

MECHANIZED ATTACK

OPERATION & SERVICE MANUAL



SNK CORPORATION OF AMERICA
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Sunnyvale, CA. 94086

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SNK WARRANTY POLICY

SNK Corporation of America (Seller) warrants to the original purchaser (Buyer) that the components listed below are free from defects in manufacturing and materials. The warranty period is 90 days, effective the date of original shipment from Seller's factory.

GAME CPU PCB(S)	_____	90 days
POWER SUPPLY SWITCHING REGULATOR	_____	90 days
MONITOR ASSEMBLY	_____	90 days
GUN ASSEMBLY	_____	90 days

No other parts of Seller's product are covered by this warranty.

The Seller's sole responsibility shall be, at its option, to repair or replace any warranted item found to be defective during the warranty period. The Buyer's responsibility shall be to notify the Seller of the defective material, and return it, freight pre-paid, to the place specified by the Seller.

Seller is not responsible for the cost of unauthorized repairs, loss of income, or any charges or losses incurred as a result of the use of this product. Seller does not warrant the suitability of its product for a particular application.

This warranty is not applicable for normal wear and tear. This warranty shall be void if inspection of the returned product indicates defect was caused by misuse, or if unauthorized repairs were attempted, or if the item was damaged due to improper handling, shipping, or customer negligence.

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TABLE OF CONTENTS

1. GENERAL INFORMATION

A. Introduction	1
B. Set-up Procedures	2
C. Dip-Switch Options.....	4

2. TECHNICAL INFORMATION

A. Test Mode Operation	5
B. Wiring Diagram	7

3. REPLACEMENT PARTS BREAKDOWN9

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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

5300 SOUTH CAMPUS DRIVE

STATEMENT OF WORK

1. TITLE

2. DESCRIPTION

3. OBJECTIVES

4. DELIVERABLES

5. TIMELINE

6. BUDGET

7. CONTACT INFORMATION

UNIVERSITY OF CHICAGO

1. GENERAL INFORMATION

A. Introduction.

Thank you for selecting this fine SNK product. We are sure that it will offer you many years of profitable service. When you purchased this product, you also acquired the support of SNK's Customer Service Department. We are only a telephone call away, ready to answer any questions pertaining to the operation of our products.

In addition to telephone support, we offer direct mailing of Service Updates and Bulletins simply by returning the Response Card found in the back of this manual. We also use this card to collect feedback from operators of our products to help shape our future products. I will elaborate on several of the features that operators have requested and that have been designed into this game:

●ELECTRONICS ACCESS DRAWER

The Power Supply and Game PCBs (Printed Circuit Boards) are conveniently located on a slide-out drawer in the lower front of the cabinet. The Electronics Access Drawer allows easy access to these components from the front of the game for adjustments and repairs.

●SERVICE PANEL

The Service Panel contains the Coin Counter, Service Switch, and Test Switch. It is located just inside the coin entry door on top of the cashbox vault.

●PLYWOOD CABINET CONSTRUCTION

The cabinet features a plywood bottom floor, with double plywood base walls, and a plywood main cabinet floor. The Electronics Access Drawer front panel is plywood, as are the

three Coin Door mounting panels. This should ensure maximum protection for the Coin Door and Game Electronics.

●HEAVY-DUTY PLAYER CONTROLS

The players control the action via realistic appearing machine guns. They feature a solenoid activated recoil effect and Optical Sensors for aim control. The guns have been designed to withstand the rough treatment expected from the players. A complete breakdown of the replacement parts is included in this manual and may be ordered from your local SNK authorized dealer.

●CONTROL PANEL SHIELD

The control panel finish is protected from cigarette burns and other hazards by a 1/8" clear plastic cover. This should preserve the appearance of the game and protect the underlying wood panel. In addition, a shelf has been installed under the Coin Vault to prevent liquid spills and missed coins from making their way to the game electronics.

●HI-QUALITY COMPONENTS AND ASSEMBLY

This game features the Wells-Gardner 25" monitor, coin door by Coin Controls, and cabinet constructed by Dynamo Corporation, who also assembled the final product. The game PCBs, software, and controls were designed and produced by SNK Corporation in Japan.

B. Set-up Procedures

This game ships from the factory ready for operation. The only assembly required is the installation of the Leg Levelers into the floor of the cabinet. These can be found packed in the cashbox.

