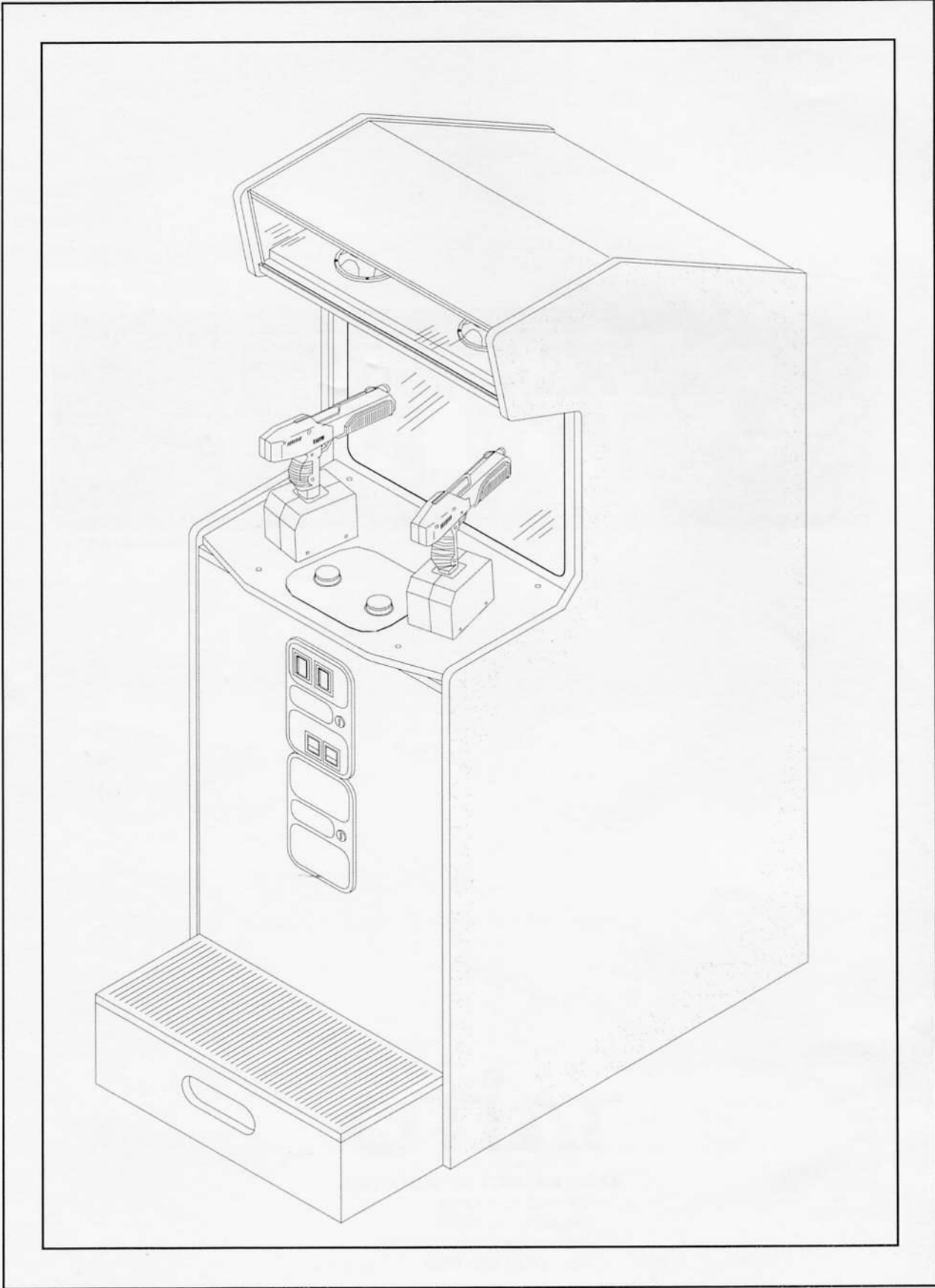
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TAITO™

TAITO AMERICA CORPORATION

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OPERATION WOLF 3

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INTRODUCTION

Game inspection

Please take a moment to read the following before turning on your new *Operation Wolf 3™* for the first time. Your game was carefully checked at the factory before shipping.

After removing the game from its carton inspect the game carefully. Look for cracks in the cabinet, gouges, bent metal parts, etc. This shipping damage should be reported to the carrier. Remember to take photographs.

Precautions concerning the place of installation

This is an indoor game machine. Absolutely do not install it outside. Even indoors, avoid installing in places mentioned below so as to ensure proper usage:

- Places subject to rain or water leakage, or condensation due to humidity.
- In the proximity of an indoor swimming pool and/or shower.
- Places subject to direct sunlight.
- Places subject to heat sources from heating units, etc., or hot air.
- Vicinity of highly flammable/volatile chemicals or hazardous matter.
- Sloped surfaces.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- Places subject to any type of violent impact.
- Dusty places.
- Residential environment - (See F.C.C. statement which follows).

F.C.C. Requirements

The Federal Communications Commission requires that all Class A equipment be verified and labeled as follows:

This equipment complies with the requirements in part 15 of FCC Rules for a Class A computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio and TV reception requiring the operator to take whatever steps are necessary to correct the interference.

This label must be permanently attached in a conspicuous location and the text must be legible. If this label is removed or tampered with such action is punishable under Section 503 of the Communications Act of 1934 (ACT), as amended.

SPECIFICATIONS

Power

Line:	115V AC 60Hz
Consumption:	250 Watts (approximately)

Cabinet

Height:	72-3/4" (As assembled)
Width:	26-5/8"
Depth:	36-5/8" with 15-7/8" additional pedestal

Caution: For safe operation it is strongly recommended the cabinet be properly grounded. The game is equipped with a three conductor power cable. The round "third prong" will ground the game when plugged into a grounded outlet. If an adaptor is used, be certain to attach the grounding lug or wire on the adaptor. Do not cut off the grounding pin or use a cheater plug to defeat the power cord's grounding pin.

GAME INSTALLATION

Operation Wolf 3™ comes fully assembled. To properly install the game, follow these steps:

1. Uncrate machine.
2. Attach leg levelers to bottom of pedestal. Level game.
3. Plug into grounded electrical outlet.

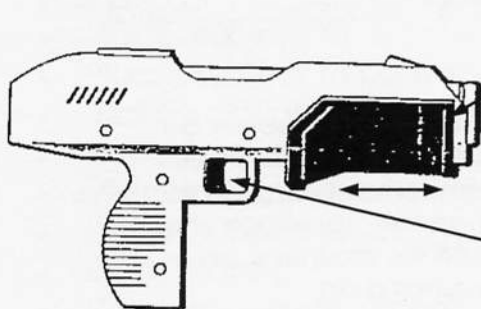
ATTENTION

Each day the Operator should check that ALL warning labels are legible and affixed to this equipment in their proper locations.

PLAY INSTRUCTIONS

Operation Wolf 3™ is a game played as long as civilian lives are not all lost. You get an unlimited number of bullets, but when all civilian lives shown on the screen are lost, the game is over.

The gun is the basic control. It can fire both bullets and bombs. Here is how to use the guns:



FORE-GRIP: Bomb Attack

Bombs can be used up to the number of stocks. Bombs are supplied depending on scored points in each cleared scene.

TRIGGER: Bullet Fire

If the trigger is pulled continuously, bullets run short and the rapid-fire becomes slowed. When you release the trigger, more bullets are supplied.

Play Instructions continued

Here is a screen layout with an explanation of the symbols you'll see on the screen :

SCREEN LAYOUT

DISPLAY OF PLAYER'S LIVES

WHEN LIVES HAVE BEEN LOST, THE GAME IS OVER

DISPLAY OF "BOMB" STOCKS

"BOMBS" CAN BE USED UP TO THE NUMBER OF STOCKS.

