

# Nintendo-Pak™



NINTENDO-PAK™ INSTALLATION & OPERATION MANUAL

FOR **Punch-Out!!**™





### **WARNING**

This instruction manual is for use only by authorized distributors of Nintendo of America Inc., coin operated video arcade games who have been licensed to install replacement parts and components in Nintendo arcade games pursuant to Nintendo-Pak™ license agreements.

### **WARNING**

If the replacement parts and components in this Nintendo-Pak™ are not installed exactly as instructed herein, there may be radio frequency interference created in violation of F.C.C. class A standards.

### **WARNING**

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a class A computing device pursuant to subpart J of part 15 of F.C.C. rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference; in which case, the user at his own expense will be required to take whatever measures may be required to correct the interference.

### **WARNING**

Use of non-Nintendo parts or modifications to your Nintendo-Pak™ parts and components may adversely affect the safety of your game, and may cause injury to your players.



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## I. INTRODUCTION

### Nintendo-Pak™

NINTENDO-PAK™ enables you to replace PUNCH-OUT!!™ with SURER PUNCH-OUT!!™ in less than one hour.

Before you begin, thoroughly read this instruction manual to familiarize yourself with the proper procedures. Make certain that you have all the tools necessary to complete the process.

If you have any questions, please call Nintendo Service at 1-(800)-633-3236.

## II. Contents of Nintendo-Pak™

Parts Name	Quantity	Remarks
CHS1-01-EXP P.C. Board	1	33 ICs
ROM Set	1	
Complete 5 Way Controller Assembly	1	
US Duck Instruction Label	1	
CHS-US Name Plate	1	
CHS-US Side Decal	2	
Nintendo-Pak™ Manual	1	
FBI Sticker	1	
Authorized Super Punch-Out!!™ Sticker	1	
FCC Class A Label	1	

## III. List of Tools Needed

Flat (standard) screwdriver

Phillips screwdriver

7 mm nut driver

Allen Wrench

Small Needlenose pliers

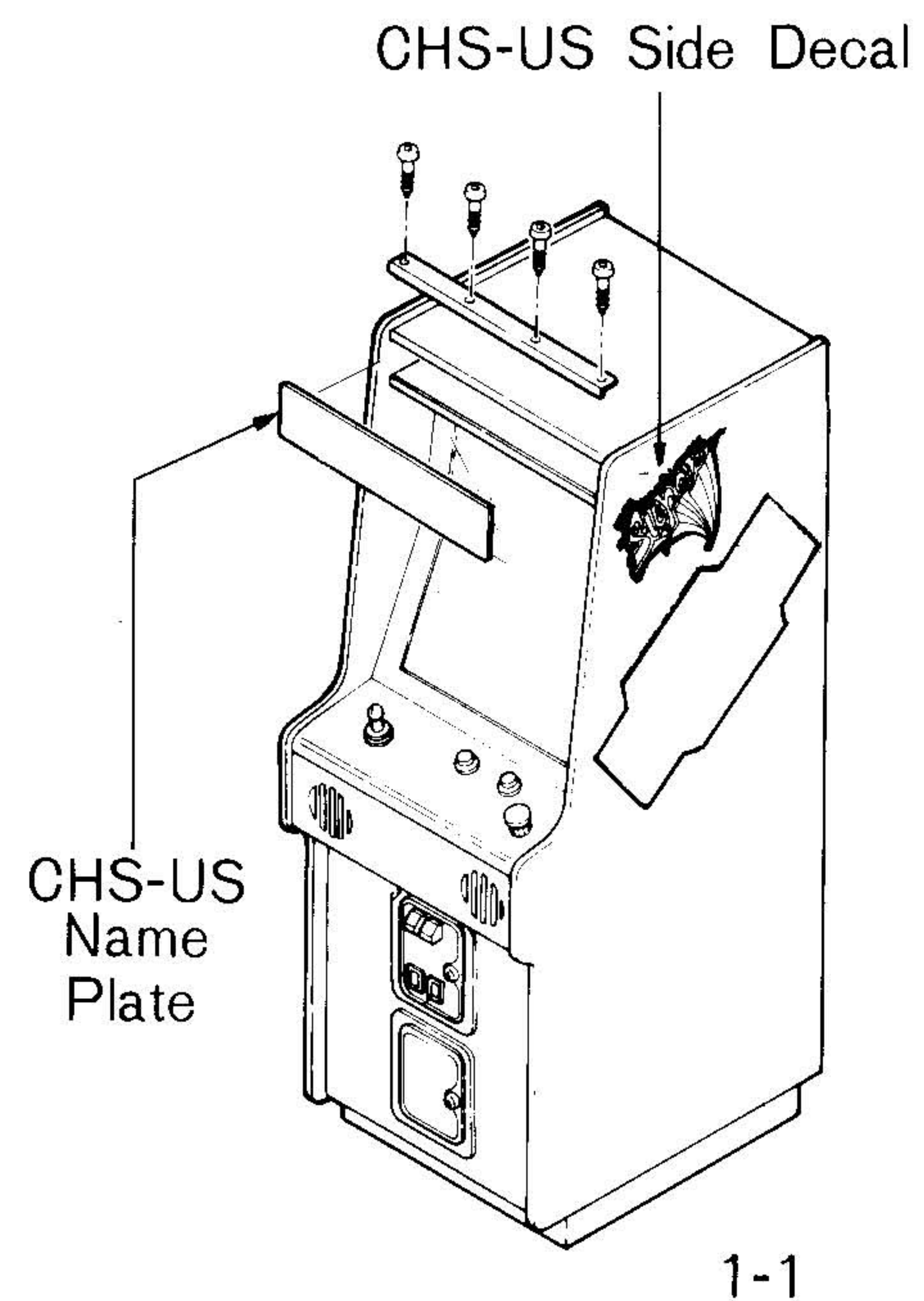
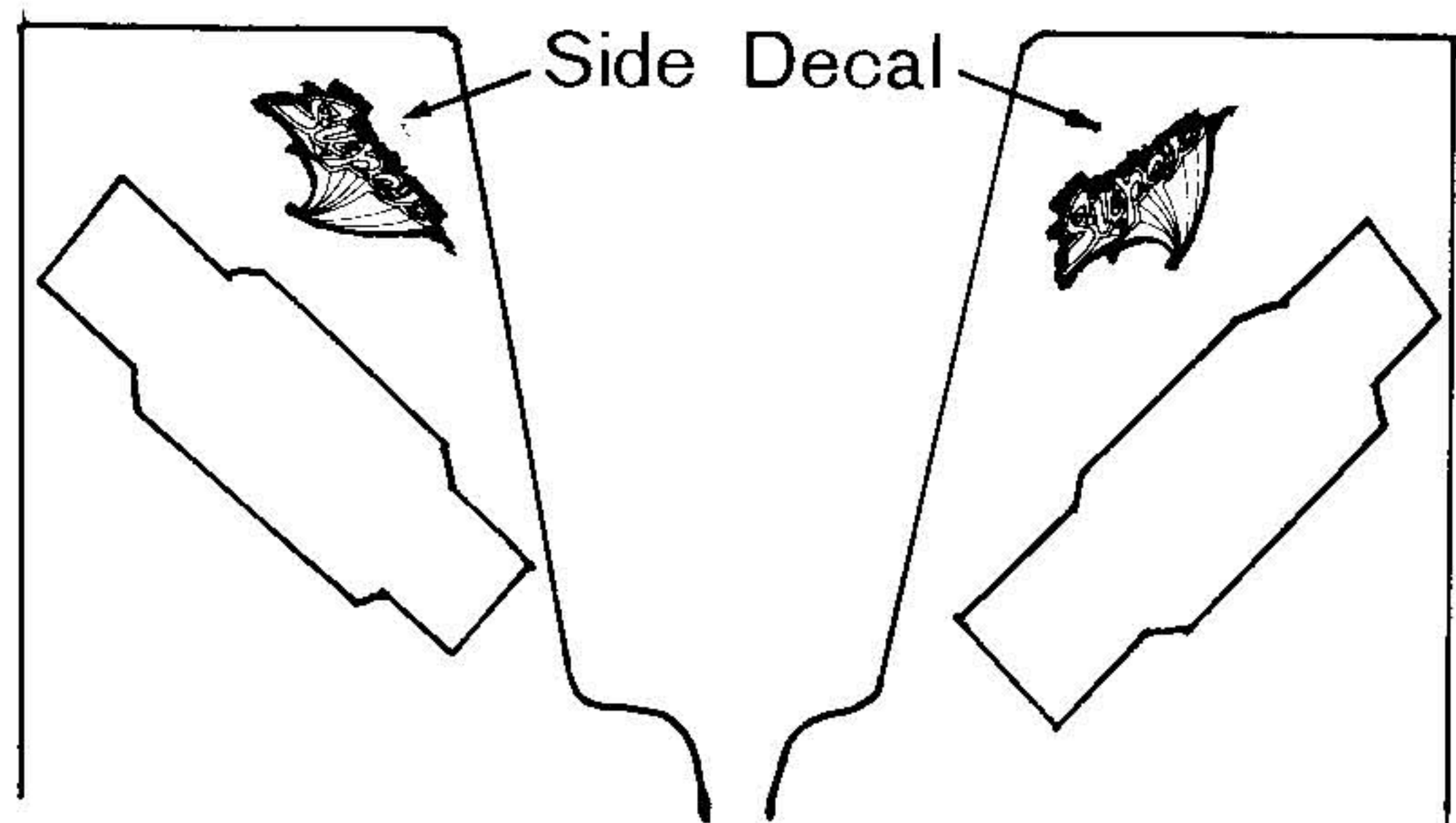
Staple gun



## IV. Replacement Process Step-by-Step and Final Check

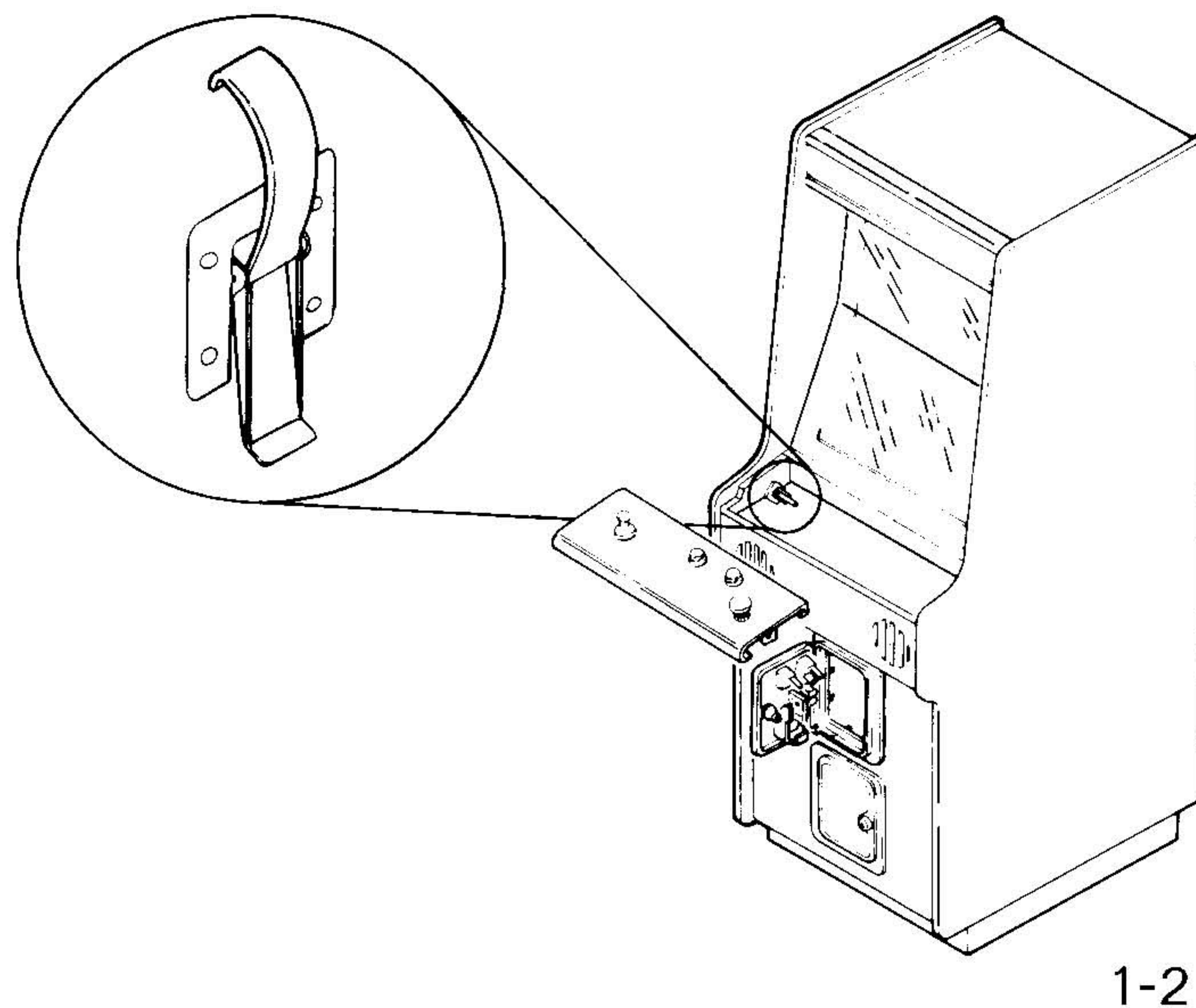
### 1. Exchange marquee/header and place new side decal (see illustration 1-1)

- A. Remove four(4) top trim screws
- B. Exchange marquee plexiglass
- C. Replace top trim and four(4) top trim screws
- D. Remove paper backing and adhere side decal in position shown on both sides of cabinet.