The game also arrives with a cardboard assembly protecting the Mirror during shipment. This must be removed from the back of the game. Open the rear access door, pull the horizontal cardboard section straight out, fold up the vertical side pieces, and slide all of the cardboard out the rear of the cabinet. You might want to store the cardboard inside the cabinet directly above the mirror so that you can re-use it when shipping the game.

Refer to the Dip-Switch Options in this manual and make the required changes to suit your location preferences. Adjust the Sound Volume at this time. The Dip-Switches and Sound Volume Control can be found on the Game PCB in the Electronics Access Drawer (see figure 1).

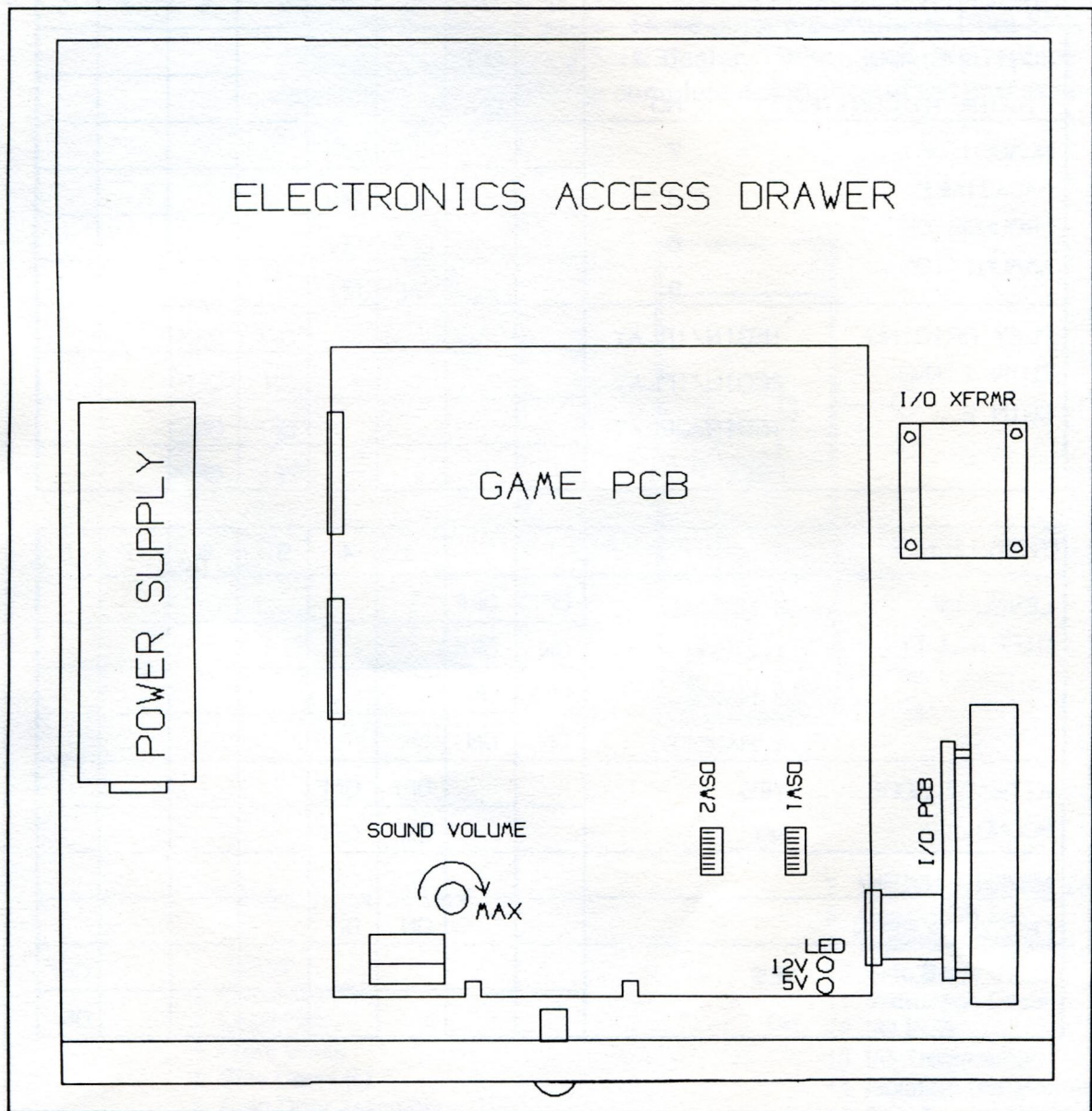


Figure 1

C. Dip-Switch Options

The Mechanized Attack game can be configured to suit the preferences of the location where it is to be operated. Please refer to the tables in Figure 2 for the specific options available.