THE NUMBER OF BULLETS

IF THE TRIGGER IS PULLED CONTINUOUSLY, BULLETS RUN SHORT AND THE RAPID-FIRING BECOMES SLOW. BY RELEASING THE TRIGGER, BULLETS ARE SUPPLIED.

TRIGGER

Other ammo is available when you shoot the colored boxes.

DON'T SHOOT CIVILIANS.

IF THE PLAYER SHOTS CIVILIANS, POINTS ARE DECREASED

TAKE ITEMS.

ITEMS CAN BE TAKEN BY SHOOTING ITEM BOXES.

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MG MACHINE GUN
RAPID FIRE

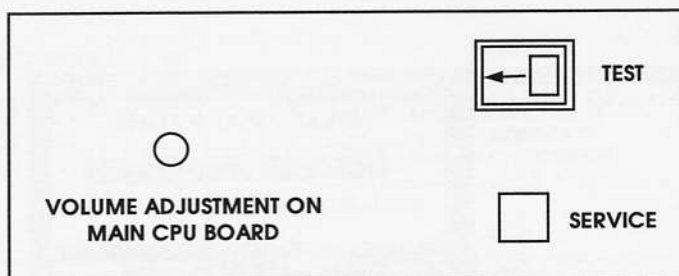
44 44-CALIBER BULLETS
STRONGER AND WIDER

SG SHOTGUN
WIDER SHOT EFFECT

GL GRENADE LAUNCHER
EXPLOSION AT IMPACT AREAS

TEST AND SWITCH SETTINGS

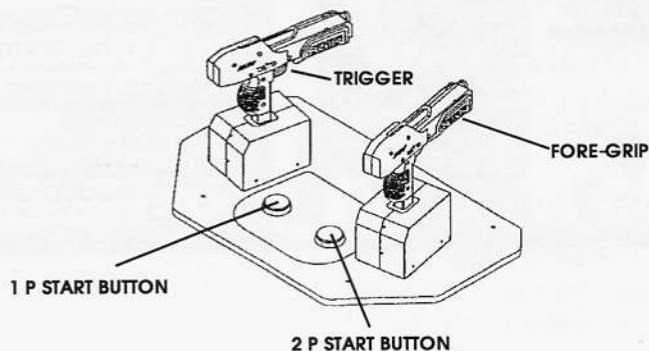
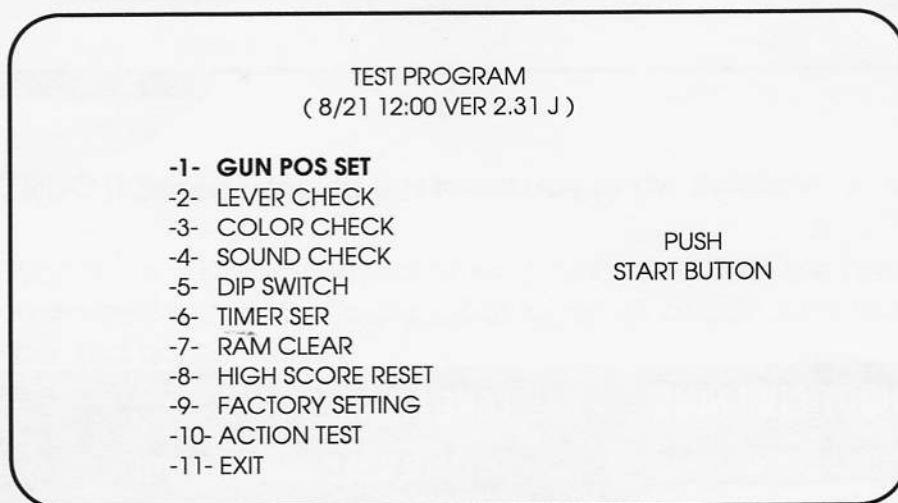
To start the testing procedure, open the coinbox door to access the test switches on the unit:



When the test switch line of the G-connector No. 15 is connected to the GND, the game mode is discontinued and the "Test Program" screen is displayed.

To select a specific test, pull the trigger of a gun. The mode is highlighted on the screen. To start the test, press the 1P start button.

To end the test mode, select "EXIT" and press the 1P start button.



Test No. 1: Gun Position Setting Test

Set the position of the 1P gun as follows:

- 1) On screen A adjust the gun to the + mark located in the upper right side of the screen and pull the trigger.
- 2) On screen B adjust the gun to the + mark located in the lower left side of the screen and pull the trigger.

Set the position of the 2P gun following steps 1 and 2 above. When the adjustment of the 2P gun is finished, the screen returns automatically to the "Test Program" screen.

SCREEN A

+

PLAYER1 X.Y MIN SET
PUSH GUN BUTTON

SET X = 00
SET Y = 00

SCREEN B

PLAYER1 X.Y MIN SET
PUSH GUN BUTTON

SET X = 00
SET Y = 00

+

Test No. 2: Lever Check

Do the input test for each switch as follows:

Press each switch. If it is normal, the color of the letters changes.

PUSH A+B BUTTON
LEVER TEST

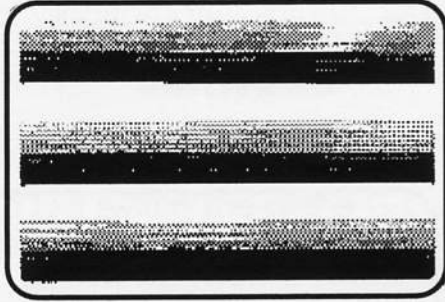
1P		2P	
UP		UP	
LEFT	RIGHT	LEFT	RIGHT
DOWN		DOWN	
BUTTON A	COIN	SW	BUTTON A
BUTTON B	SERVICE	SW	BUTTON B
BUTTON C			BUTTON C

When the trigger and the fore-grip are pulled at the same time, the screen returns to the "Test Program" screen.

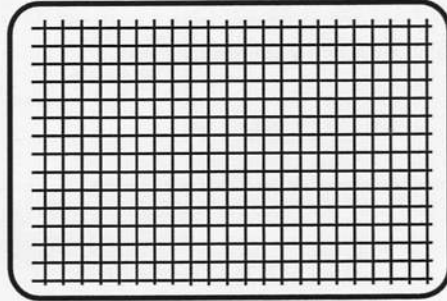
Test No. 3: Color Check Test

Check the color adjustment and size of the monitor as follows:

When the trigger is pulled, the screen changes from the color bar screen to the crosshatched screen. Push the 1P start button to return to the "Test Program" screen.



(COLOR BARS)

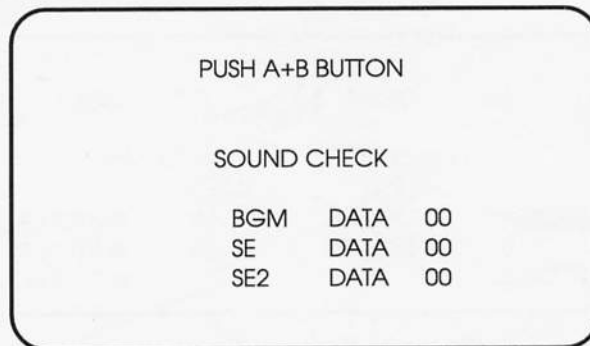


(CROSSHATCH)

Test No. 4: Sound Check

Check the sound outputs as follows:

- Pull the trigger to advance the selection items, and use the fore-grip to change the numbers
- Press the 1P start button to select the item, then press the 2P start button to test the sounds you have selected.