### 2. Remove operation panel ass'y (see illustration 1-2)

- A. Open service door
- B. Unlock operation panel hold down clamps
- C. Disconnect main harness connectors and remove operation panel ass'y

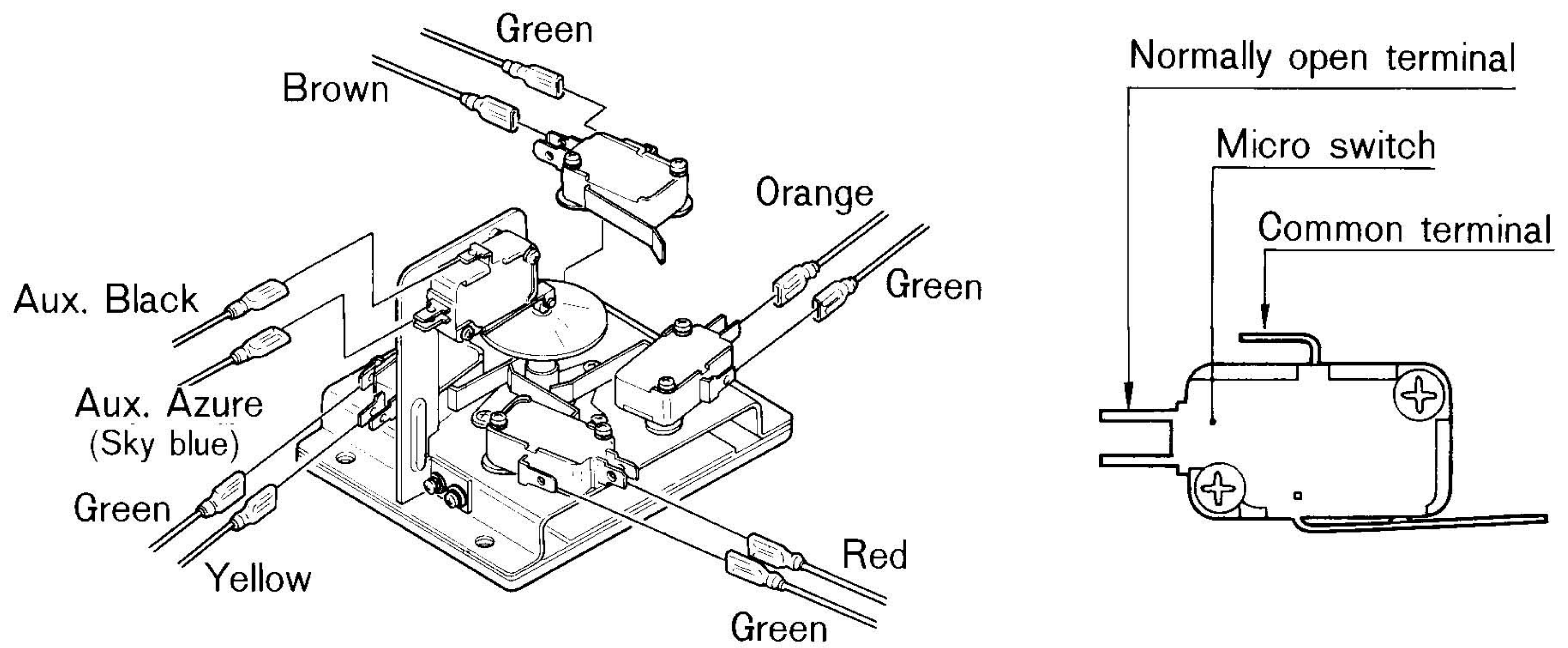




### 3. Exchange 4 way controller and place duck instruction label

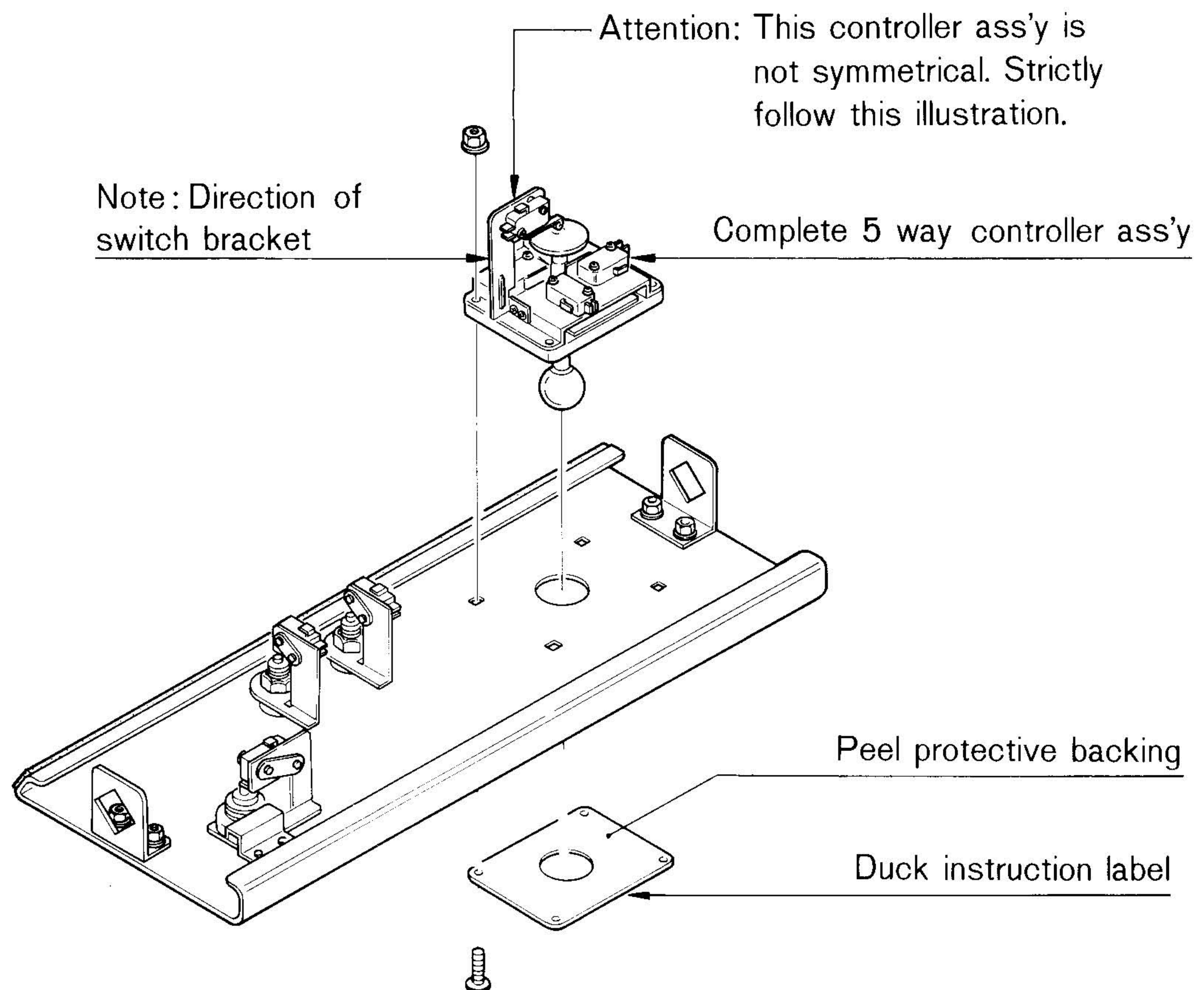
- A. Disconnect wire harness connectors from 4 way controller  
(see illustration 1-3)

IMPORTANT: Pull on connector not on wire



1-3

- B. Unscrew four(4) M4 nuts and remove four(4) carriage bolts  
C. Remove backing paper and stick duck instruction label to the control panel by aligning four(4) holes with carriage bolts.  
D. Install complete 5 way controller ass'y (see illustration 1-4)  
Note: Be sure to remove plastic wrap from controller knob.



1-4



#### 4. Reconnect wire harness connectors (see illustration 1-3)

- A. Reconnect wire harness connectors to new 5 way controller ass'y  
Wire color : Green (4) .....Common terminal  
Brown, Red, Orange and Yellow  
.....Normally open terminal

- B. Connect wire harness connectors of azure(sky blue) and either of the 2 black wires to new 5 way controller ass'y

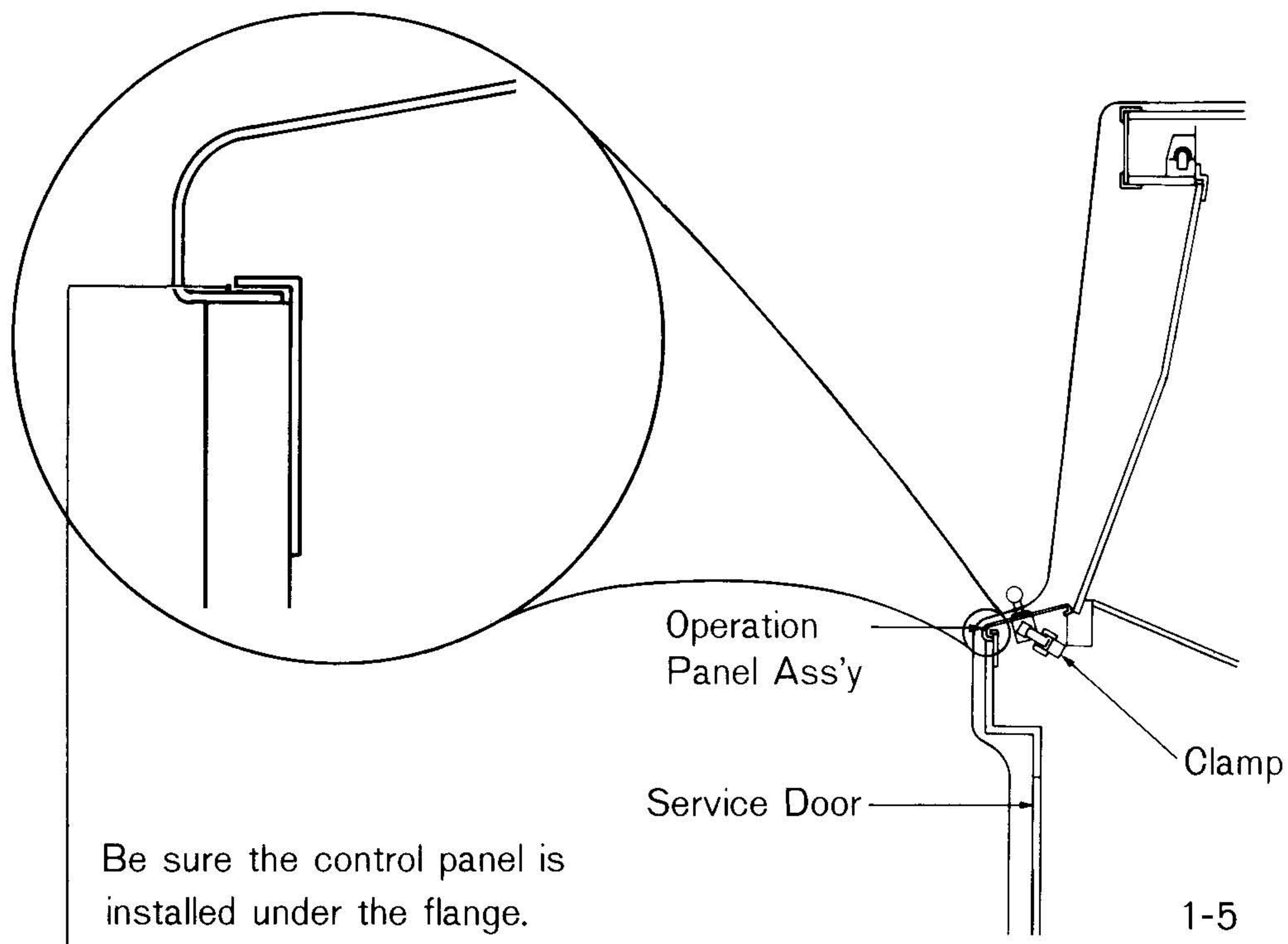
CAUTION : Azure and black wires were auxiliary and not used in original Punch-Out!!™

