

#### f. I/O Test

- 1) Push the Test Switch and ZERO PATTERN will be displayed.  
\* After that, 3 patterns of Monitor Tests can be conducted sequentially every time the DEAL button is pushed.
- 2) Thereafter, 2 types of displays will be shown sequentially every time the LAST GAME key switch is turned On-Off.

\* The first display shows the status of the Dip Switches and Jumper Setting.

I/O TEST									
RAM OK									
PROM OK									
Meter Wire OK									
DIP S/W & JUMPER									
	SW-1			SW-2			Jumper		
	ON	OFF		ON	OFF	ON	OFF		
Music		<input type="checkbox"/>	Deno 1		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Prog.		<input type="checkbox"/>	Deno 2		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Max. P		<input type="checkbox"/>	* * *		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
WonCR		<input type="checkbox"/>	A.PAY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
D. DWN	<input type="checkbox"/>	<input type="checkbox"/>	Speed		<input type="checkbox"/>			<input type="checkbox"/>	
D. D. C	<input type="checkbox"/>	<input type="checkbox"/>	SLCT5	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	
CR/CO		<input type="checkbox"/>	MaxC1	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	
OD. T		<input type="checkbox"/>	MaxC2	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	
CARD		<input type="checkbox"/>	* * *		<input type="checkbox"/>			<input type="checkbox"/>	
Color	<input type="checkbox"/>	<input type="checkbox"/>	BK-CH		<input type="checkbox"/>			<input type="checkbox"/>	
TURN ON LAST S/W FOR NEXT TEST									

\* The second display

I/O TEST	
<b>Switches</b> Optical 1st (1ST COIN SENSOR) Optical 2nd (2ND COIN SENSOR) Drop Sensor (COIN DROP SW) Call-Atten (SERVICE/CHANGE SW) Mech-Door (MACHINE DOOR SW) Drop-Door (DROP DOOR SW) Reset Key (RESET KEY SWITCH) Meter Key (CRT METER KEY SWITCH) H.W-Switch (HOPPER WEIGHT SWITCH) Last Key (LAST GAME SW)	<b>Movements</b> Jackpot - Signal Coin Lock Out Signal Tower Upper Signal Tower Lower Sound Test Hopper Payout Hop & Trouble Signal Divider Finish
<b>GAME SWITCHES AND LAMPS</b>	
Collect/Pay Double Down One Bet Max Bet Deal/Draw	Select 1 Select 2 Select 3 Select 4 Select 5

- 3) If some parts (SWITCHES) are activated, other parts (MOVEMENTS) can be tested. Each of the latter's color will turn yellow, if their functions are correct.
- 4) The I/O Test will be finished, if the LAST GAME key switch is turned On-Off again.

#### g. Cleaning/Clearance and Updating

##### 1) Demagnetizing

The CRT Monitor will become magnetized during prolonged operation. This will cause irregularity in the color on the screen. If this happens, push the Demagnetizing Switch once. It is the black button which is located below the Monitor on the right.

##### 2) Exterior Cleaning

Cleaning is required at regular intervals for the trouble free operation of the Sigma Gaming Machine.

A non-abrasive cleaning fluid should be used to clean the cabinet or metal parts on the door. As for glass and plastic parts, an anti-static type cleaning fluid should be used.

##### 3) Clearance and Updating of Information

After the steps above have been completed, all data should be cleared according to either one of the procedures listed below.

###### \* Procedure 1

- a) Turn the power Off.
- b) Remove the PROGRAM ROM (No. 1).
- c) Insert the new PROGRAM ROM.
- d) Turn the power On
- e) Turn the RESET key switch On-Off.

###### \* Procedure 2

- a) Turn the power Off.
- b) Turn the CRT Meter Key and Reset Key Switches On.
- c) Turn the power On.
- d) Turn the Reset Key Switch Off.

The setup and installation have been completed. Game operation can be started.