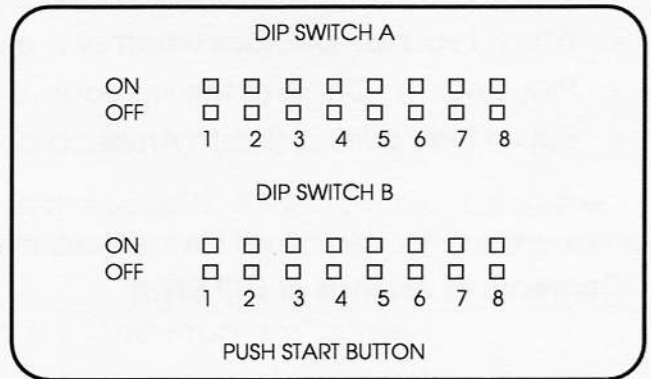


Pull the trigger and the fore-grip at the same time to return to the "Test Program" screen.

Test No. 5: Dip Switch

Test the DIP switch settings as follows:

- Use the fore-grip to select the switch to be changed. Use the trigger to select "ON" or "OFF" settings.
- The contents for the selected switch are displayed on the lower left side of the screen.



DIP SW A (FOR NORTH AMERICA)

Set contents		1	2	3	4	5	6	7	8																
Screen rotation	Normal	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF																
	Reverse		ON																						
Attract sound	With		OFF							OFF	OFF	OFF	OFF	OFF	OFF	OFF									
	Without																ON								
Play pricing	1 Coin 1 Play																OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
	2 Coins 1 Play																								ON
	3 Coins 1 Play																								OFF
	4 Coins 1 Play																								ON
Buy-in play pricing	Same as play	OFF		OFF	OFF	OFF	OFF	OFF	OFF																OFF
	1 Coin																								
	2 Coins		OFF																						
	3 Coins		ON																						

DIP SW A (EXCEPT NORTH AMERICA)

Set contents		1	2	3	4	5	6	7	8																
Screen rotation	Normal	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF																
	Reverse		ON																						
Attract sound	With		OFF							OFF	OFF	OFF	OFF	OFF	OFF	OFF									
	Without																ON								
Play pricing	1 Coin 1 Play																OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
	2 Coins 1 Play																								ON
	3 Coins 1 Play																								OFF
	4 Coins 1 Play																								ON

DIP SW B

Set contents		1	2	3	4	5	6	7	8
Game difficulty	Normal	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Easy	ON							
	Hard	OFF	ON						
	Extra hard	ON							
Life	5	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	6			ON					
	7			OFF	ON				
	8			ON					
Blood	Without	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	With							ON	

Contents of settings of DIP SW-A

- Screen rotation: The screen is inverted.
- Attract sound: Decides whether the attract sound is activated.
- Play pricing: Decides the number of coins per play.
- Buy-In Play pricing (North America only): Sets the continue play fee.

Contents of settings of DIP SW-B

- Game difficulty: sets the game difficulty levels.
- Life: sets the number of lives at start of game.
- Blood: decides whether to activate bloodletting when men are shot during play.

Test No. 6: Timer Setting

Set the present date and time as follows:

- When the 1P start button is pressed, the items move. When you pull the trigger, the value of the color-changed item advances. Pull the fore-grip to return to the original value.
- When you've finished with the settings, press the start button to implement the change. *The settings will not change without this step.*

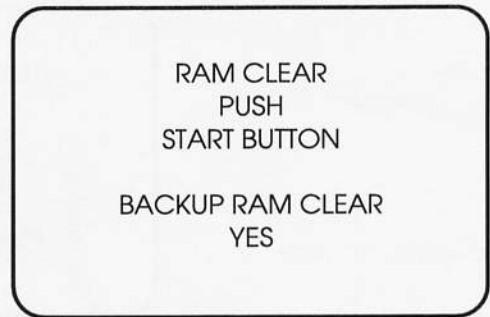
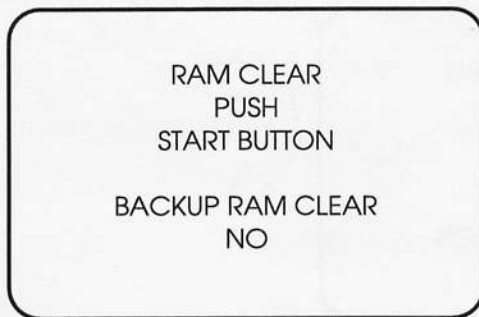
TIME	SET	PROGRAM
DATE	-	94/8/21
WEEK	-	SUNDAY
TIME	-	12:25:48
DATE	-	94/8/21
WEEK	-	SUNDAY
TIME	-	14:25:48

Pull the trigger and the fore-grip at the same time to return to the "Test Program" screen.

Test No. 7: RAM Check

Initialize the back-up RAM as follows:

- 1) Pull the trigger to select YES or NO on the screen. Initialize it by pulling the fore-grip. Your selection will not be implemented if you do not pull the fore-grip.
- 2) Press the 1P start button to return to the "Test Program" screen.



Test No. 8: High Score Reset

Clear the high score as follows:

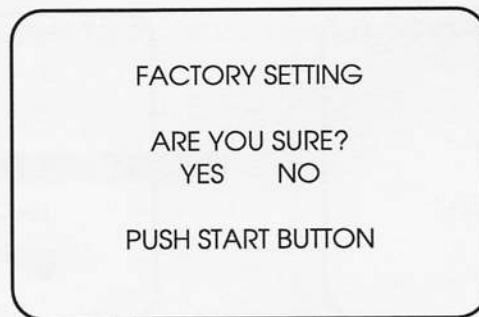
Pull the trigger to select YES on the screen, then press the 1P start button to reset the high score.

When the 1P start button is pressed, the screen returns to the "Test Program" screen.

Test No. 9: Factory Setting Check

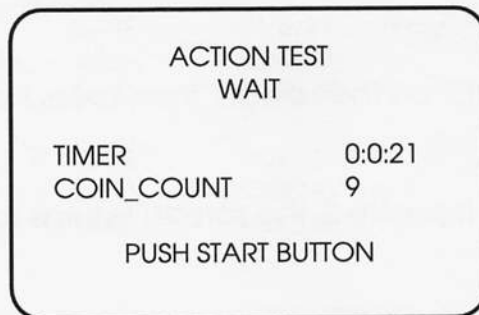
Factory settings are listed on page 8 of this manual.
This screen returns all settings to the factory settings as follows:

- 1) Pull the trigger to select YES if you want to return all settings to the factory settings. Confirm your choice by pulling the fore-grip. No changes will occur if you do not pull the fore-grip.
- 2) Press the 1P start button to return to the "Test Program" screen.