Wire color :Black .....Common terminal  
Azure .....Normally open terminal

#### 5. Replace operation panel ass'y

- A. Reconnect wire harness main connectors  
B. Replace control panel and fasten hold down clamps

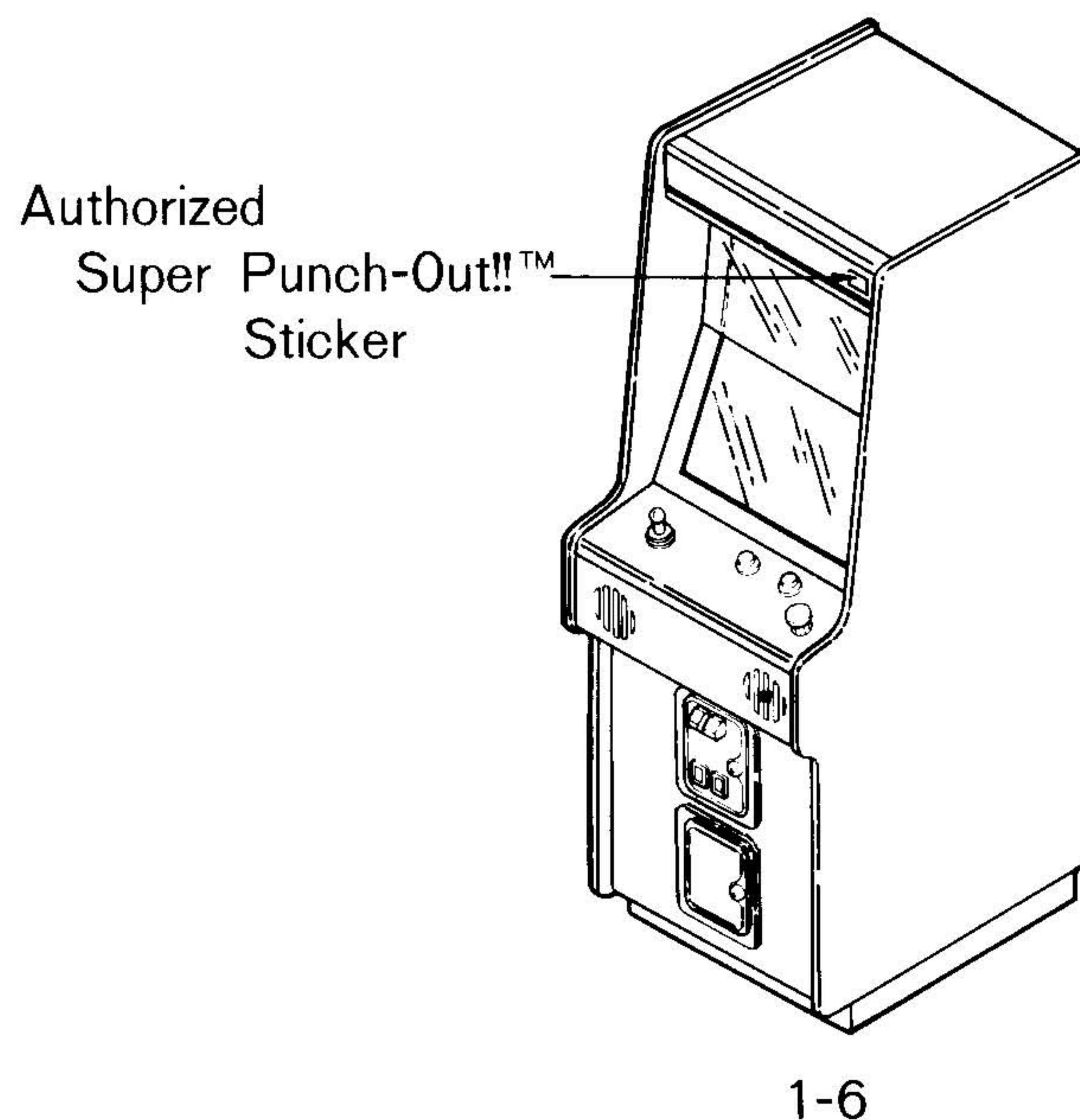
IMPORTANT :To avoid vandalism, operation panel must be properly seated as shown in illustration 1-5





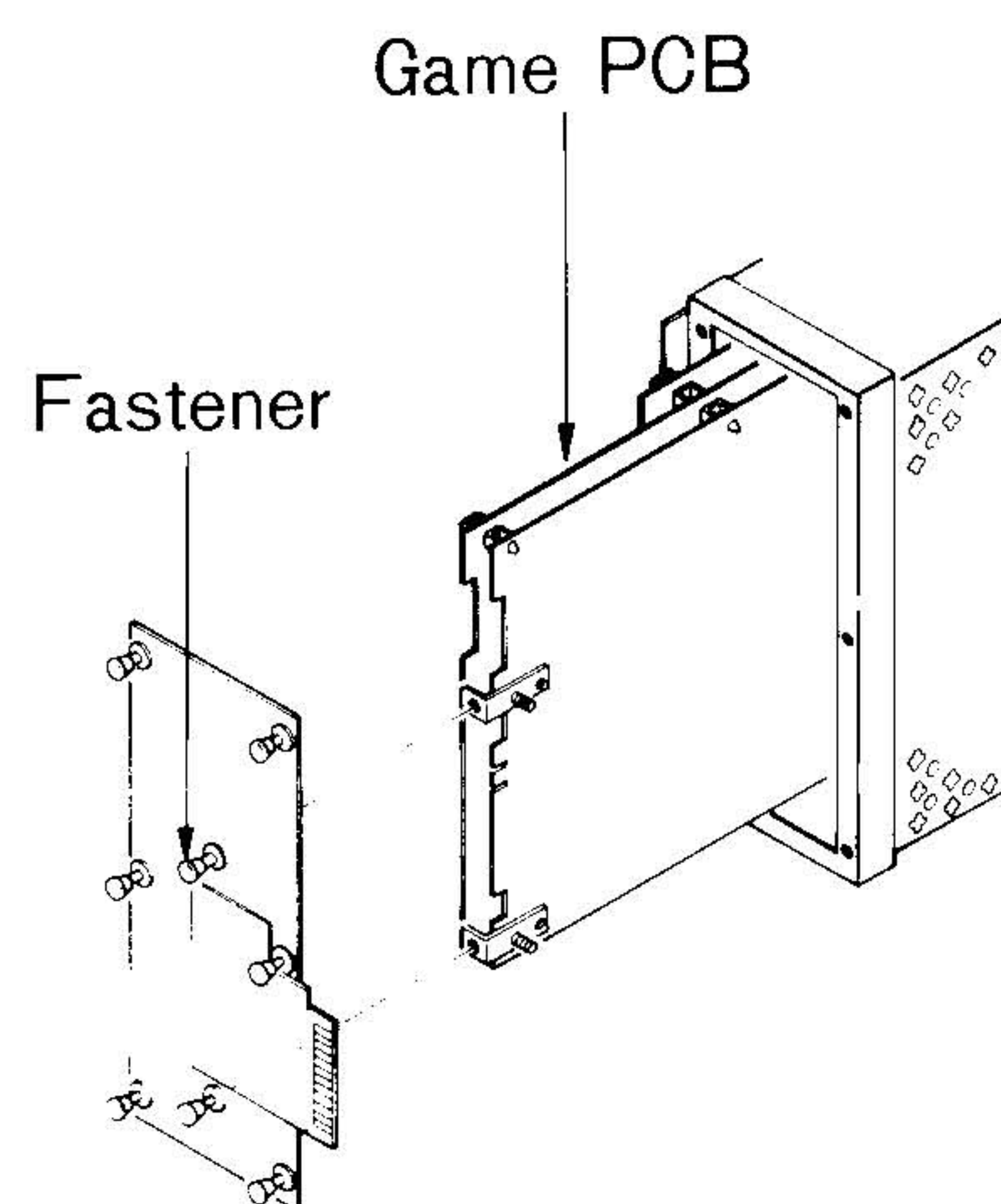
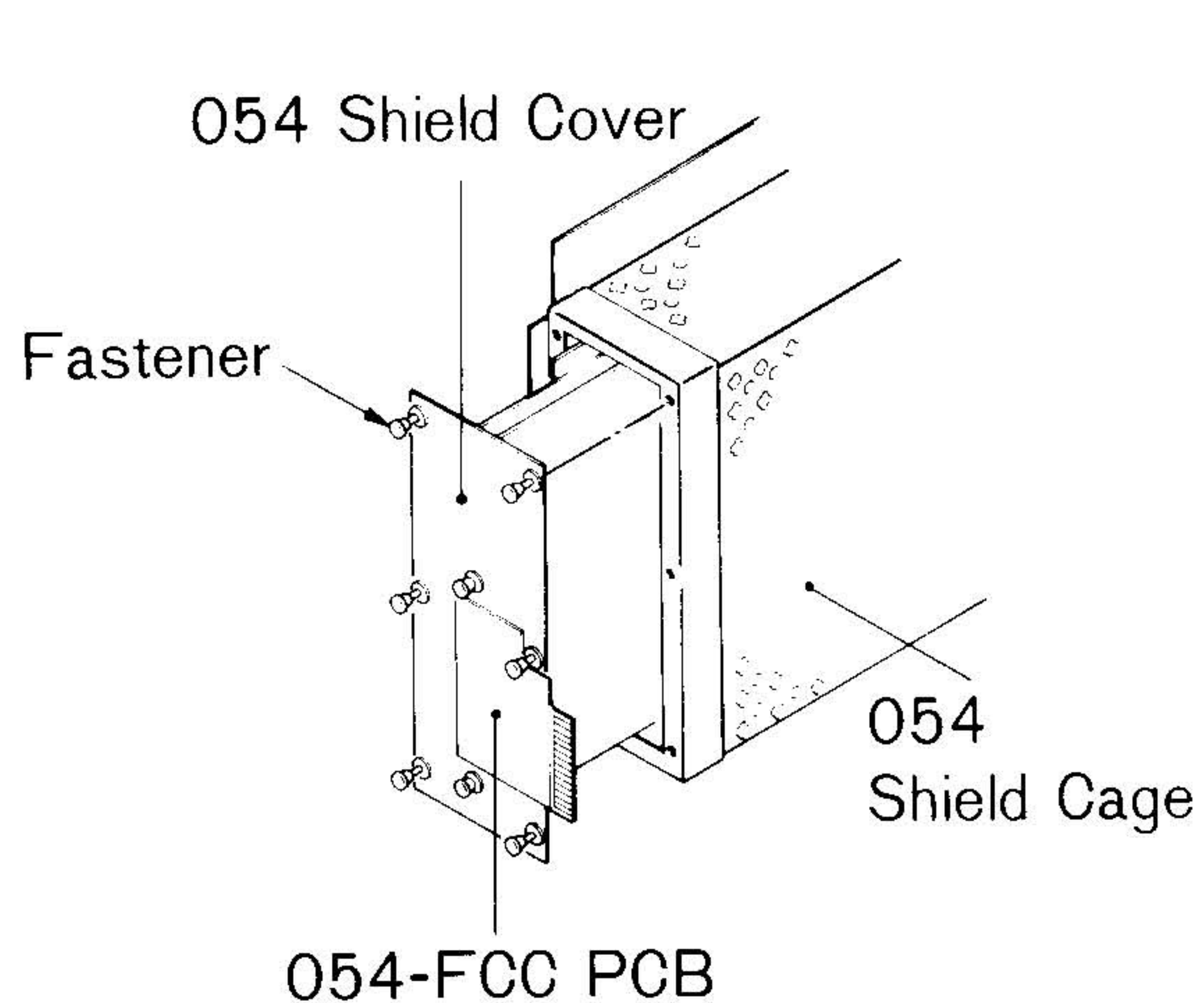
## 6. Attach authorized Super Punch-Out!!™ sticker

Place in location shown (see illustration 1-6)