DIPSWITCH 1		1	2	3	4	5	6	7	8
CONTINUE MODE	YES		OFF						
(1 COIN TO CONTINUE)	NO		ON						
NUMBER OF MAGAZINES	7			OFF	OFF				
(ROUNDS OF AMMUNITION)	5			ON	OFF				
	6			OFF	ON				
	8			ON	ON				
PLAY PRICING	1 COIN/1 PLAY					OFF	OFF		
COIN 1 AND	2 COIN/1 PLAY					ON	OFF		
COIN 2	1 COIN/2 PLAY					OFF	ON		
	FREE PLAY					ON	ON		

DIPSWITCH 2		1	2	3	4	5	6	7	8
LEVEL OF DIFFICULTY	2 NORMAL	OFF	OFF						
	1 EASY	ON	OFF						
	3 HARD	OFF	ON						
	4 HARDEST	ON	ON						
ATTRACT MODE	YES			OFF	OFF				
SOUND	NO			ON	OFF				
NEVER FINISH				OFF	ON				
FREEZE SCREEN				ON	ON				
TEST MODE	YES								OFF
	NO								ON

Figure 2

2. TECHNICAL INFORMATION

A. Test Mode Operation.

Each time the power is applied to the game, the Main CPU executes a series of tests to ensure that all of its circuitry is operational. This is referred to as the Power-Up Self Test. The CPU checks all program memory ROMs and RAMS and displays the status of each. If an error occurs, the test will stop and display a relevant error condition on the screen.

To place the game into manual Test Mode, open the Coin Entry door, flip the Test Switch on (up), and turn the game power on. The game will run the Power-Up Self Test, and then display the first test screen. To access the next test screen, press the Player 1 Start button on the left Gun assembly. The various tests are described below:

1. GRID TEST

Displays a black screen with 16 vertical and 14 horizontal white lines.

2. COLOR TEST

Displays 4 boxes that are colored Red, Green, Blue, and White on a Black background.

3. SWITCH TEST

Displays a grey-white screen with all switch functions listed. As each switch is activated, it's indicator will change from a "0" to a "1". The screen also displays the spot where the optical sensor in each gun is aimed. The right gun indicator is Violet and the left gun indicator is Green. You should be able to guide the indicators around the screen.

4. DIP MODE

This screen displays the current Dip Switch options, and shows the status of each dip switch.

5. FRONT VIDEO

Displays various Front Video images stored in the 4 Meg Roms.

6. BACK1 VIDEO

Displays a Background image from the Back1 Roms.