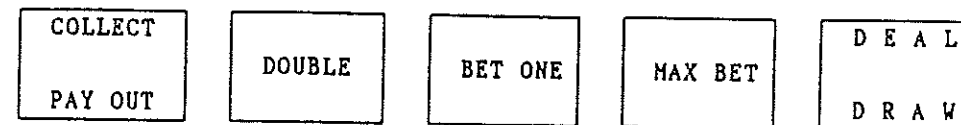
### 3. Game Operation

#### 3-1. How to Play

##### Layout of Buttons



##### \* In CREDIT Play Mode



##### \* In COIN Play Mode



- Insert coin(s).
- Press the DEAL button and the first two (2) cards will be dealt with their faces up.
- If there is a spread (difference) of more than 1 (one) between the first two (2) cards, a player has the option of raising his wager up to the amount of the original wager he has bet.
- Press the DRAW button and five (5) cards will be dealt with their faces down. After that, the player has to push one of the SELECT buttons and one of the five (5) cards will be revealed.  
The player wins if the number of the card selected is in-between the first two (2) cards.

Note 1) ACE is the highest and 2 is the lowest.

Note 2) If the numbers of the first two (2) cards are the same (a pair), the amount of the wager will be returned (it also will be regarded as a Win), and after that, another card should be selected for the Three (3) of a Kind.

Note 3) If the numbers of the first two (2) cards are consecutive, and the card selected matches one of the first two (2) cards, the amount of the wager will be returned (it also will be regarded as a Win).

- 4) 

DIP S/W OR JUMPER SETTING IS CHANGED TURN ON-OFF RESET S/W TO USE NEW SETTINGS GAME DATA EXCEPT WITH METERS IS CLEARED
---

The status of the Dip Switches or Jumpers has been changed. Turn the RESET key switch On-Off, and the new game feature is available. (All the game data, except the Operational Data, Malfunction Data, and Security Timer, will be cleared. And if there is any credit it will also be cleared.)

- 5) 

OPTICAL COIN SENSORS ARE WRONG OR DIRTY CHECK OR CLEAN IT
---

One of the Optical Sensors, which detects coins inserted or coins dropped, has been broken or become dirty.  
Countermeasure: Replace or clean the Optical Sensor, or check the wiring of the Sensor.

- 6) 

SOUND CPU DOES NOT WORK CHECK IT
-------------------------------------

The Sound CPU or SOUND ROM has a problem.  
Countermeasure: Turn the RESET key switch On-Off. Operation will be started without any sound being generated.

\* If this message is displayed every time the power is turned On, the Sound CPU or Sound ROM must be replaced.

- 7) 

WARNING WIRE OF MAGNETIC METERS IS DISCONNECTED CHECK WIRE OR RECONNECT
--

The wire of the Magnetic Counters has been disconnected.  
Countermeasure: Connect it properly. After that, turn the power Off-On.

\* This test will also be conducted during game operation.

e. Self-diagnostic Function

Whenever the power is turned On, a Self-Test will be automatically made. If any trouble or change is detected during this test, the Monitor will display the details and the machine will stop its other functions.

\* Display during Self-Test when no trouble or change has been detected:

POWER ON → NOW, POWER UP SELF TESTING → NORMAL OPERATION  
WAIT FOR A WHILE

\* Display after the trouble or change has been detected:

- 1) WARNING  
DATA IN ROM IS DEFECTIVE  
CHECK IT

The Program ROM(s) has a problem. In rare cases, the socket has been broken.

Countermeasure: Replace the ROM (See 4-1, ROM, page 34) or socket.

- 2) DATA IN STOCK IS WRONG  
CHECK RAM AND CIRCUIT  
OR  
TURN ON-OFF RESET S/W  
TO CLEAR DATA IN STOCK

The data stored in the RAM(s) is not correct, or the battery, RAM(s), or its peripheral circuit(s) has been broken.

Countermeasure: If the data is not correct, clear the RAM's by turning the RESET key switch On-Off. (All data will be cleared.) And if the battery, RAM(s), or its peripheral circuit(s) has been broken, replacement will be required.

- 3) ROM NO. OR VER. NO. IS DIFFERENT  
TURN ON-OFF RESET S/W  
TO USE NEW PROGRAM.  
OLD DATA IN STOCK IS CLEARED

A ROM with a different ROM number and/or VERSION number from that previously inserted before the last power Off has been inserted. (This message will always be displayed if the ROM has been replaced.)

Countermeasure: Clear the RAM's by turning the RESET key switch On-Off. (All data stored before the ROM was replaced will be cleared.)