## 7. Remove Punch-Out!!™ game P.C. Board (see illustration 1-7 and 1-8)

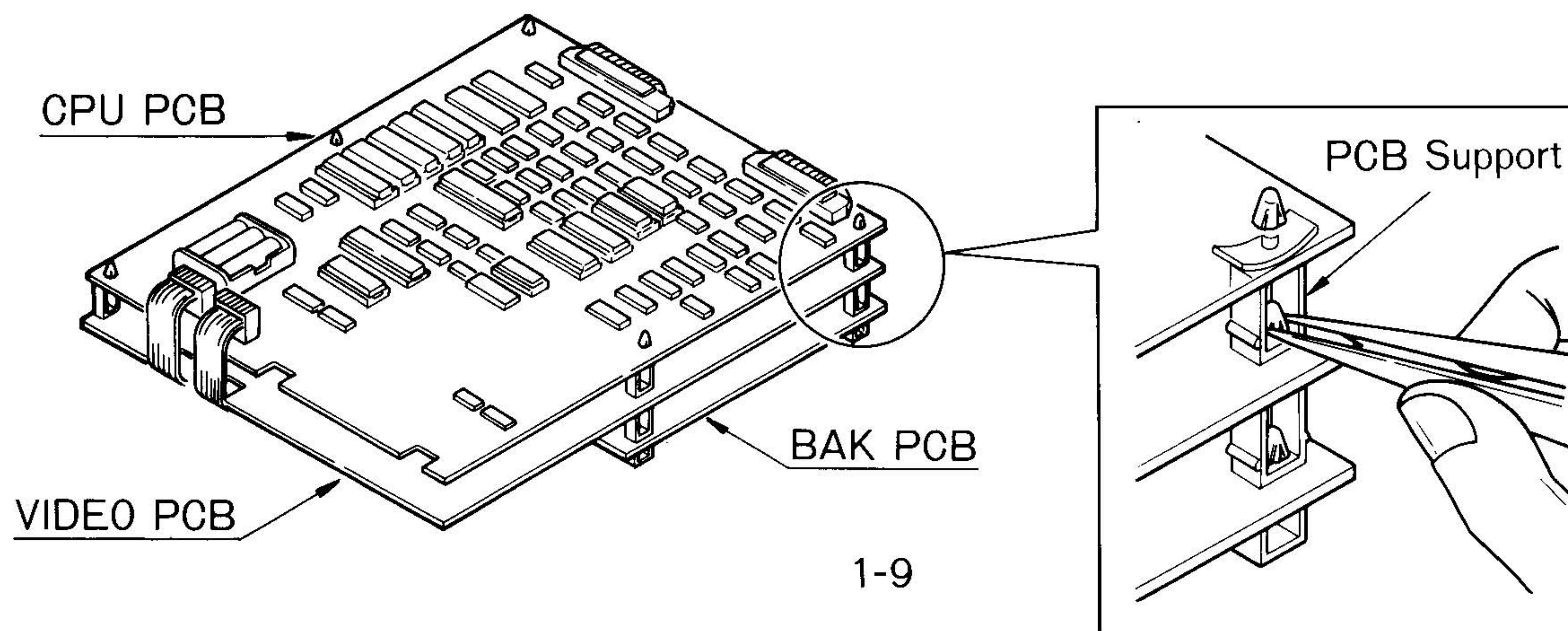
- A. Make sure the game is unplugged!!
  - B. Open the rear door panel
  - C. Remove the 56-pin edge connector from the right side of the 054-FCC PCB on the 054 shield cover
  - D. Pull out 6 fasteners located on perimeter of the 054 shield cover (see illustration 1-7)
  - E. Remove the game PCB from the 054 shield cage by carefully sliding it straight out of the wooden PCB retainers
  - F. Pull out 2 fasteners in the middle of the 054 shield cover
- The game PCB can now be removed (see illustration 1-8)





## 8. Remove the BAK PCB from the PCB Assembly. (see illustration 1-9)

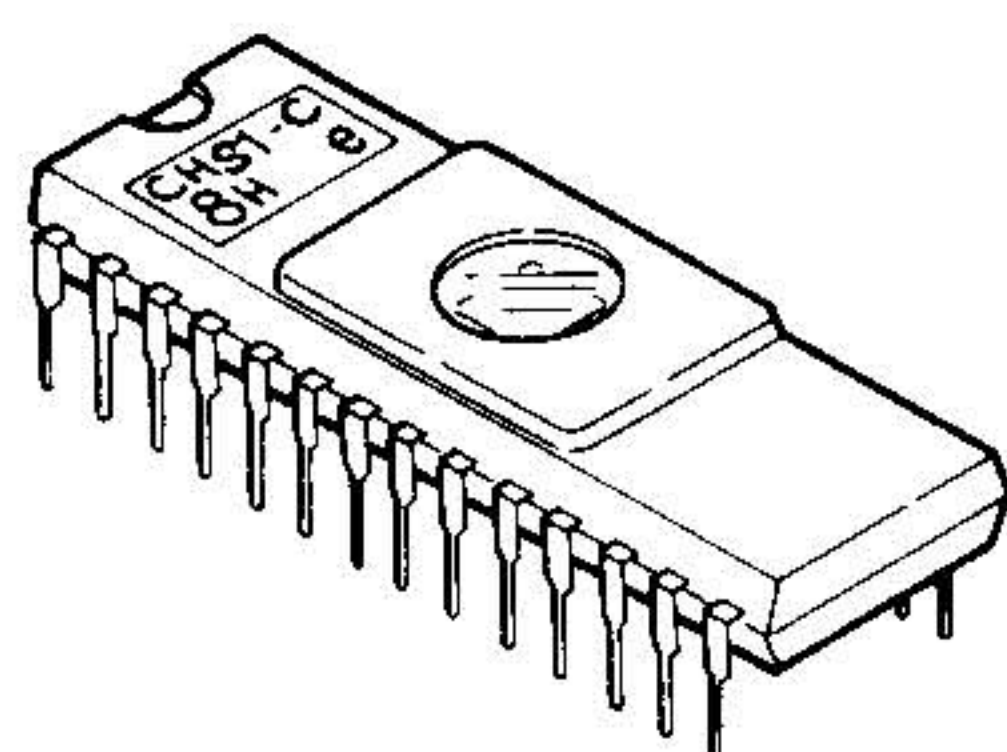
- A. Remove the two (2) 50-pin connectors and the two (2) 10-pin connectors from the BAK PCB
- B. Pinch tabs of PCB support with small needlenose pliers to remove BAK PCB.



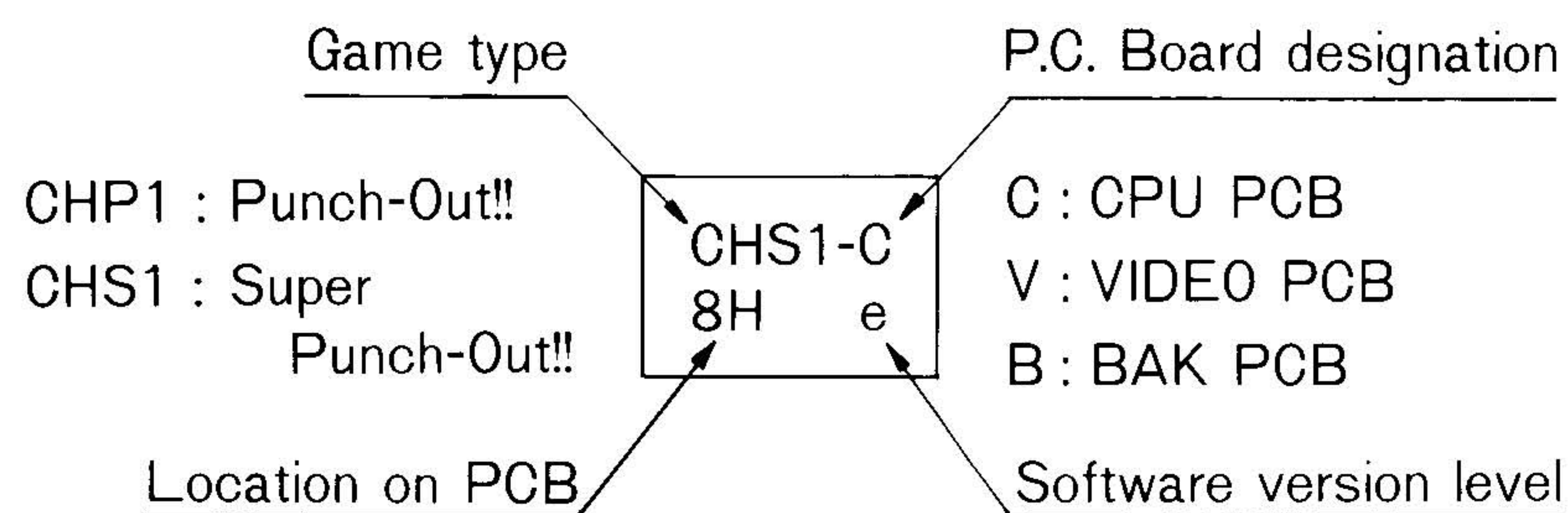
## 9. Replace ROM set

Description of ROM label (see illustration 1-10A and 1-10B)