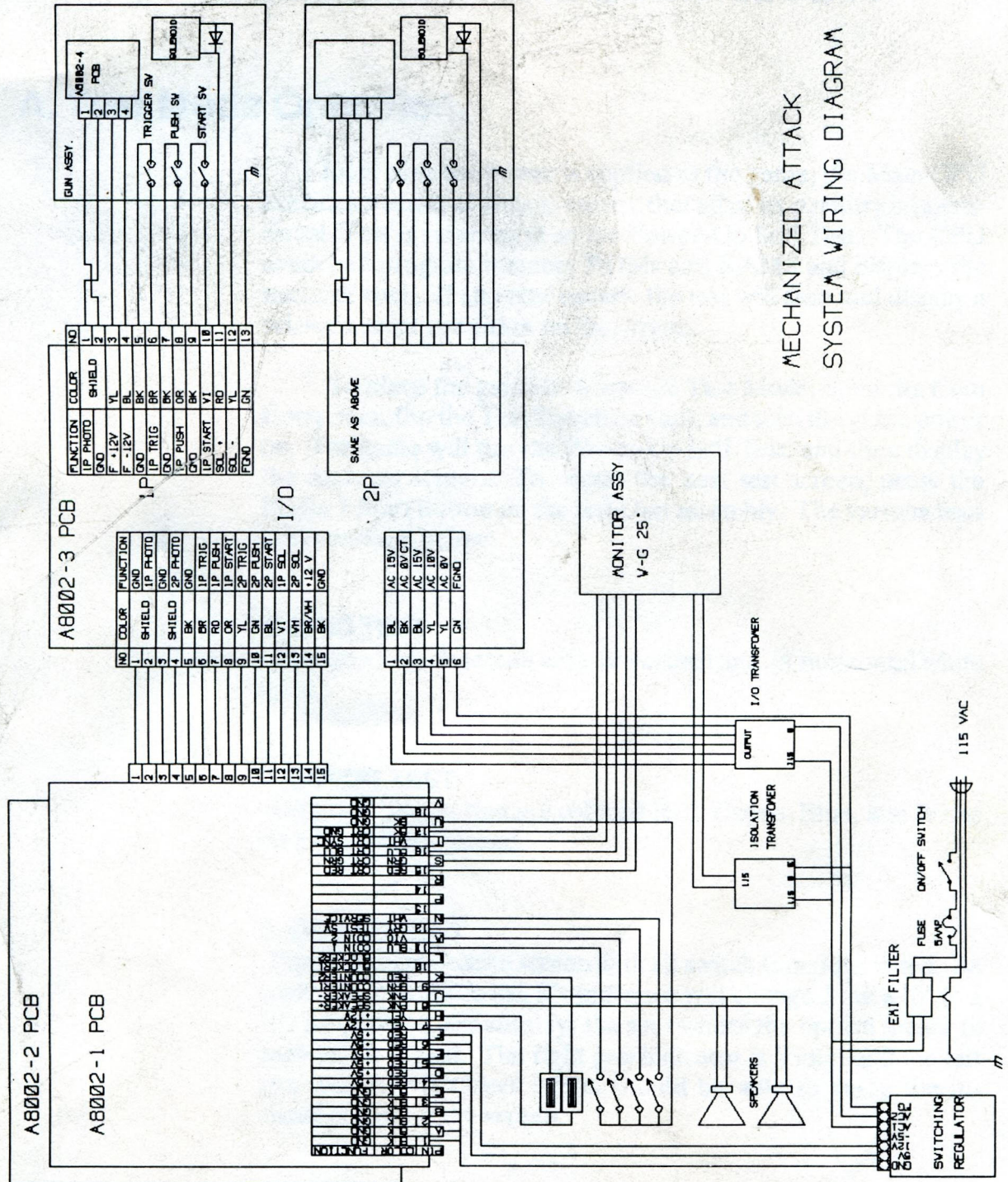
7. BACK2 VIDEO

Displays a Background image from the Back2 Roms.

8. SOUND TEST

Allows you to select a Sound Code with the Trigger Switch, and generate that sound by pressing the Grenade pushbutton.

B. Wiring Diagram

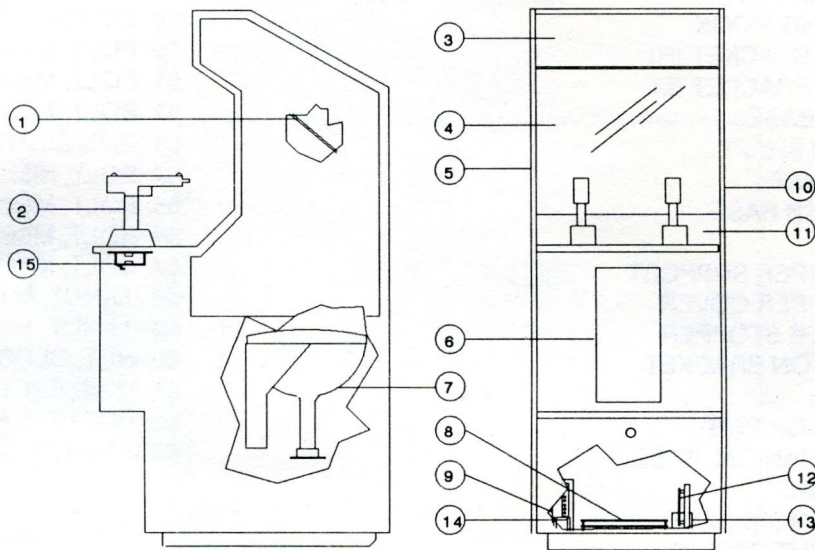


MECHANIZED ATTACK
SYSTEM WIRING DIAGRAM

NOTES:

3. REPLACEMENT PARTS LIST

In the event replacement parts are required for your game, we have included the following section to assist in determining and ordering the proper parts. These parts are available from SNK through any authorized SNK dealer. When ordering replacement parts, please give the complete description of the part as indicated in this section.