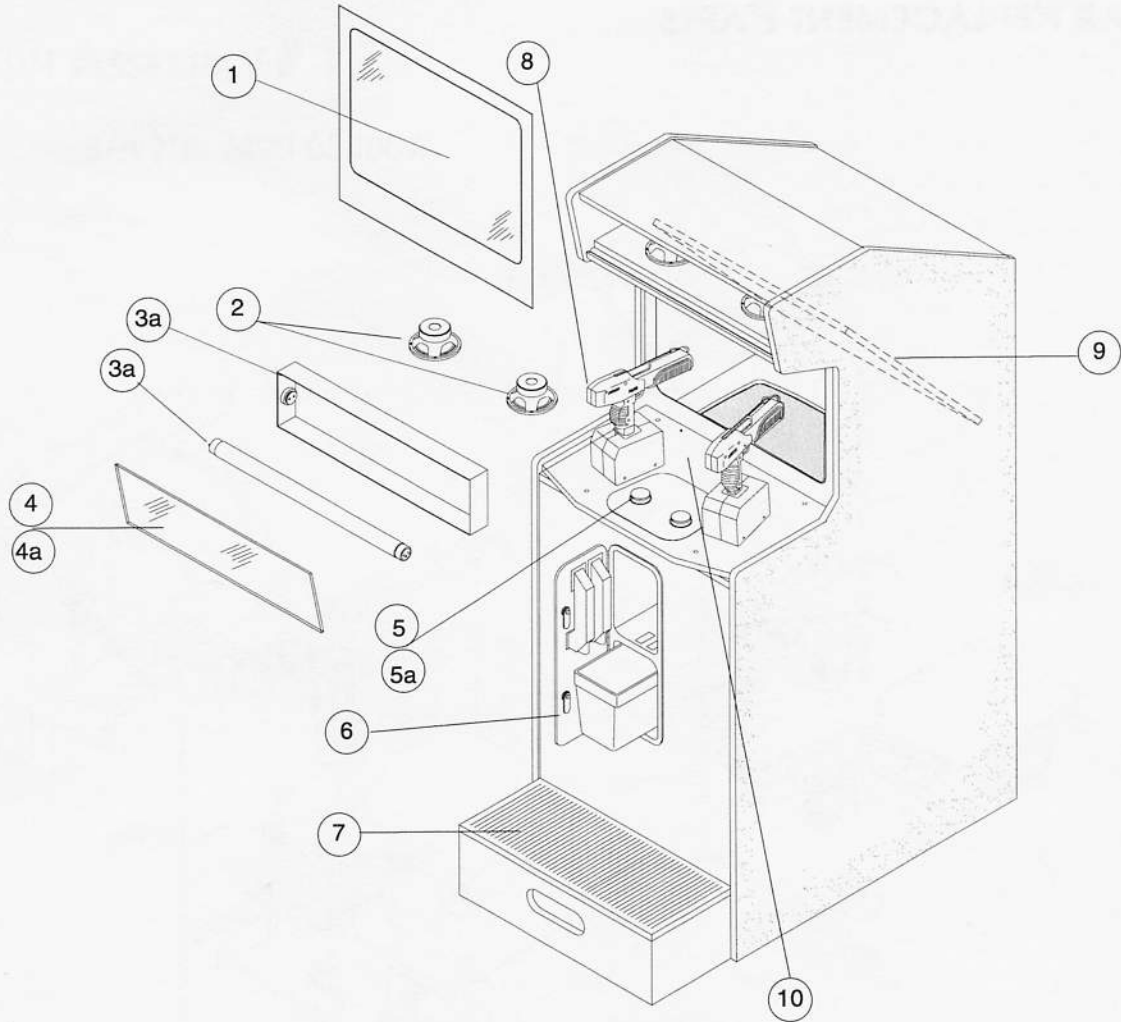
Test No. 10: Action Test

Select this test to enter the gun action test.



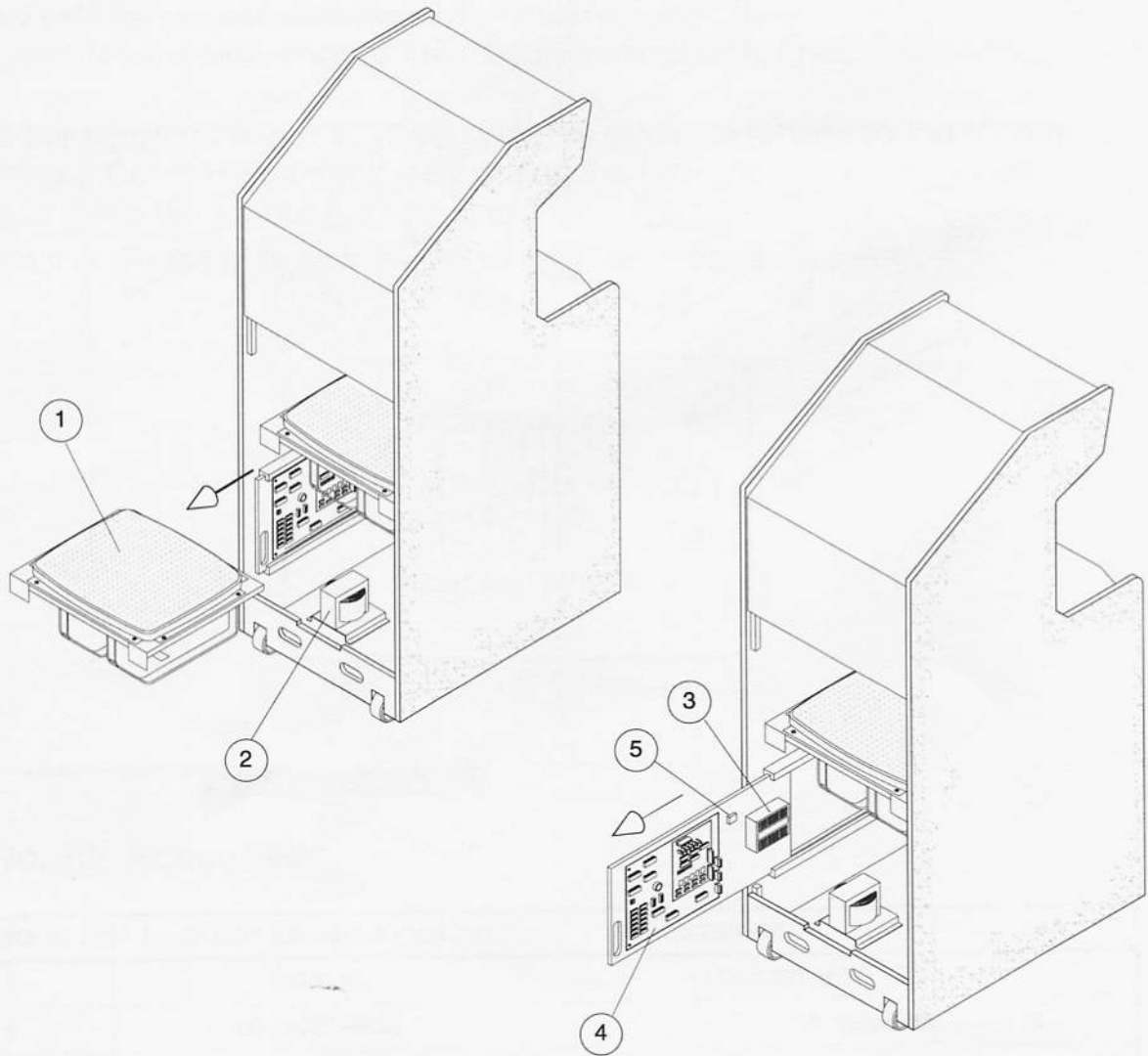
When the 1P start button is pressed, the screen returns to the "Test Program" screen.