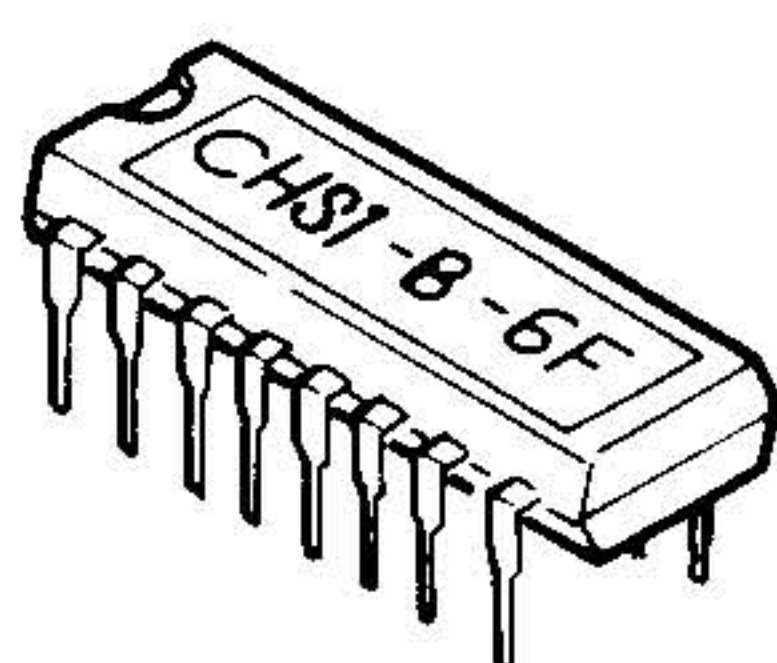
### EP-ROM label



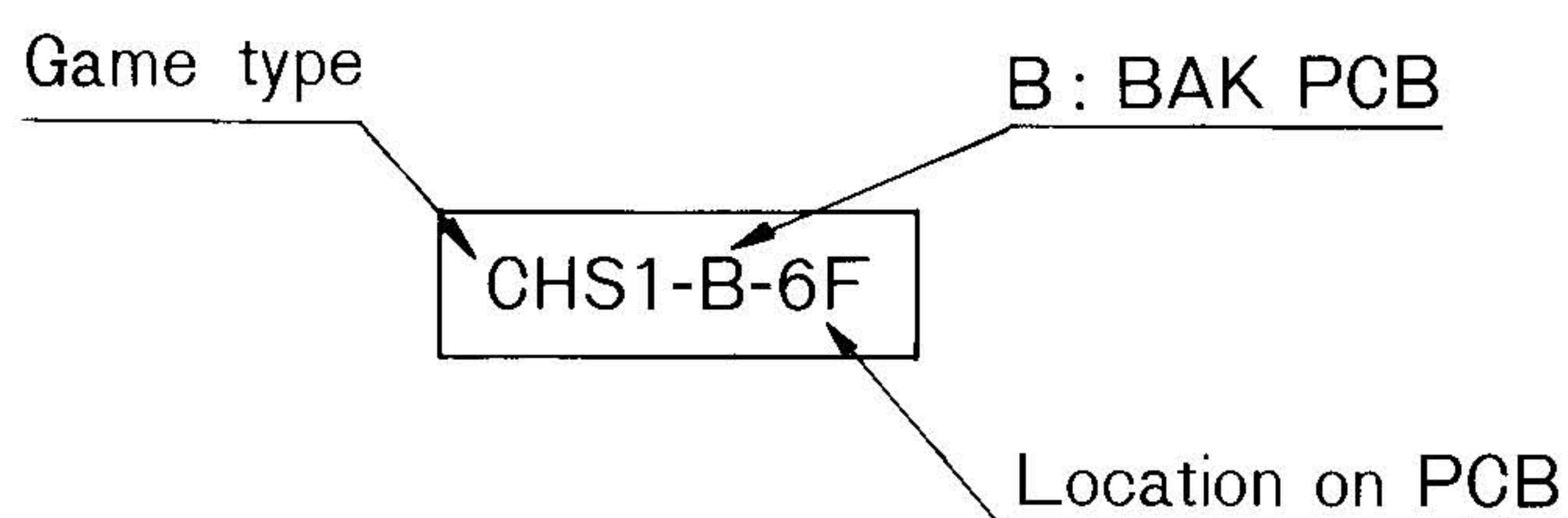
1-10A



### Fuse ROM label

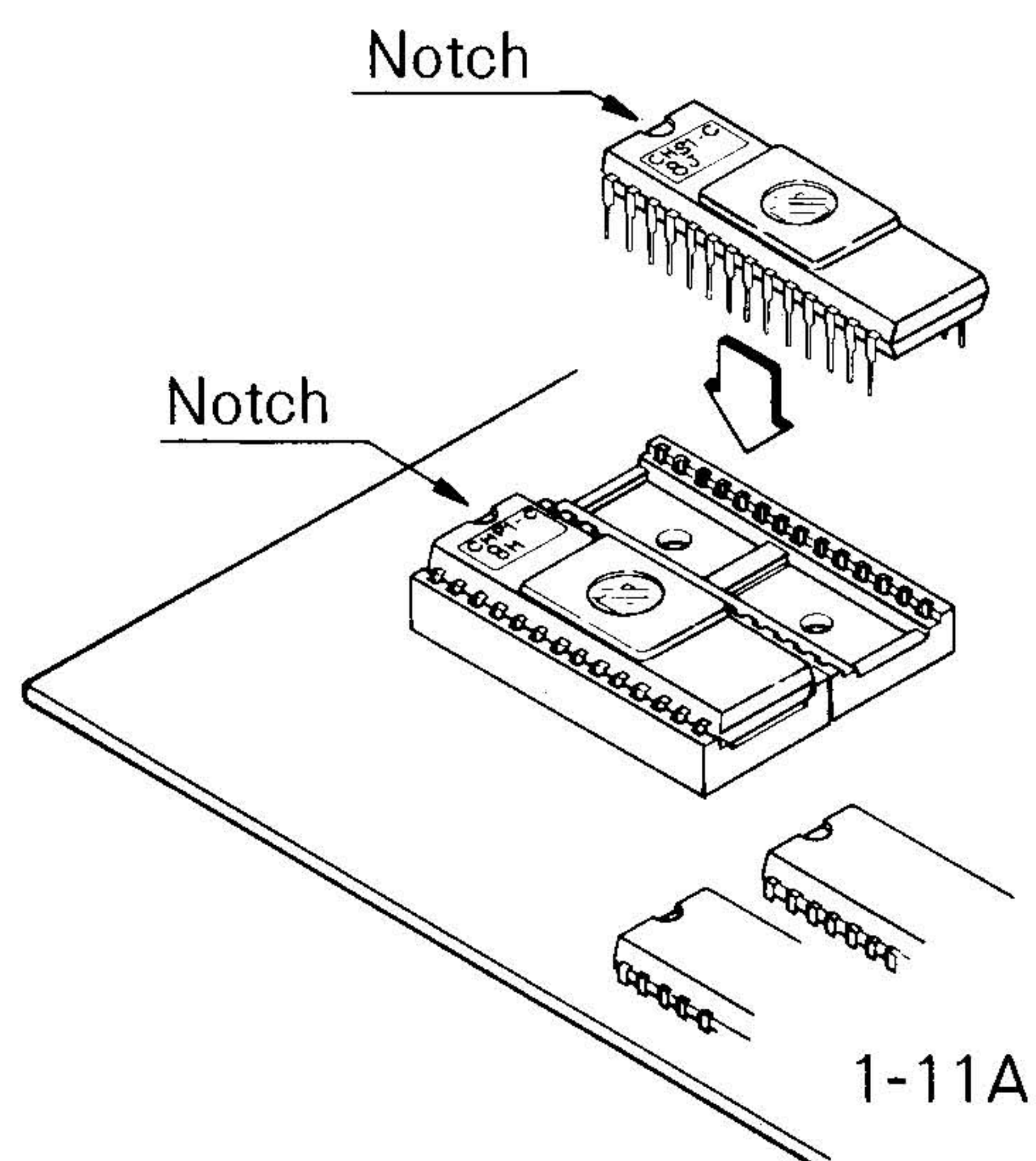


1-10B



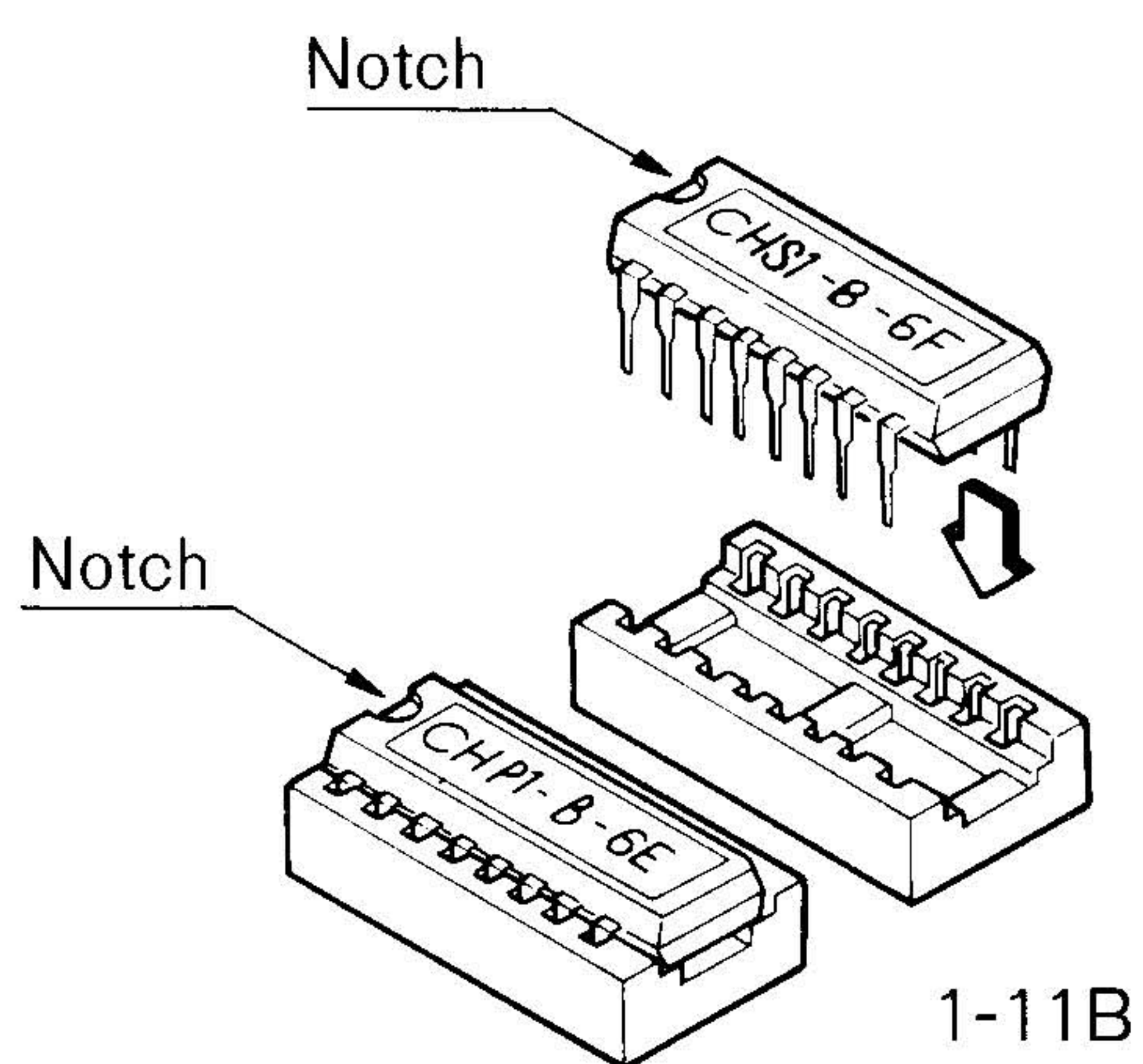


Explanation of direction of ROM to insert in IC socket  
(see illustration 1-11A and 1-11B)



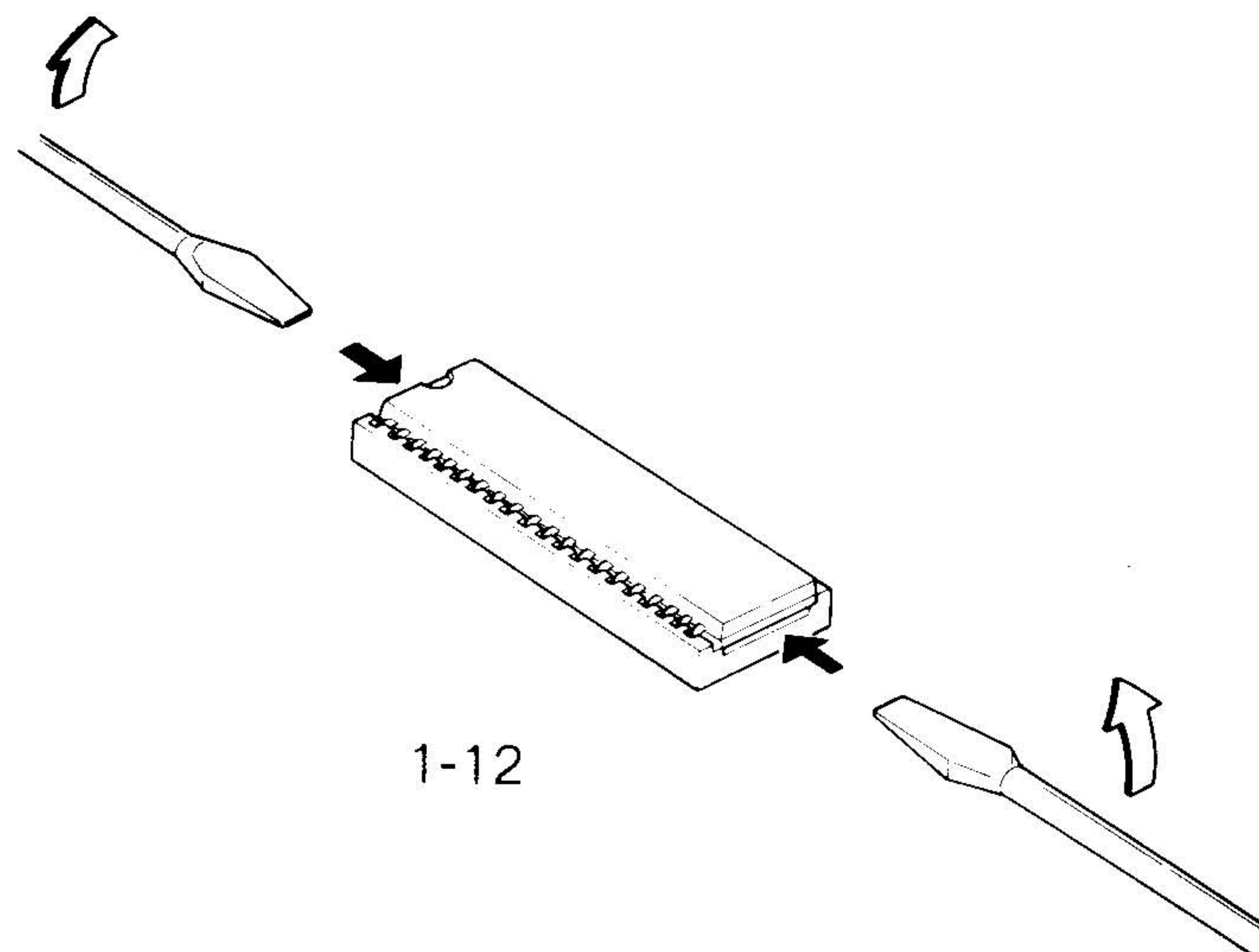
Direction of the notch must be same as original one.

CAUTION : A reversed insertion may damage ROM and PCB.



CAUTION : ROM label's position does not designate the direction of ROM.  
Notch of ROM shows the direction of ROM.

Replace ROMs one at a time with a IC remover or small flat screwdriver as shown (see illustration 1-12)





## CPU P.C. BOARD

Exchange 

CHP1-C ##
--------------

 for 

CHS1-C ##
--------------

 ##: Location Number

Be sure Location Numbers are the same.

Six(6) locations of ROM must be replaced as shown below

8F	8H	8J	8K	8L	6P
----	----	----	----	----	----

## VIDEO P.C. BOARD

Exchange 

CHP1-V ##
--------------

 for 

CHS1-V ##
--------------

 ##: Location Number

Be sure Location Numbers are the same.