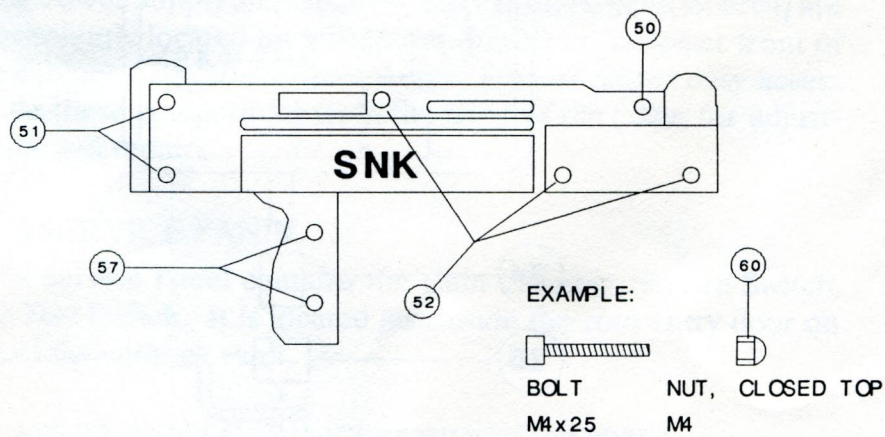
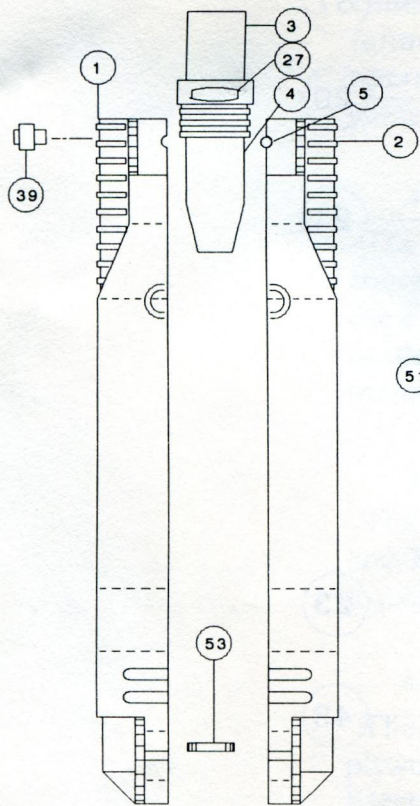
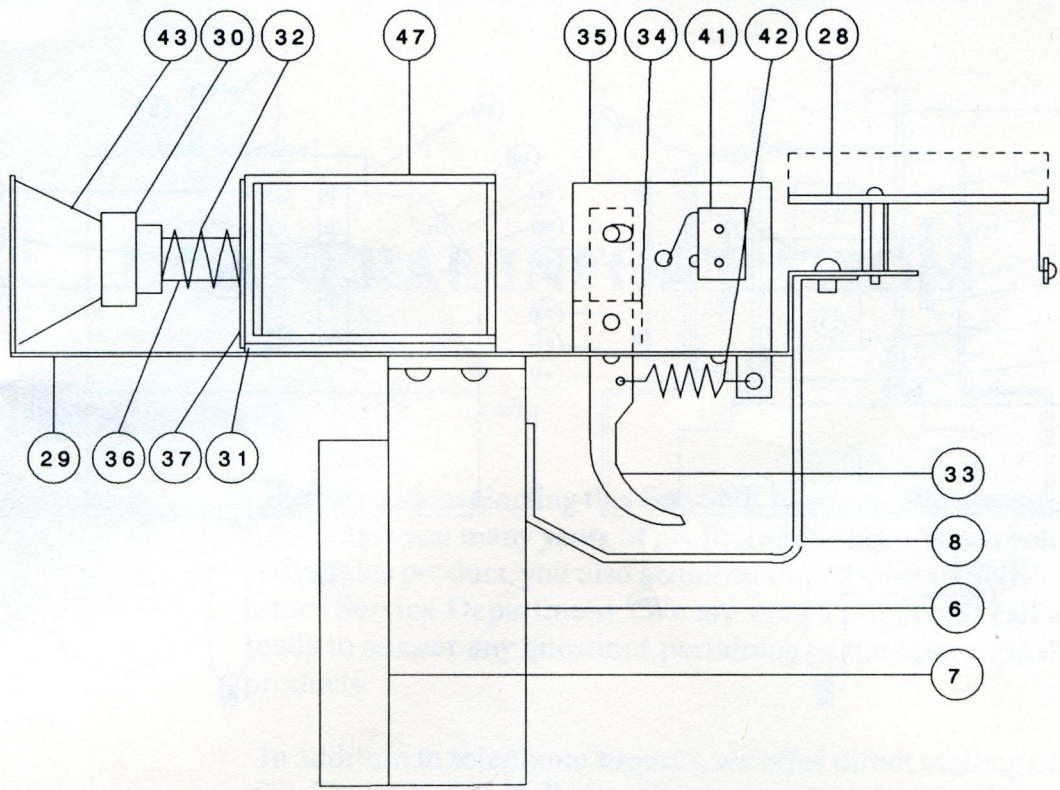
FINAL ASSEMBLY