\* Double Down Game

- 1) If any one of the winning combinations appears, the player is required to decide if he will collect his winnings or take a chance of doubling it in the Double Down game.
- 2) To collect his winnings, the COLLECT button should be pushed.
- 3) If the DOUBLE button has been pushed, 2 (two) cards will be dealt with their faces down in the left and right position.
- 4) The player has to push either one of the 2 (two) SELECT buttons corresponding to the two (2) cards.
- 5) The cards will be turned over from the other one to the selected one.
- 6) If the card selected is higher than the other one, his winnings will be doubled.
- 7) If it is lower, all coins won in the regular game will be lost.
- 8) If it is the same, the game will be a push. Cards will be automatically dealt again.
- 9) The maximum number of coins which can be won in the Double Down game is 10,000. The Double Down game can continue to be played as many times as the player likes until the winning number reaches the number which exceeds the maximum number in the next Double Down game.
- 10) To end the Double Down game, the COLLECT button should be pushed.

e. If there is any credit on the Credit Meter, one coin can be bet by pushing the BET ONE button once. If there is sufficient credit, the maximum number of coins accepted by the machine in a game can be bet by pushing the MAX BET button.

f. In CREDIT Play Mode, the winning number of coins will be counted up on the Credit Meter, if the COLLECT button has been pushed.

If the BET ONE button or MAX BET button has been pushed after a game is over, the winning number of coins will be automatically counted up on the Credit Meter and one coin or the maximum number of coins will be bet on the next game.

g. All of the coins displayed on the Credit Meter will be paid out if the PAY OUT button has been pushed.

If the CREDIT METER shows a number of less than 401 (1,001), all coins will be automatically paid out of the Hopper.

If it shows 401 (1,001) or more, 400 (1,000) coins will be automatically paid out of the Hopper, and the remainder will be paid by the attendant.

h. If the Credit Meter shows 10,000 coins or more, 400 (1,000) coins will be automatically paid out of the Hopper, and the remainder will be paid by the attendant.

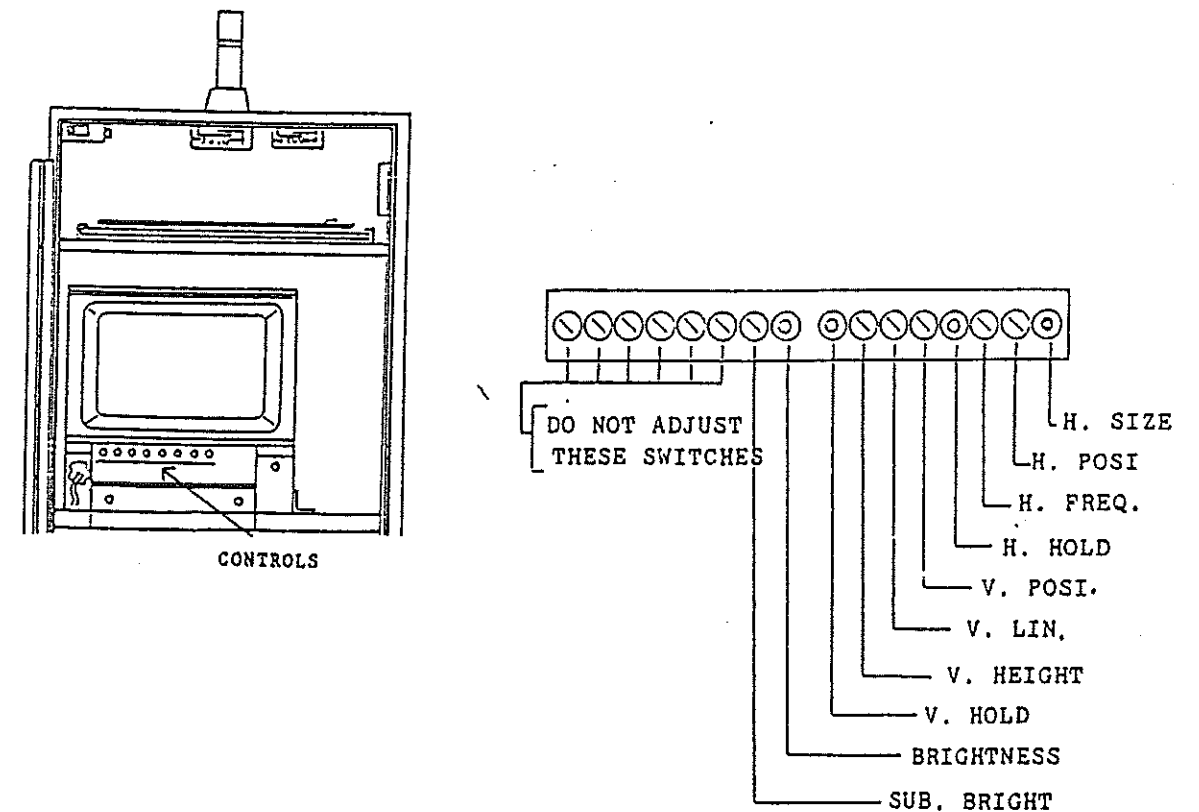
i. In COIN Play Mode, up to 400 (1,000) coins will be automatically paid out of the Hopper, if the COLLECT button has been pushed. If the winning coins are more than 400 (1,000), 400 (1,000) coins will be automatically paid out of the Hopper, and the remainder will be paid by the attendant.