Eleven(11) locations of ROM must be replaced as shown below

2R	2T	2U	2V	3R	3T
3U	3V	4R	4T	4U	

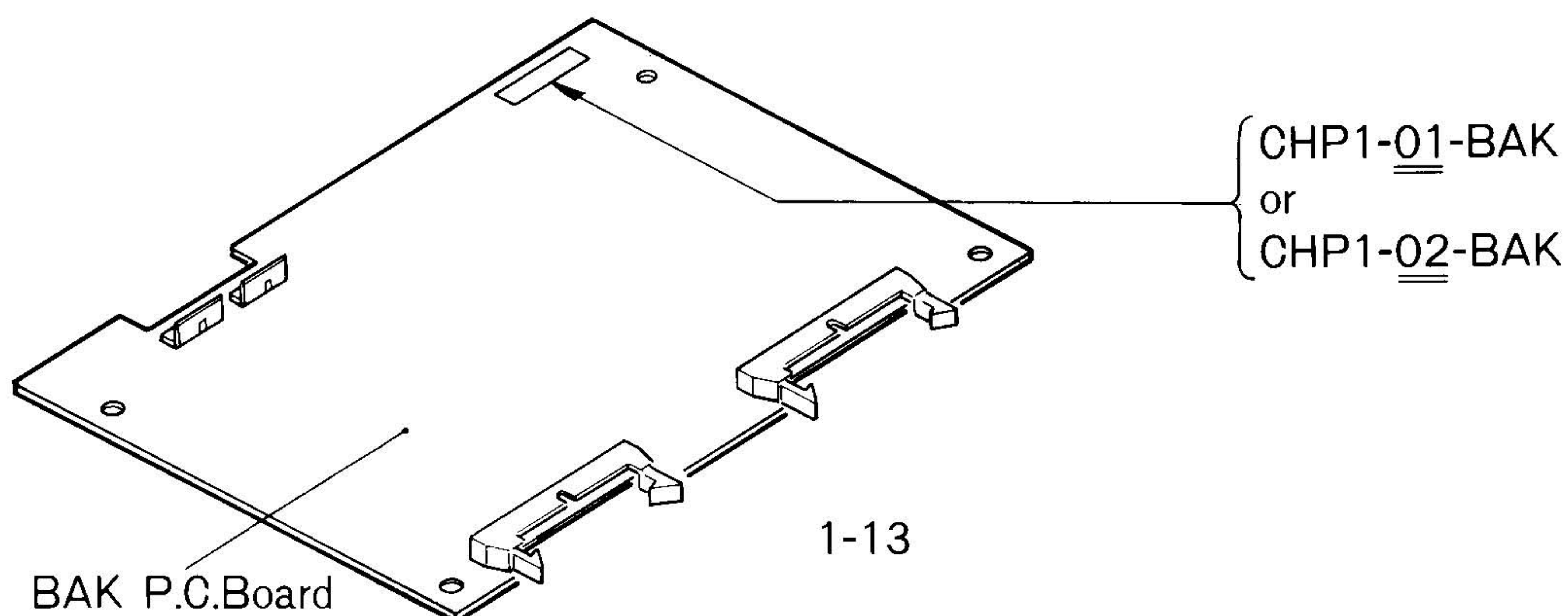


## BAK P.C. BOARD

CAUTION : There are different versions of the BAK P.C.Board.  
This Nintendo-Pak™ is made to cover all versions.  
Make certain you have selected the right ROM for the  
Punch-Out!!™ you are replacing.  
Please follow as shown below.

### EP-ROM

1. Check version of BAK P.C. Board (see illustration 1-13)



2. Exchange EP-ROM

For CHP1-01-BAK

Exchange 

CHP1-B ##
--------------

 for 

CHS1-B ## 01
--------------------

 (White colored label)

For CHP1-02-BAK

Exchange 

CHP1-B ##
--------------

 for 

CHS1-B ## 02
--------------------

 (Green colored label)

Be sure location numbers are the same.

Two(2) locations of ROM must be replaced as shown below

4C	4D
----	----



Fuse ROM

1. There are two(2) different sets of Fuse ROMs with different colored labels on Fuse ROM (White and Pink).  
Match each new colored label to original one.

2. Exchange 



 (White) for 



 (White)

Exchange 



 (Pink) for 



 (Pink)

Be sure location numbers are the same.  
Six(6) locations of ROM must be replaced as shown below

6E	6F	7E	7F	8E	8F
----	----	----	----	----	----

Since these ROM sets cover all versions of P.C.Board types, there will be left over ROMs which are not used.
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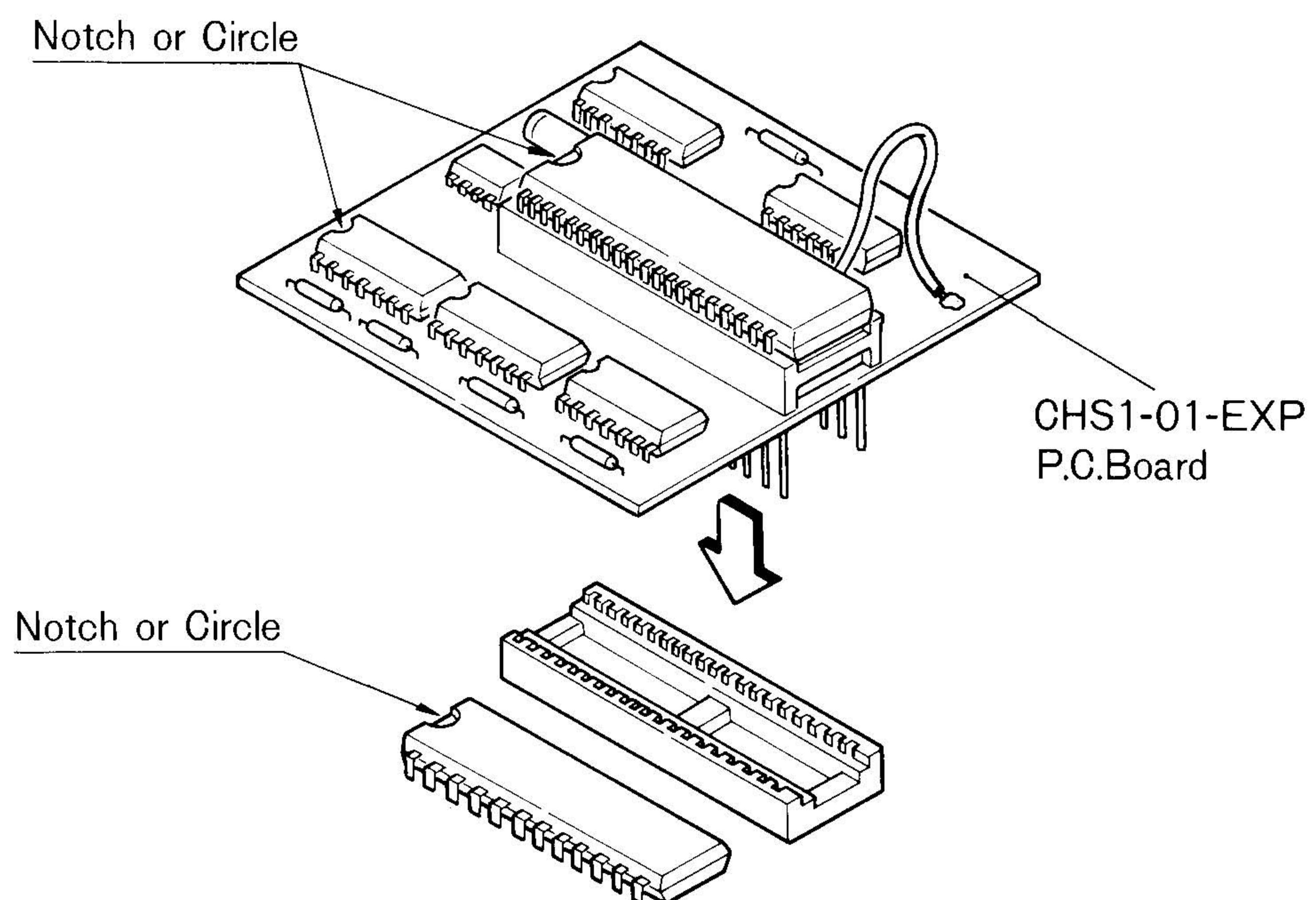
10. Attach CHS1-01-EXP PCB to 40-pin Dip Socket on CPU PCB.  
(see illustration 1-14)

- A. Remove Z80A Microprocessor (location 6H on CPU PCB) from 40-pin Dip IC Socket.
- B. Insert CHS1-01-EXP PCB to 40-pin Dip IC Socket  
(see illustration 1-14)

CAUTION : Be sure to insert the CHS1-01-EXP PCB with the chips in the same direction as the other ICs on the CPU PCB. Inserting this backwards may damage the CPU PCB and the EXP PCB.

Firmly insert CHS1-01-EXP PCB into IC Socket in order to prevent failures.

Carefully check all 40-pins for proper connection.



1-14



## 11. Reinstall PCB ass'y and check Self-Test and Bookkeeping

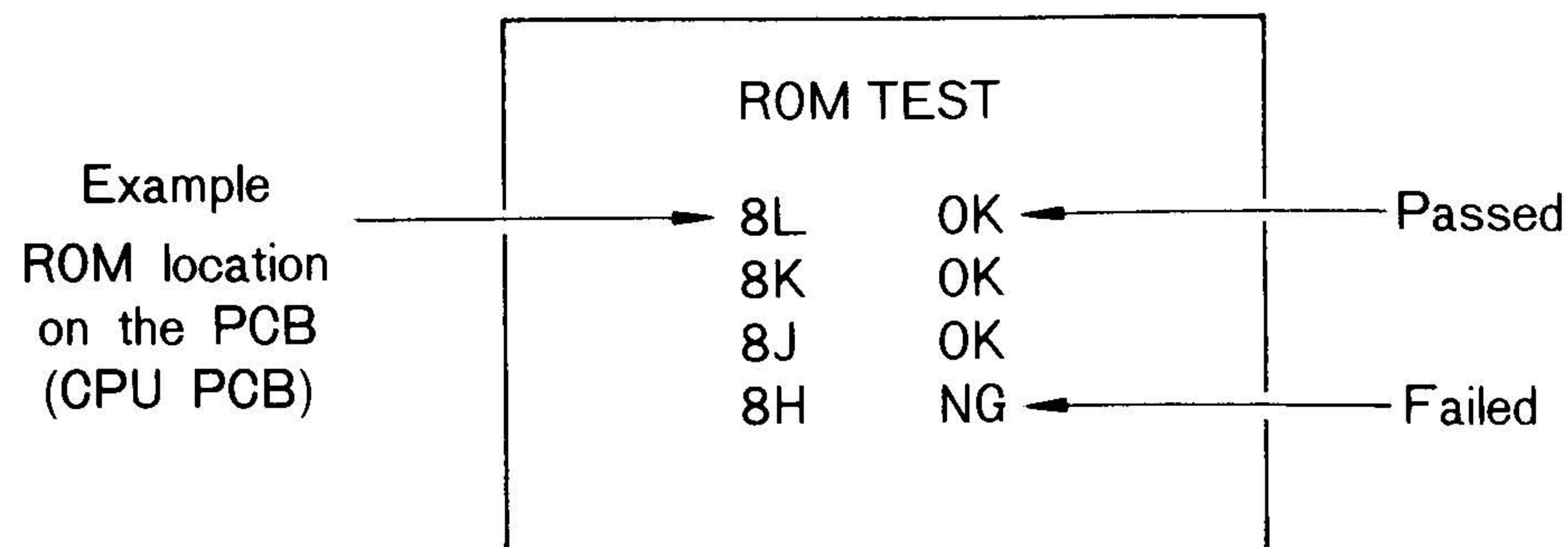
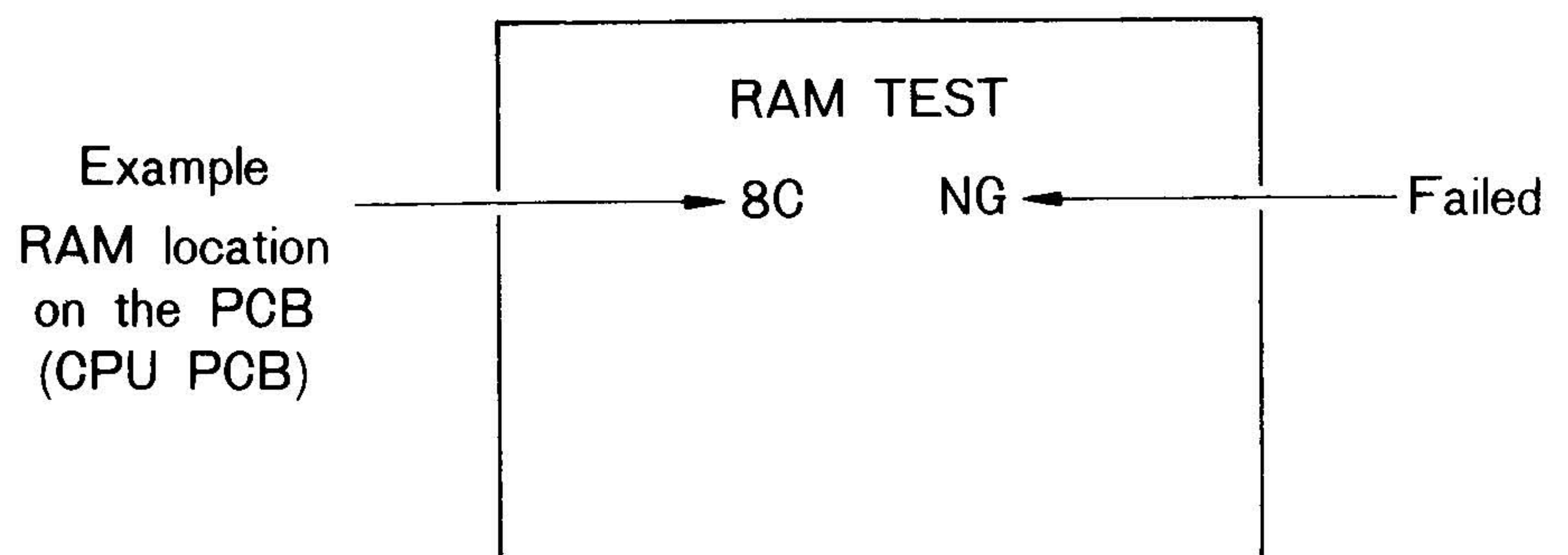
- A. Reassemble the game PCB set from CPU PCB, VIDEO PCB and BAK PCB. Be sure to connect all 50-pin and 10-pin connectors.
- B. Connect the game PCB to 054-FCC PCB.
- C. Replace the game PCB into the shield cage and connect the 56-pin edge connector to the 054-FCC PCB.
- D. Check Self-Test and Bookkeeping.