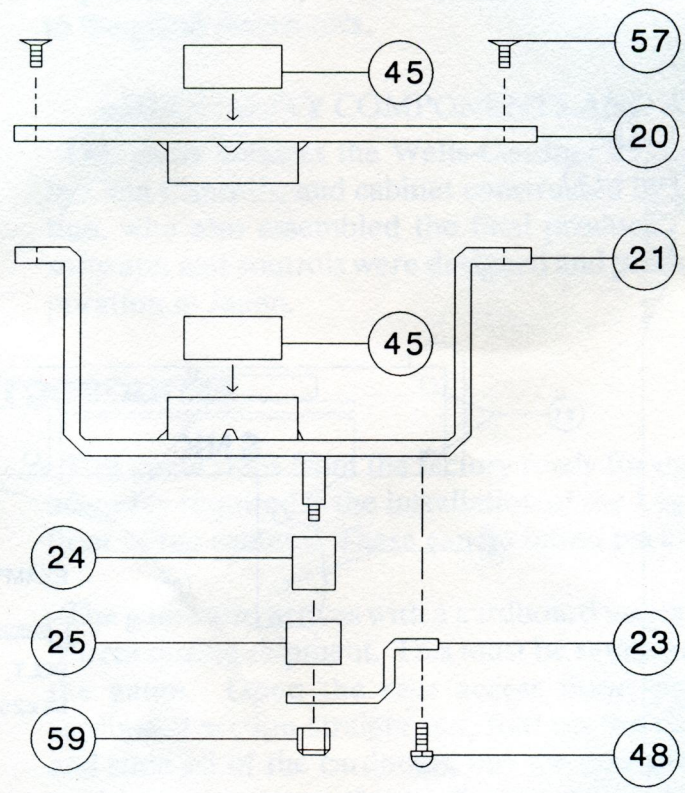
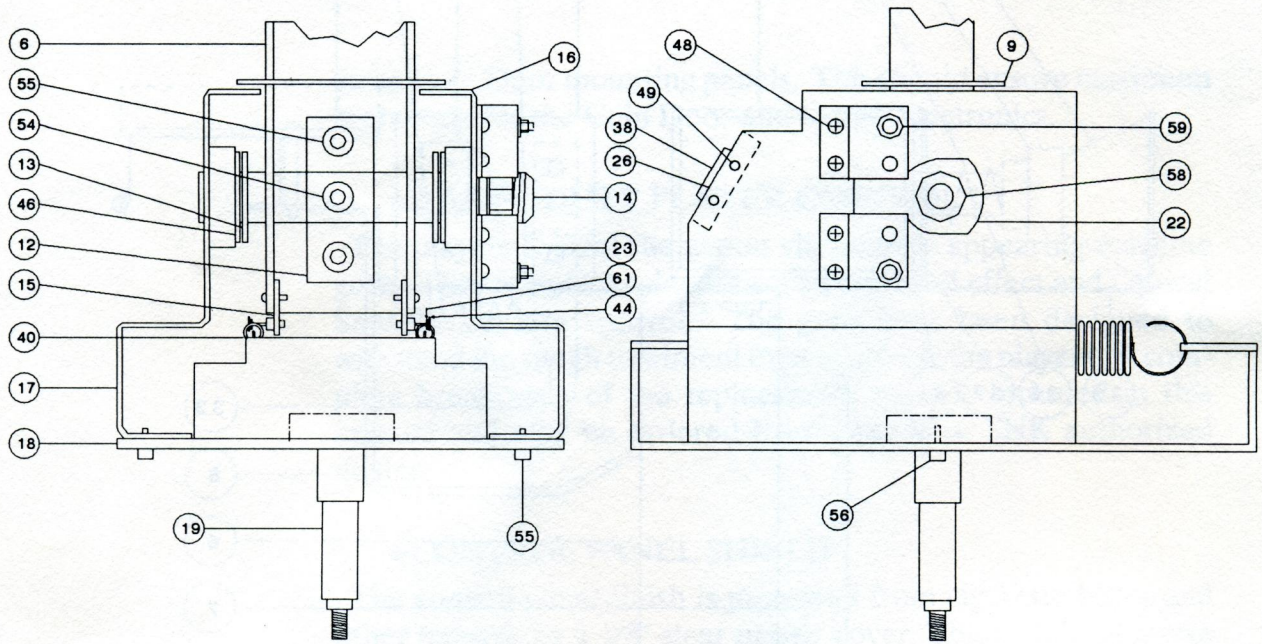
- 1 Mirror
- 2 Gun Assembly
- 3 Logo Plex
- 4 Front Glass
- 5 Side Decal (L)
- 6 Coin Door assembly