Note) In the Double Down game, ACE is the highest and 2 is the lowest.

A>K>Q>J>10>9>8>7>6>5>4>3>2

#### d. Adjusting the 14 inch Monitor

Controls for fine tuning the C.R.T. Monitor are located below the Monitor inside the cabinet, as illustrated below (shown by the arrow →).



#### IMPORTANT

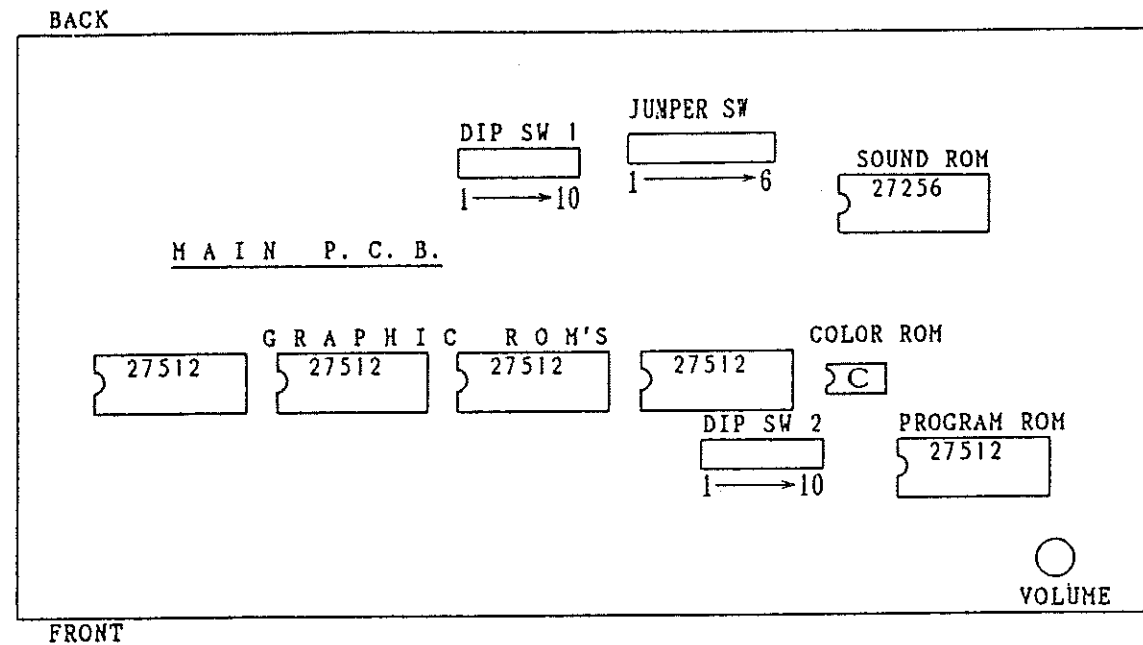
Never adjust the Controls unless it is absolutely necessary, because correct adjustment of the High Resolution Monitor is extremely difficult.

Adjustment has been completed before shipment and the position of each Control has been marked. If any of them has been moved, return it to the marked position.

Either a blue or green background for the Monitor is available by switching one of the Dip Switches On or Off.

### c. Sound Adjustment

The Volume Control for sound effects is located on the Main P.C.B. If it is rotated clockwise, the volume will be turned up. It should be adjusted appropriately.