FRONT REPLACEMENT PARTS



Seq.	Description	Part No.	Qty.
1	CRT Glass 19X25X21.6	NX-00001	1
2	Speaker, 4"	5555-13961-00	2
3	Flourescent Light Assy.	A-15890	1
3a	Flourescent Light	H-16303	1
4	Clear Glass	08-7456-4	1
4a	Screened Marquee	ZA-00014	1
5	Push Button - Red	20-9687-1	1
5a	Push Button - Blue	20-9687-3	1
6	Coin Door	NY-00001	1
7	Mat, 16" Black Ribbed	NP-00002	1
8	Gun Assy.	M90 03480A	1
9	25" Mirror	31-1900	1
10	Instruction Decal (on Monitor Glass)		1 set

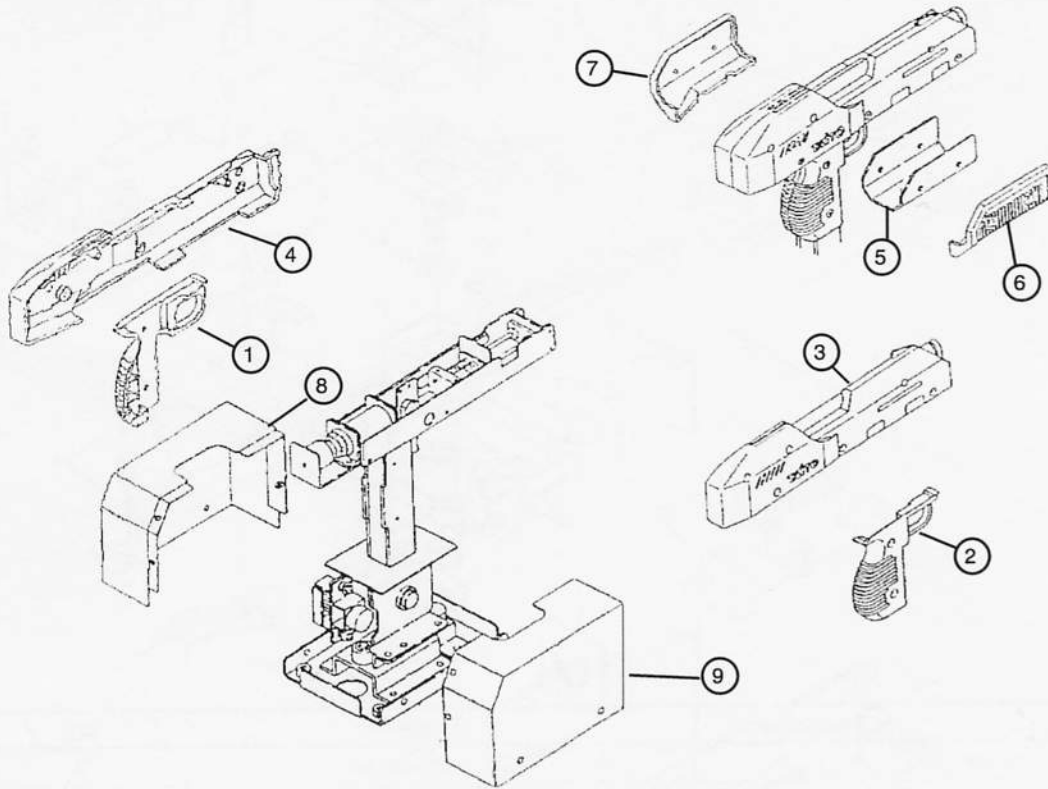
REAR REPLACEMENT PARTS



Seq.	Description	Part No.	Qty.
1	25" Color Monitor	5675-12787-05	1
2	Transformer	5610-13829-02	1
3	Switching Regulator Power Supply	20-9920	1
4	Main CPU Board Assy.	M43T0297A	1
5	Diode Bridge	5100-09418-00	1

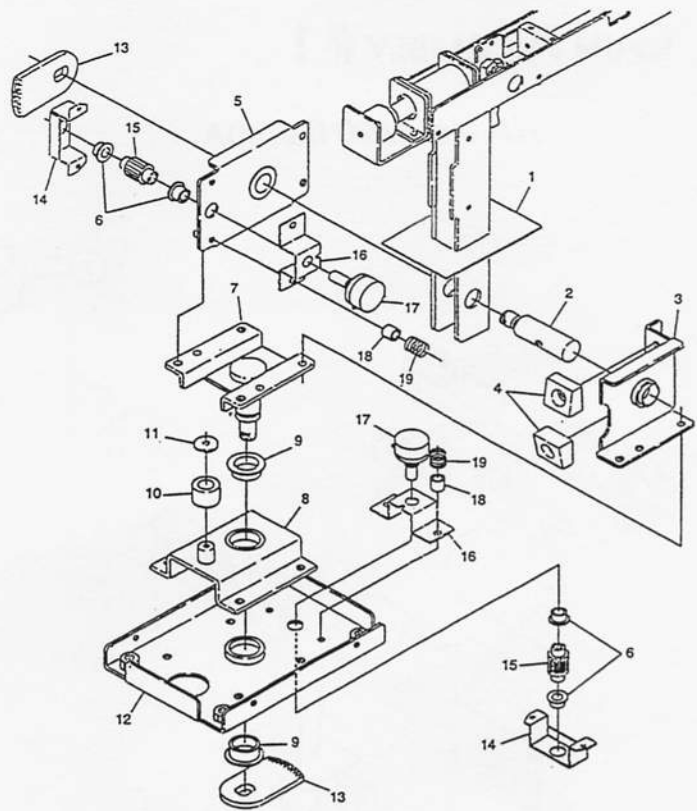
GUN ASSEMBLY # 1

S/A No. M90 03480A



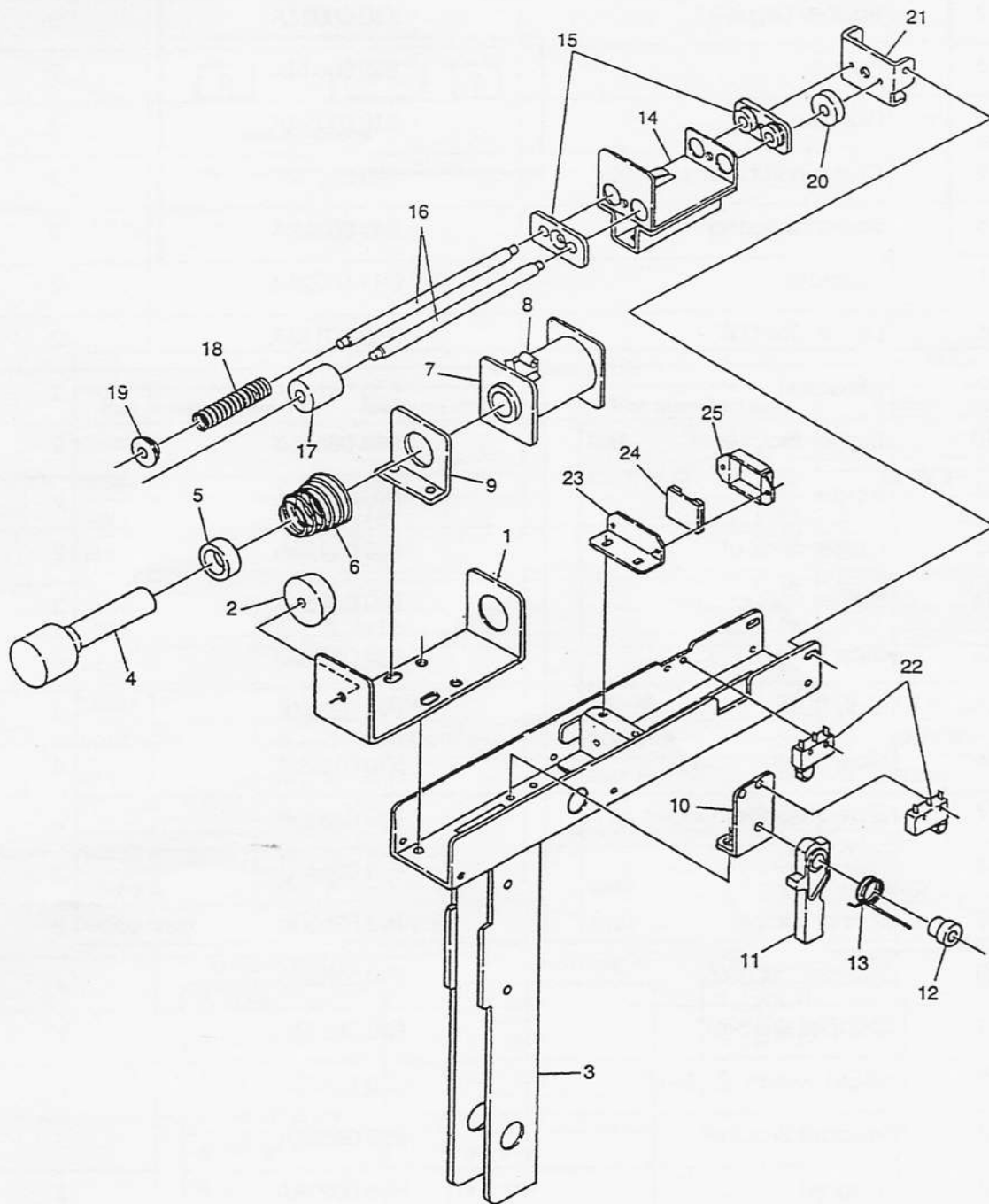
Seq.	Description	Part No.	Qty.
1	Grip A	F90 3624B	2
2	Grip B	F90 03625B	2
3	Gun Body A	F90 03622B	2
4	Gun Body B	F90 3623B	2
5	Slide Grip Base	E30 08621B	2
6	Slide Grip A	F90 03626A	2
7	Slide Grip B	F90 08627A	2
8	Base Cover L	E30 08622A	2
9	Base Cover R	#30 08623A	2