- 7 Monitor assembly, 25"
- 8 Game PCB Set
- 9 Switching Regulator, 15A
- 10 Side Decal (R)
- 11 Instruction Decal
- 12 I/O PCB
- 13 I/O Transformer
- 14 Isolation Transformer
- 15 Gun Base assembly

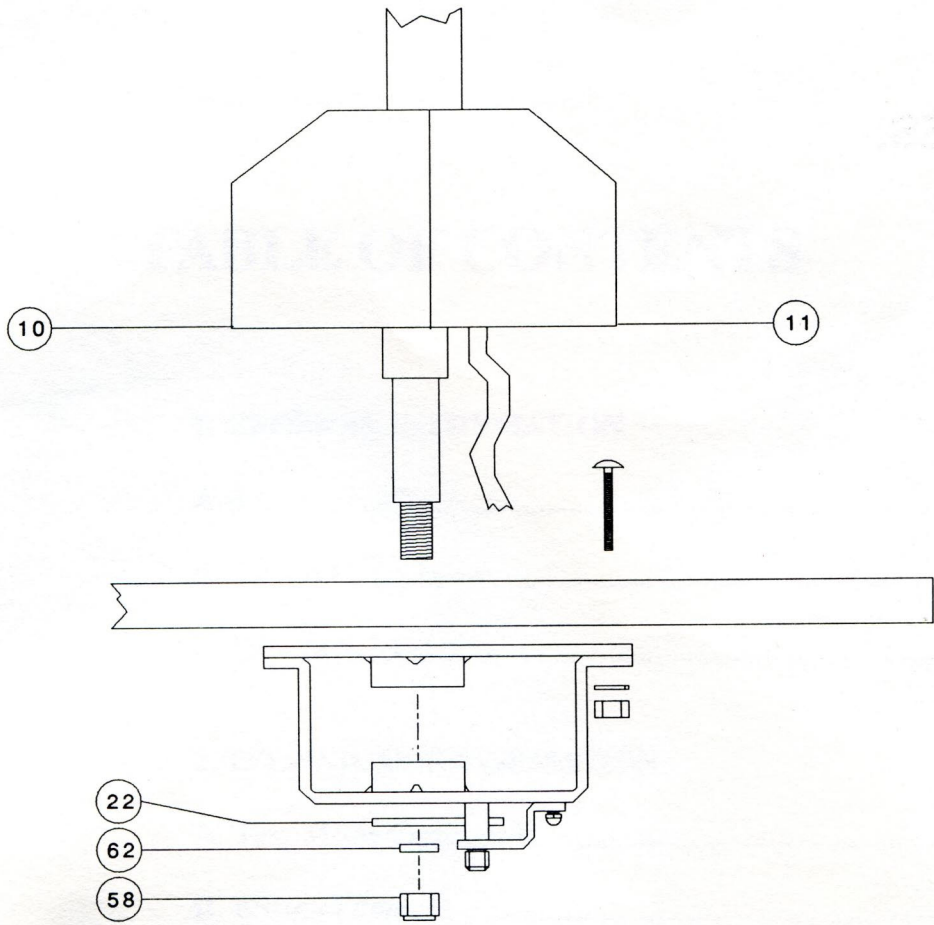
GUN ASSEMBLY

- | | |
|----------------------|------------------------------|
| 1 GUN HOUSING (L) | 35 TRIGGER BASE (R) |
| 2 GUN HOUSING (R) | 36 SOLENOID ARMATURE |
| 3 BARREL A | 37 WEIGHT SHEET |
| 4 BARREL B | 38 START BUTTON (SS-10R-MB) |
| 5 GUN SIGHT | 39 GRENADE BUTTON |
| 6 GRIP FRAME A | 40 RETURN SPRING (KSSC6965) |
| 7 GRIP FRAME B | 41 TRIGGER SWITCH (SS-5GL2) |
| 8 TRIGGER COVER | 42 TRIGGER SPRING (KSSC6611) |
| 9 GUN MASK | 43 RUBBER LEG (C-30-RK) |
| 10 CASE A | 44 SNAP PIN (SSP-4) |
| 11 CASE B | 45 BUSHING (80B-1815) |
| 12 SUB SHAFT STOPPER | 46 BUSHING (80F-1512) |
| 13 SHAFT SPACER | 47 SOLENOID (SD 12AA-24-00) |
| 14 SUB SHAFT | 48 SCREW, M5x8 PAN HEAD |
| 15 SPRING HOOK | 49 SCREW, M3x8 PAN HEAD |
| 16 SIDE BRACKET (R) | 50 BOLT, M4x25, HEX |
| 17 SIDE BRACKET (L) | 51 BOLT, M4x40, HEX |
| 18 BOX BASE | 52 BOLT, M4x45, HEX |
| 19 MAIN SHAFT | 53 GUN SIGHT (B) (NOT USED) |
| 20 UP BASE | 54 BOLT, M5x35, HEX |
| 21 UNDER BASE | 55 BOLT, M5x10, HEX |
| 22 CAM | 56 BOLT, M5x12, HEX |
| 23 STOPPER SUPPORT | 57 BOLT, M4x8, HEX, FLAT TOP |
| 24 STOPPER COVER | 58 U-NUT, M12 |