### 3-2. Attendant-Pay and Jackpot

When more than 400 (1,000) coins are to be paid out of the Hopper, the remaining coins will be paid by the attendant.

The following sequence will occur:

- 400 (1,000) coins will be paid out of the Hopper.
- The number of coins to be paid by the attendant will be displayed on the lower left of the Monitor.
- "Sound" will be generated.
- The upper part of the Signal Tower will light up.
- The machine will lock up.

If a Progressive Jackpot is won, the following sequence will occur:

(There will be no payout from the Hopper.)

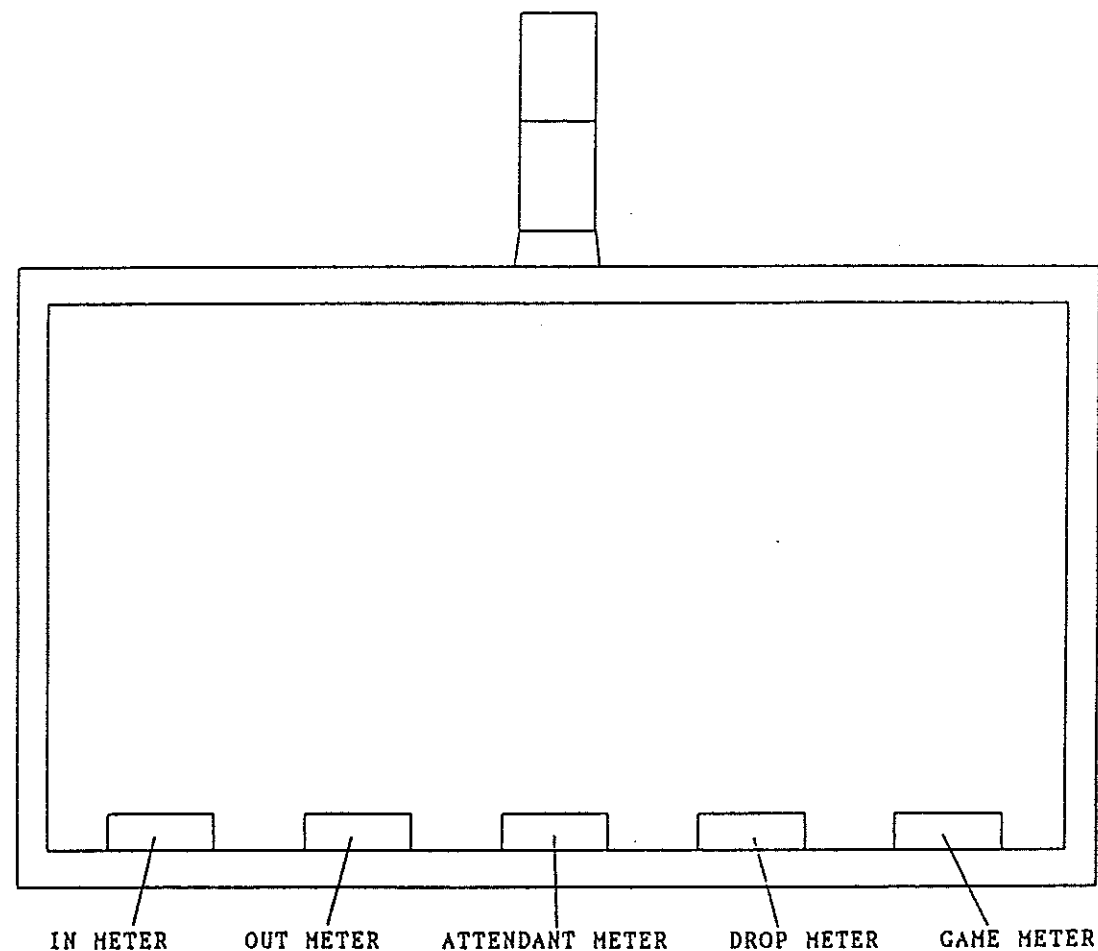
- JACKPOT will be displayed on the lower part on the Monitor.
- "Sound" will be generated.
- The upper part of the Signal Tower will light up.
- The machine will lock up.

If one of the above-mentioned situations occurs, confirm the number of coins to be paid by the attendant, and turn the RESET key switch On and Off, to return to new game play condition.