GUN ASSEMBLY # 2



Seq.	Description	Part No.	Qty.
1	Mask	F90 02522A	2
2	Sub Shaft	E10 00880A	2
3	Side Bracket R (with Bush LFF-1510)	E30 08619A	2
4	Stopper Rubber A	F90 01790A	4
5	Side Bracket L (with Bush LFF-1510)	E30 08618A	2
6	Oiles Flange Bush 80F-0905	F90 0198A	8
7	Shaft Bracket	E90 00669B	2
8	Up Base	E90 003129B	2
9	Oiles Flange Bush 80F-1810	F90 01799A	4
10	Stopper Rubber B 10.1X18X12	F90 01791A	2
11	Washer	E30 06163A	2
12	Under Base	E30 08620A	2
13	Gear A	E70 00132B	4
14	Gear Bracket	E30 06164B	4
15	Gear B	E70 00133A	4
16	Volume Bracket	E30 06165B	4
17	Variable Resistor 5K-B EWSWI1F20E53	A21 02541A	4
18	Spacer - 5L	E10 00881B	4
19	Tension Spring	E40 00275A	4

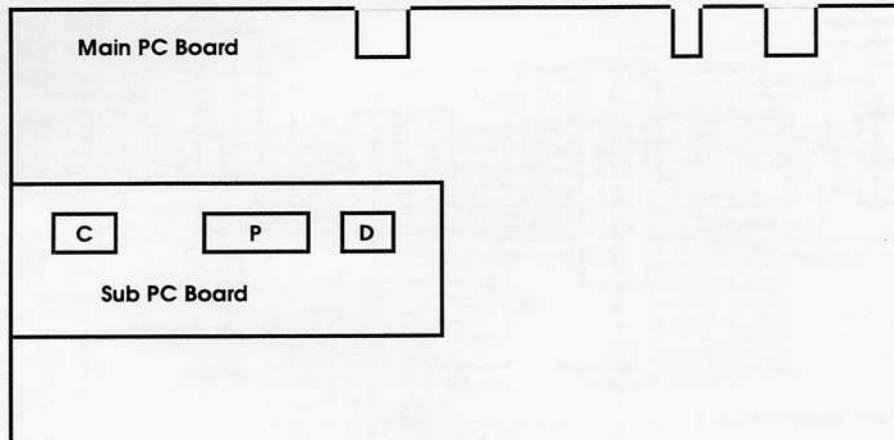
GUN ASSEMBLY # 3



Gun Assembly Parts shown on page 16

Seq.	Description	Part No.	Qty.
1	Solenoid Bracket	E30 06168A	2
2	Rubber Leg K-24	F30 00024A	2
3	Frame	E30 08614A	2
4	Plunger	310 01124A	2
5	Cushion Rubber 13X18X6	F90 02519A	2
6	Solenoid Spring	E40 00362A	2
7	Solenoid	C11 01225A	2
8	Diode 1N4003	A02 00113A	2
9	L-Bracket	E30 06169A	2
10	Trigger Bracket	E30 08615B	2
11	Trigger	F90 03628A	2
12	Trigger Spacer	E10 01125A	2
13	Trigger Spring	E40 00363A	2
14	Slide Base	E30 08616D	2
15	Slide Bush	F90 02484A	4
16	Slide Shaft	E10 01126A	4
17	Slide Stopper Rubber 5X16X18	F90 02520A	2
18	Return Spring	E40 00365A	2
19	Spring Spacer	F90 02530A	2
20	Bumper 5X16X5	F90 02543A	2
21	Stopper Bracket	E30 08617A	2
22	Micro Switch SS-5GL2	C02 00183A	4
23	Magnet Bracket	E30 08626A	2
24	Magnet	H90 00218A	2
25	Magnet Cover	E30 08627A	2
(Not Shown)	K Harness	L90 03189A	2

TEST OF CONNECTOR TERMINALS



G CONNECTOR			
Part mounted side		Soldered side	
GND	1	A	GND
GND	2	B	GND
+5V	3	C	+5V
+5V	4	D	+5V
-5V	5	E	-5V
+12V	6	F	+12V
POST	7	H	POST
METER 1	8	J	METER 2
LOCK OUT 1	9	K	LOCK OUT 2
SP (+)	10	L	SP (-)
	11	M	
VIDEO R	12	N	VIDEO G
VIDEO BL	13	P	VIDEO SYNC
VIDEO GND	14	R	SERVICE

Part mounted side		Soldered side	
TEST	15	S	
COIN 1	16	T	COIN 2
	17	U	
	18	V	
	19	W	
	20	X	
	21	Y	
TRG 1P	22	Z	TRG 2P
BOMB 1P	23	a	BOMB 2P
BSET 1P	24	b	BSET 2P
	25	c	
	26	d	
GND	27	e	GND
GND	28	f	GND

C CONNECTOR

1	+5V
2	VR 1P X
3	VR 1P Y
4	VR 2P X
5	VR 2P Y
6	
7	
8	
9	
10	GND

P CONNECTOR

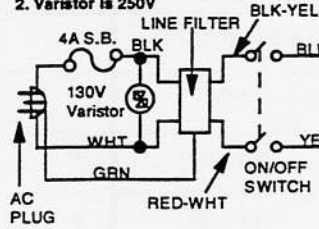
1	+24V
2	+24V
3	+12V
4	+12V
5	+5V
6	+5V
7	GND
8	GND
9	+24VGND
10	+24VGND

D CONNECTOR

1	SOL 1P
2	SOL 2P
3	
4	

POWER WIRING DIAGRAM

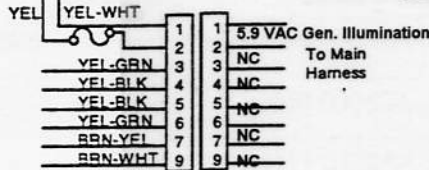
Note:
For 230VAC Operation
1. Fuse is 2A S.B.
2. Varistor is 250V