### (1) Entry

There are two ways to enter Self-Test and Bookkeeping modes.

- (a) While pressing the Service Switch, set the Power On/Off Switch to the "On" position. The hall of Fame RAM is now possible to reset.
- (b) Set for Self-Test Mode with Toggle P (SW2) on the game PCB. And set the Power On/Off Switch to the "On" position.

### (2) Self-Test and Bookkeeping are self-explanatory on the Video Monitor as follows.

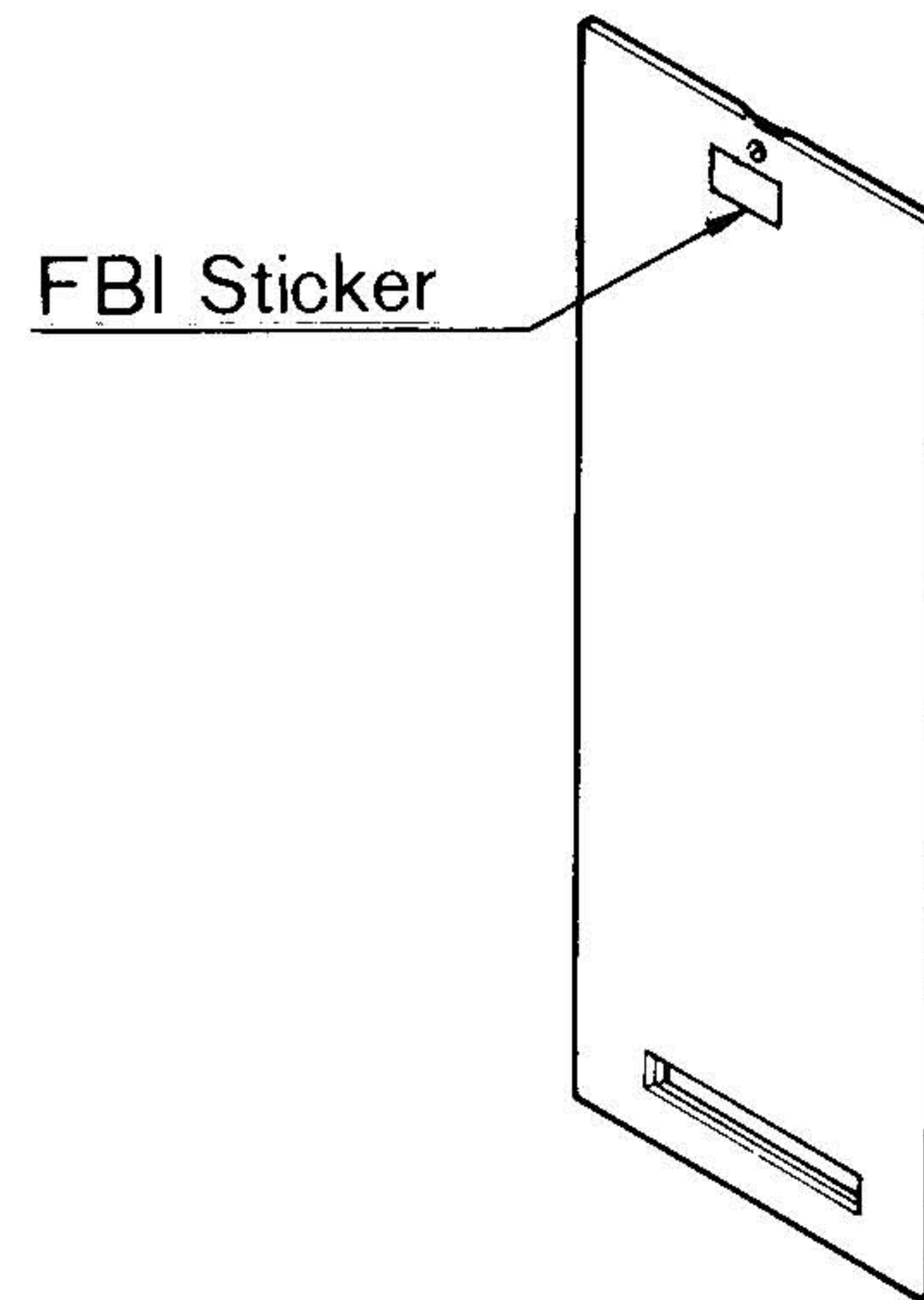


After servicing the game PCB, close the 054 shield cover completely with the fasteners. (see illustration 1-7 and 1-8) Failure to do so may result in unacceptable radio communication interference.



**12. Attach FBI sticker (see illustration 1-15)**

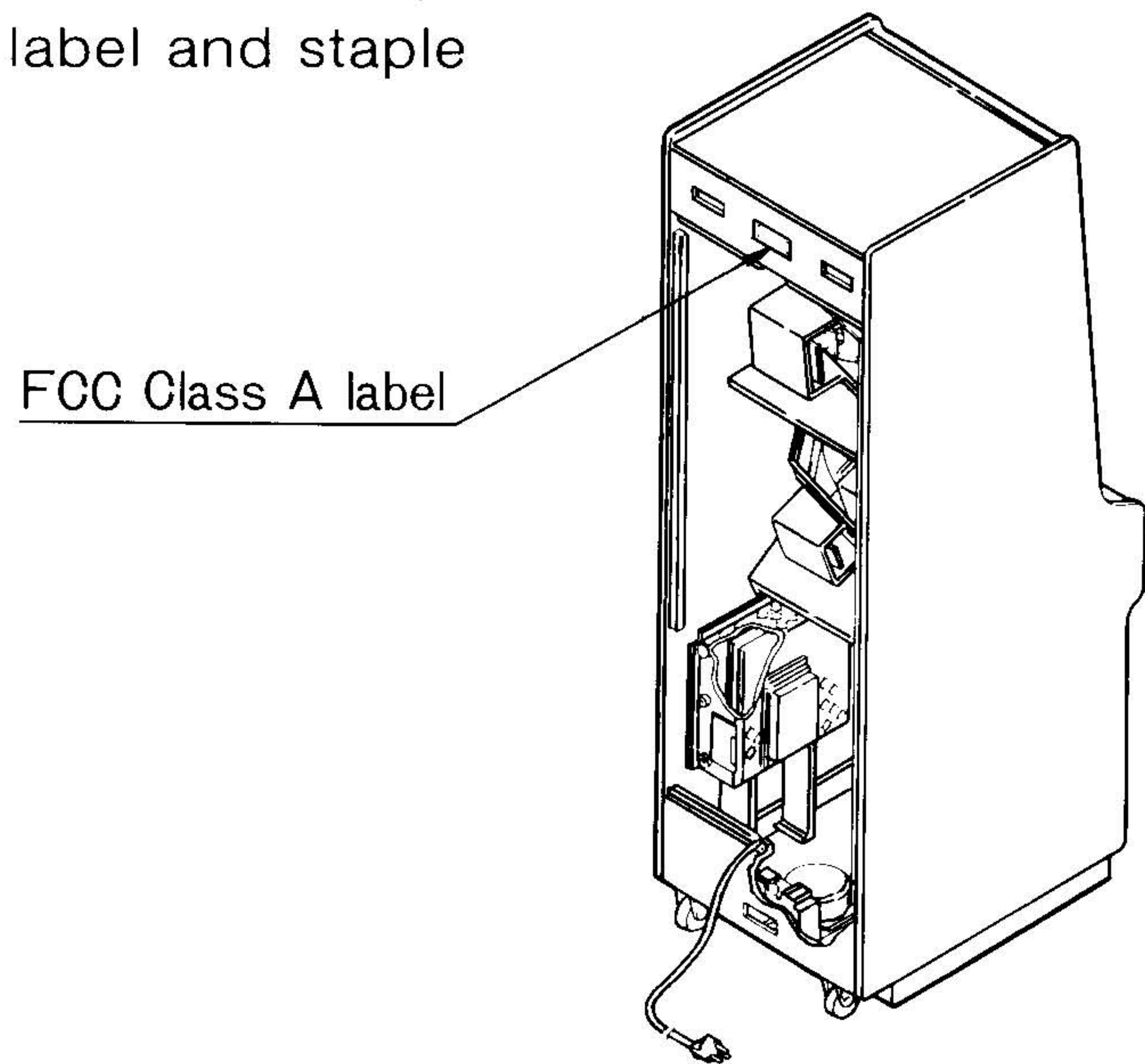
- A. Place label on back door just under lock
- B. Staple all four(4) corners



1-15

**13. Attach FCC Class A label (see illustration 1-16)**

If old FCC Class A label is not readable,  
put on new FCC Class A label and staple  
all four(4) corners.



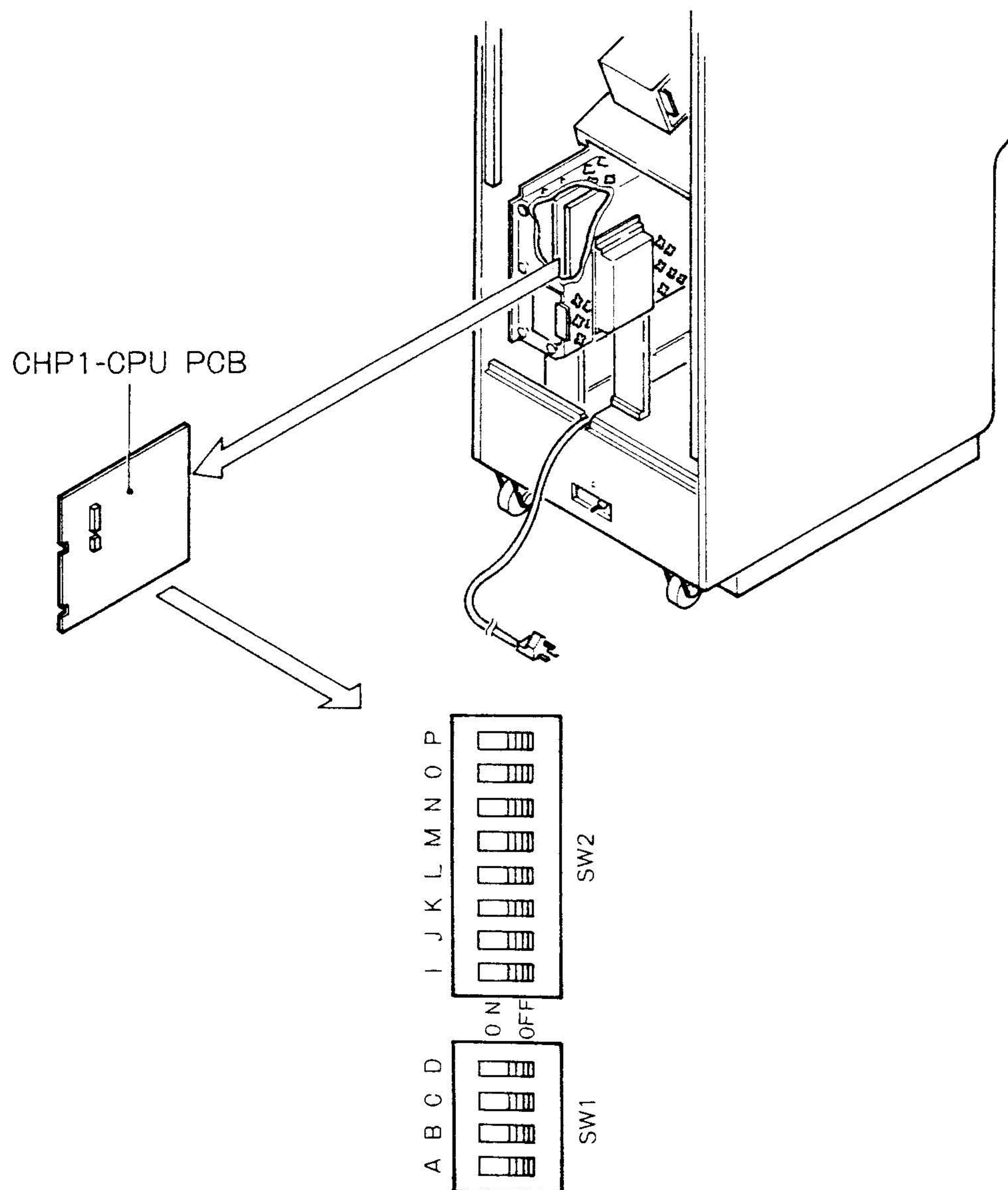
1-16



## V. Adjustments

### Option Switch Settings

A pair of Option Toggle Switches are mounted on the Game PCB.