| 25 OUTER STOPPER | 59 U-NUT, M5 |
| 26 BUTTON BRACKET | 60 NUT, CLOSED TOP, M4 |
| 27 LENS | 61 WASHER, FLAT, M6 |
| 28 SENSOR PCB | 62 WASHER, FLAT, M12 |
| 29 MECHANICAL BASE | 63 WASHER, SPRING, M5 |
| 30 WEIGHT | |
| 31 SOLENOID BASE | |
| 32 WEIGHT SPRING | |
| 33 TRIGGER | |
| 34 TRIGGER BASE (L) | |





NOTES



NOTES:

CUSTOMER RESPONSE CARD

Thank you for purchasing this fine SNK game. As part of our efforts to provide timely and pertinent information to you, please complete the information card below and return it to SNK Corporation of America. We will place your firm on a mailing list so that you will receive all published technical information regarding this product.

Please include all comments, good or bad, so that we may better tailor our services and products to suit your needs.

CUSTOMER INFORMATION

COMPANY NAME: _____
ADDRESS: _____
CITY, STATE: _____ ZIP: _____
TELEPHONE: (_____) _____
YOUR NAME: _____

GAME INFORMATION

SERIAL NUMBER: _____
DATE RECEIVED: _____

COMMENTS ON THIS PRODUCT: _____

COMMENTS ON SNK SERVICES: _____

PLEASE
PLACE
STAMP
HERE

CUSTOMER RESPONSE CARD

SNK CORPORATION OF AMERICA
246 SOBRANTE WAY
SUNNYVALE, CA. 94086

ATTN: COIN-OP CUSTOMER SERVICE DEPT.

FOLD ALONG DOTTED LINE

CITY STATE ZIP PHONE YOUR NAME
GAME INFORMATION SERIAL NUMBER DATE RECEIVED
COMMENTS ON THE PRODUCT
SUNNYVALE, CA 94086