POWER WIRING DIAGRAM



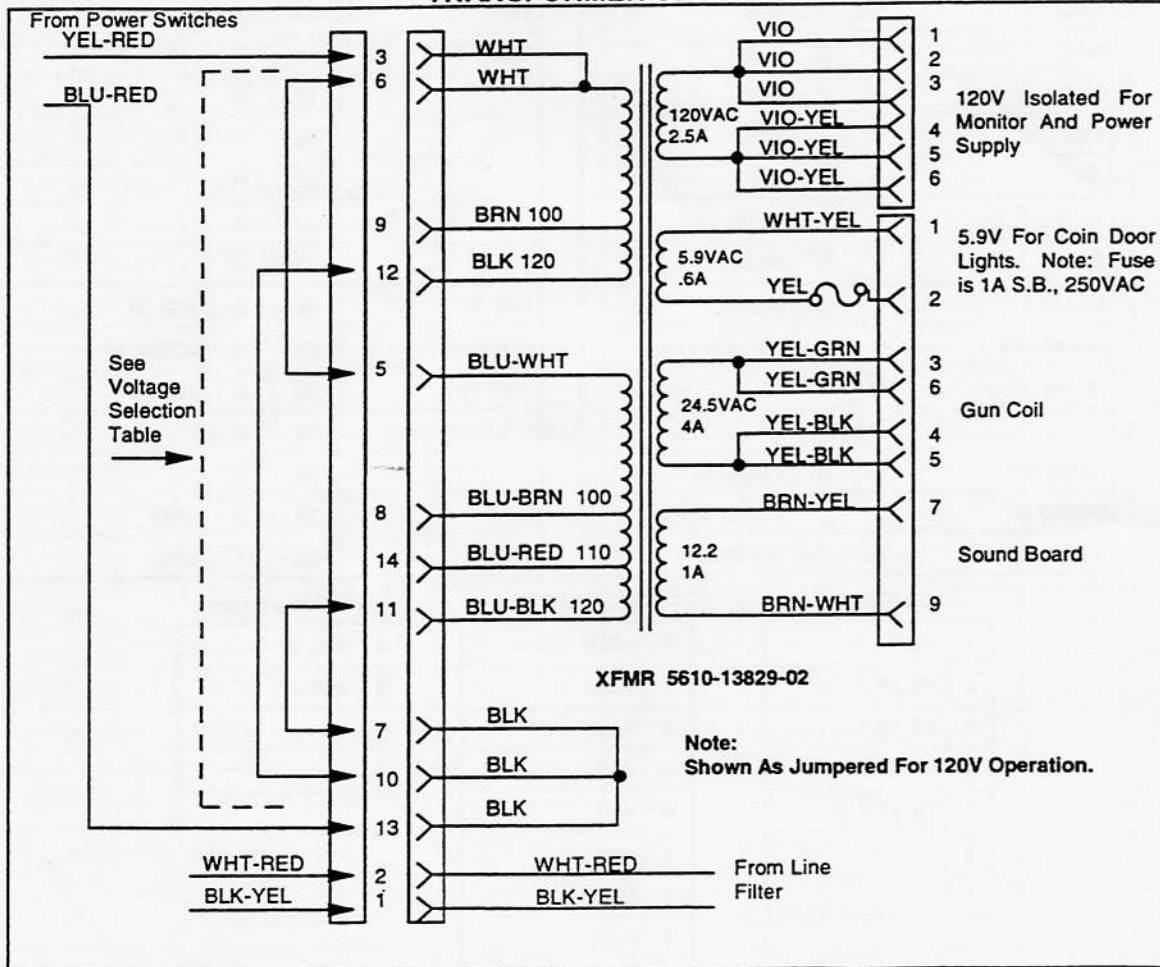
Note:
G.I. Fuse is 1A S.B.



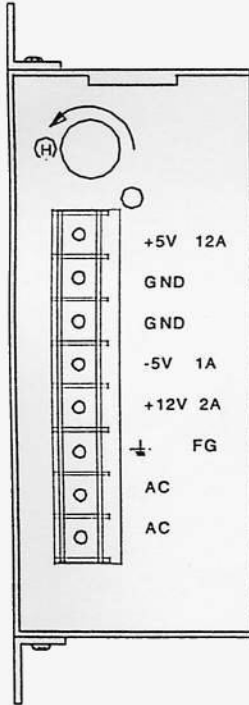
VOLTAGE SELECTION TABLE

Voltage	Jumper Pins	Varistor	Fuse
100	5-6 7-8 9-10	130V	5A S.B.
120	5-6 7-11 10-12	130V	5A S.B.
200	5-9 10-8	275V	3A S.B.
210	5-9 10-14	275V	3A S.B.
220	5-9 10-11	275V	3A S.B.
230	5-12 10-14	275V	3A S.B.
240	5-12 10-11	275V	3A S.B.

TRANSFORMER CHART

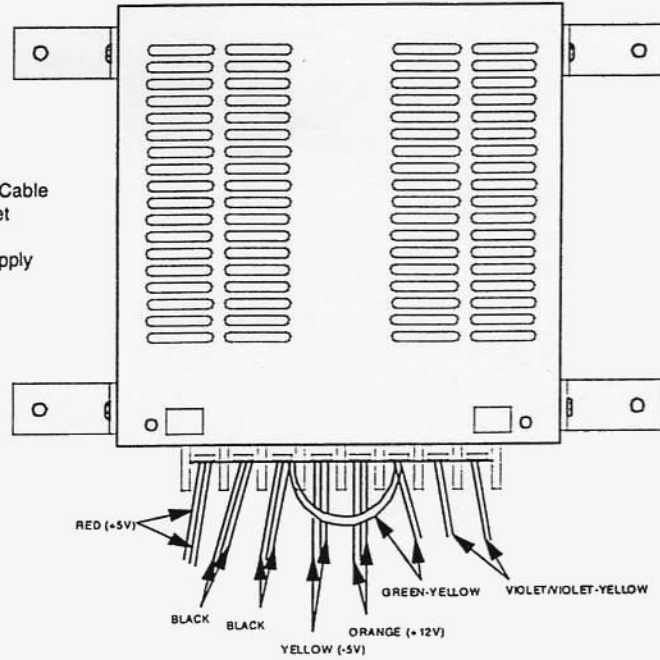


POWER SUPPLY SWITCHER ASSEMBLY



Part Number
 H-17914
 01-10500
 01-12162
 20-9920

Description
 Switcher Power Cable
 Mounting Bracket
 Shield
 P/S Switcher Supply



JAMA Chart

Function	Wire Color	Pin	Pin	Wire Color	Function
Ground	Black	1	A	Black	Ground
Ground	Black	2	B	Black	Ground
+5Vdc	Red	3	C	Red	+5Vdc
+5Vdc	Red	4	D	Red	+5Vdc
-5Vdc	Yellow	5	E	Yellow	-5Vdc
+12Vdc	Orange	6	F	Orange	+12Vdc
	Key	7	H	Key	
Meter 1	Brown	8	J	Brown-Red	Meter 2
	N/C	9	K	N/C	
Speaker (+)	Red-Gray	10	L	Brown-Gray	Speaker (-)
	N/C	11	M	N/C	
Video Red	Red	12	N	Green	Video Green
Video Blue	Brown	13	P	White	Video Sync
Video Ground	Shield	14	R	White-Gray	Service Switch
Test Switch	Black-Blue	15	S	Black-Green	Tilt Switch
Coin 1	Black-Brown	16	T	Black-Red	Coin 2
Start 1	White	17	U	Violet-White	Start 2
	N/C	18	V	N/C	
	N/C	19	W	N/C	
	N/C	20	X	N/C	
	N/C	21	Y	N/C	
1 Push 1	White-Yellow	22	Z	Violet-Yellow	2 Push 1
1 Push 2	White-Green	23	a	Violet-Green	2 Push 2
	N/C	24	b	N/C	
	N/C	25	c	N/C	
	N/C	26	d	N/C	
Ground	Black	27	e	Black	Ground
Ground	Black	28	f	Black	Ground