### Option Toggle Switches



## A. Game Price Settings

Game Price Settings

credit/coin	Toggle (SW1) Settings			
	A	B	C	D
1/3	OFF	OFF	ON	ON
1/2	ON	OFF	OFF	OFF
1/1	OFF	OFF	OFF	OFF
2/1	OFF	ON	OFF	OFF
3/1	ON	OFF	ON	OFF
4/1	OFF	ON	ON	OFF
5/1	OFF	ON	OFF	ON
6/1	ON	ON	ON	OFF
Freeplay	ON	ON	ON	ON

## B. Game Option Settings

Game Option Settings

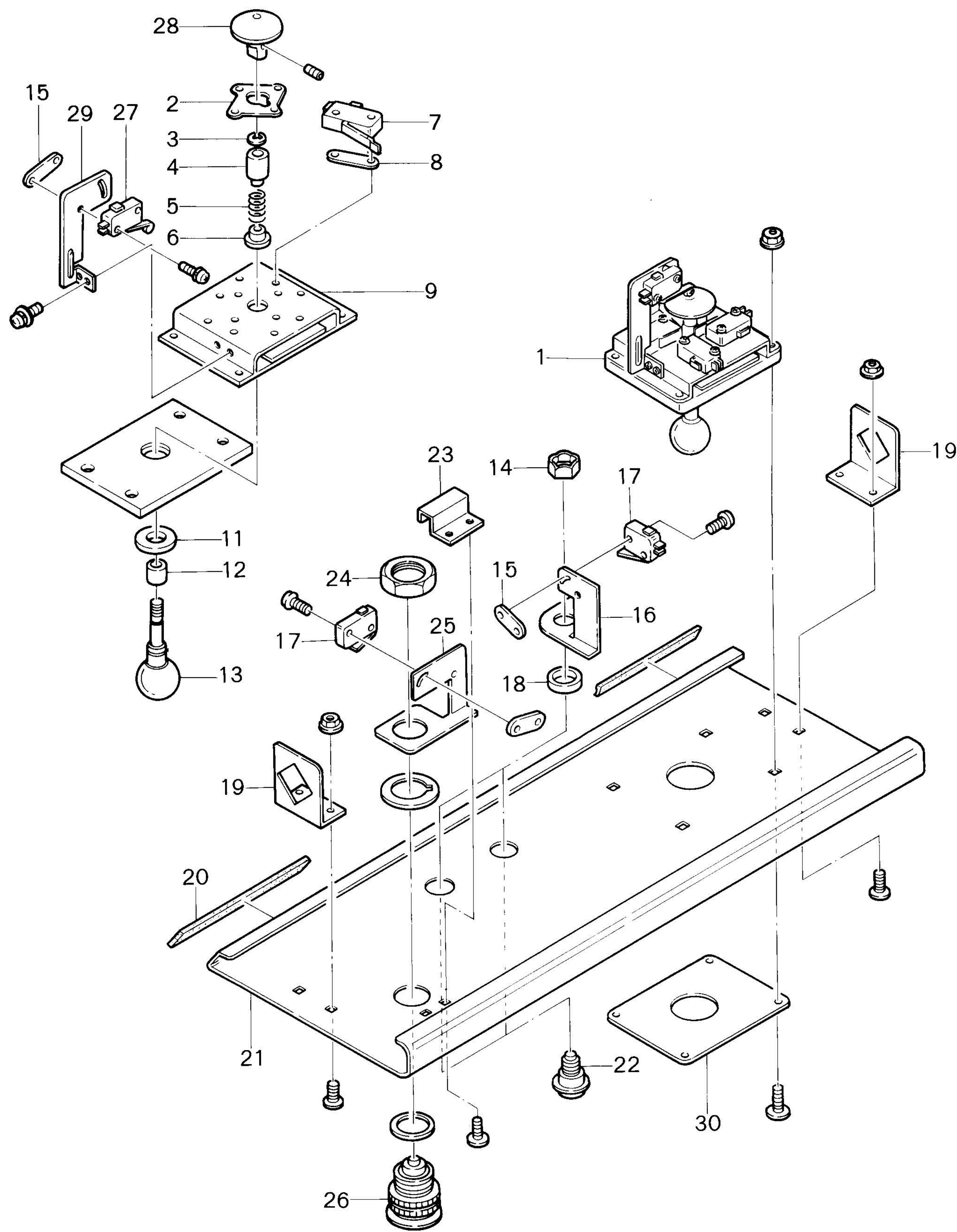
		Toggle (SW2) Settings							
		I	J	K	L	M	N	O	P
Game Difficulty									
Easy	(0)	OFF	OFF						
↓	(1)	ON	OFF						
↓	(2)	OFF	ON						
Hard	(3)	ON	ON						
Time									
Long	(0)			OFF	OFF				
↓	(1)			ON	OFF				
↓	(2)			OFF	ON				
Short	(3)			ON	ON				
Attract Music									
Silent	(0)					OFF			
With Music	(1)					ON			
Rematch at a discount									
No	(0)						OFF		
Yes	(1)						ON		
Self-Test/Game									
Game	(0)								OFF
Self-Test	(1)								ON

### —WARNING—

All the Option Switch Settings MUST be done with Power Off.



VI. Reorder Parts Lists



Operation Panel Ass'y.

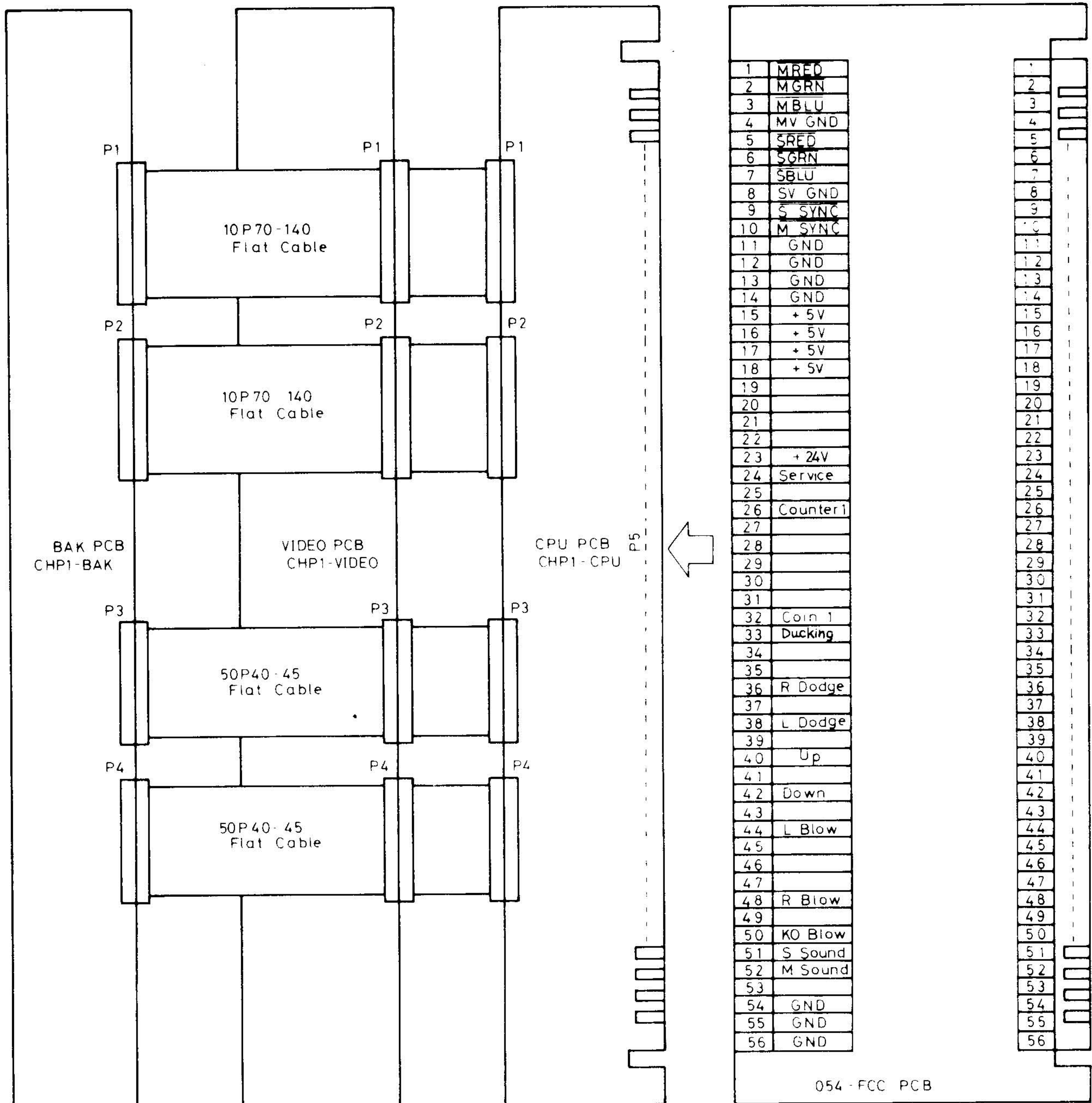


## PARTS LIST: CHS1-UP Operation Panel Assembly

ITEM	PART No.	DESCRIPTION
1	CHSU-14-11	Complete 5 way Controller Ass'y.
2	TKGU-23-51	4 way Guide Plate
3	TKGU-23-23	E Ring 4
4	CHSU-11-12	A5 Switch Collar
5	TKGU-23-22	Lever Spring
6	TKGU-23-20	Spring Stopper
7	TKGU-23-13	Micro-switch VL12L (Bent) (4 Required)
8	TKGU-23-17	Switch Spacer (4 Required)
9	CHSU-11-11	A5 Bearing Bracket
10	TMAU-12-15	Lever Plate
11	TMAU-12-14	Control Knob Plate 28D
12	TMAU-12-16	Controller Knob Collar 8L
13	CHSU-11-13	A5 Knob with Shaft 86.5L
14	TKGU-23-34	Pal Nut (2 Required)
15	TKGU-23-26	Nut Plate (4 Required)
16	TKGU-23-12	Switch Button Bracket (2 Required)
17	TMAU-34-18	Micro-switch VL12L (Straight) (3 Required)
18	TMAU-12-18	Collar 34×28×7H (2 Required)
19	TMAU-11-19	Operation Panel Fastener B 38W
20	CHPU-12-17	Black Sponge 2×10×590L
21	CHPU-12-11	CHP-US Operation Panel
22	TKGU-23-32	Orange Button Ass'y. (2 Required)
23	CHPU-11-14	Button Stopper
24	CHPU-11-15	Nut M30 P2
25	CHPU-11-16	Switch Button Bracket Large
26	CHPU-23-33	Button ZAP-2A Ass'y. (Include AI Ring and Rubber Ring)
27	TKGU-23-10	Micro-switch VL105 L2
28	CHSU-11-15	Pull switch Button
29	CHSU-11-14	Pull switch Button Bracket
30	CHSU-11-16	US Duck Instruction Label
	CHSU-12-13	CHS-US Name Plate
	CHSU-61-18	CHS-US Side Decal (2 Required)



## VII. Wiring and Connection











**Printed in Japan**