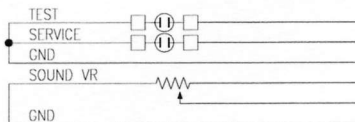
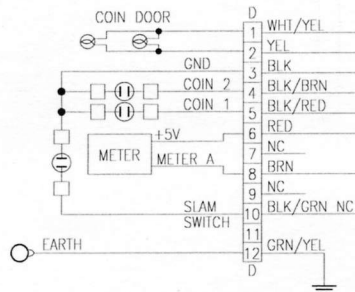
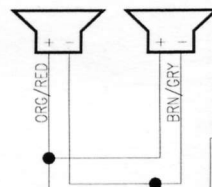
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Wheeling, IL 60090
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OPERATION WOLF 3™

FULL RANGE 20W

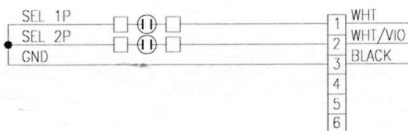
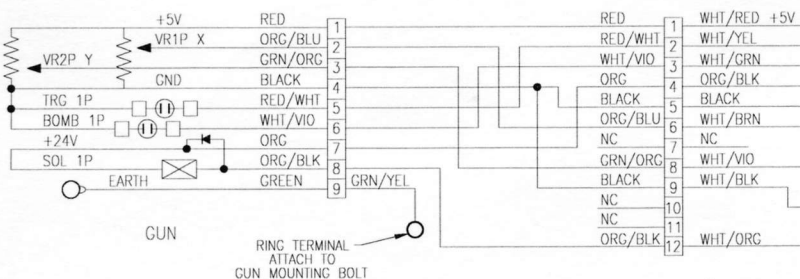
8 OHM 8 OHM



PLAYER 1

INTERCONNECT CABLE

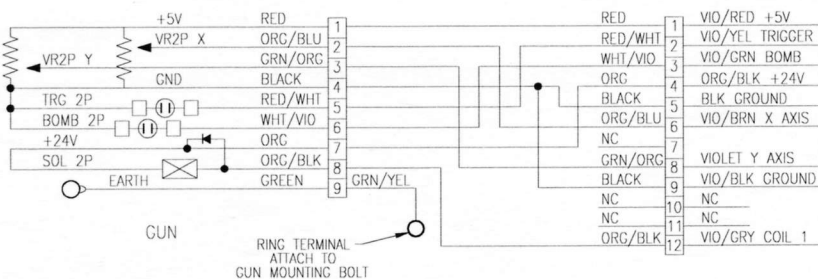
MAIN HARNESS

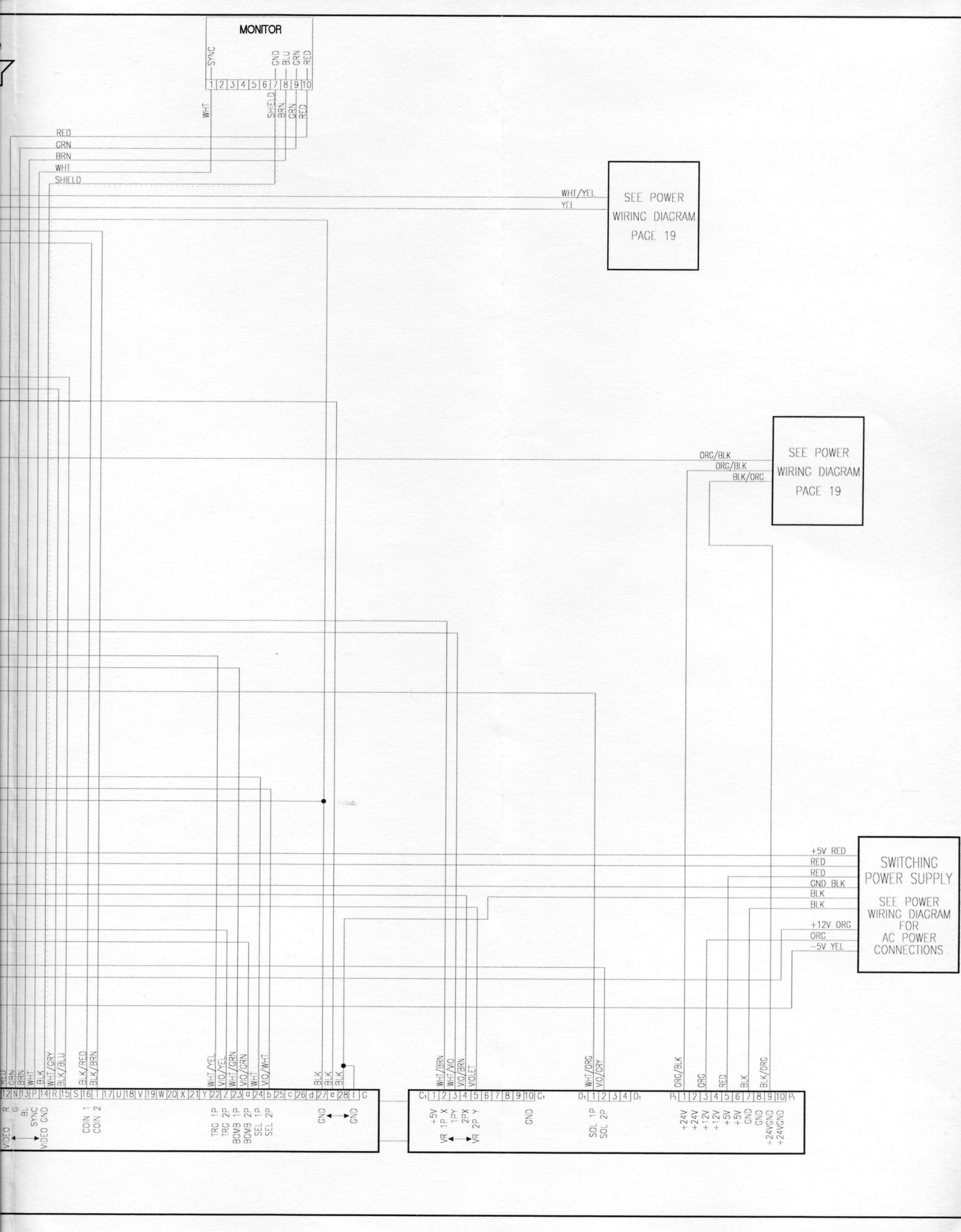


PLAYER 2

INTERCONNECT CABLE

MAIN HARNESS





MONITOR

1	2	3	4	5	6	7	8	9	10
WHT	SYNC	SHIELD	BRN	GND	BLU	GRN	GRN	RED	RED

SEE POWER WIRING DIAGRAM PAGE 19

SEE POWER WIRING DIAGRAM PAGE 19

SWITCHING POWER SUPPLY
SEE POWER WIRING DIAGRAM FOR AC POWER CONNECTIONS

VIDEO R	VIDEO G	VIDEO BL	VIDEO SYNC	VIDEO GND	CON 1	CON 2	TRG 1P	TRG 2P	BOMB 1P	BOMB 2P	SEL 1P	SEL 2P	GND	GND
RED	GRN	GRN	BRN	WHT	BLK	BLK	WHT/YEL	VIO/YEL	WHT/GRN	VIO/GRN	WHT	VIO/WHT	BLK	BLK

+5V	VR 1P X	VR 1P Y	VR 2P X	VR 2P Y	GND	GND	SOL 1P	SOL 2P	+24V	+24V	+12V	+5V	+5V	GND	+24V GND	+24V GND
WHT/BRN	WHT/VIO	VIO/BRN	VIO/BRN	VIO/LET	BLK	BLK	WHT/ORG	VIO/GRY	ORG/BLK	ORG	RED	BLK	BLK	BLK/ORG	BLK/ORG	BLK/ORG

ORG/BLK
ORG/BLK
BLK/ORG

+5V RED
RED
GND BLK
BLK
BLK
+12V ORG
ORG
-5V YEL

WHT/YEL
YEL

RED
GRN
BRN
WHT
SHIELD