\* If a Progressive Jackpot is won, the number of coins won will not be recorded. However, it will be included in #33, "Number of highest win hit in Between games" recorded. (See 3-4, CRT Display Meter, page 26.)

### 3-3. Magnetic Counters

- a. The Magnetic Counters are located below the Top Display Glass.
- b. If the METER key switch, which is located on the upper right side of the cabinet, is turned On, the appropriate lamps will light up and the details of the Magnetic Counters can be read.
- c. The Magnetic Counters cannot be reset.
- d. If the game is played with the door open, the Magnetic Counters will not increment.



### b. Hopper Weight Switch:

The Hopper Weight Switch ③ is located on the lower part of the Hopper, as illustrated. The weight of the Hopper Bowl (quantity of coins in it) determines whether this switch is turned On or Off.

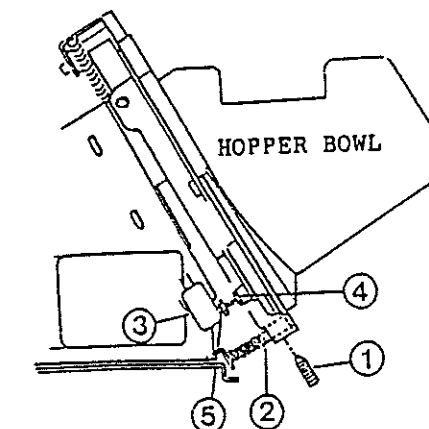
The status of the Coin Diverter will be changed only when the Micro-computer detects that the Micro Switch has been turned On or turned Off. The detection is performed every time a game is complete. The Coin Diverter will guide coins into the Cash Box or into the Hopper, depending on the status of the Micro Switch.

If it is not adjusted properly, Hopper Empty can occur, coins may overflow from the Hopper, or other possible troubles will follow shortly.

### \* Adjusting the Hopper Weight Switch

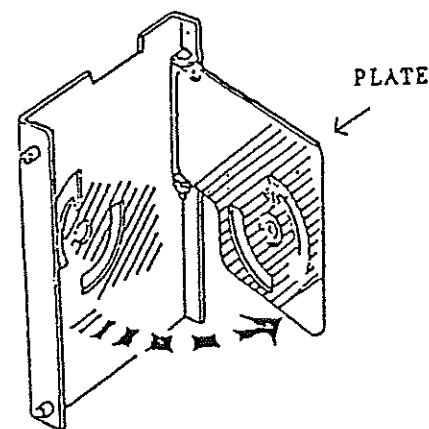
- 1) Remove all coins from the Hopper Bowl.
- 2) Loosen the Set Screw ①. (A hexagonal wrench #3/64 inch should be used.)
- 3) Fill the Hopper Bowl with coins until they reach the appropriate Hopper capacity. At this time, the Hopper capacity should be determined by the operator. If 600 coins have been determined to be the Hopper capacity, coins inserted will be dropped into the Hopper until the Hopper contains 600 coins. And if it contains more coins, all coins inserted will be dropped into the Cash Box.
- 4) Adjust the Set Screw ② (A hexagonal wrench #5/64 inch should be used) so that the Micro Switch ③ (Hopper Weight Switch) can be turned On in that condition. (When it is turned On, it will click.)
- 5) Fasten the Set Screw ① after the above-mentioned procedures have been completed.

NOTE) Never fasten or loosen Set Screws ④ and ⑤. It may upset the adjustment.



2) Cleaning the Mechanical Rejector

A soft cloth which has been dipped in a non-abrasive cleaning fluid or in a lubricant, should be used to clean the Mechanical Rejector. Never spray a cleaning fluid or a lubricant directly on the Mechanical Rejector. The springs contained in it enable the plate to be opened and closed. However, if too much force is applied, the springs can be broken. The plate can be detached by unhooking the latch on the spring hinge.



e. Each Magnetic Counter shows the following details:

	COIN MODE	CREDIT MODE
IN METER	Number of coins inserted	Number of coins bet by coin insertion and credit bet
OUT METER	Number of coins paid out of the Hopper	Number of coins paid out of the Hopper and credit bet
ATTENDANT METER	Number of coins paid by the attendant	Number of coins paid by the attendant
DROP METER	Number of coins dropped into the Cash Box	Number of coins dropped into the Cash Box
GAME METER	Number of games played	Number of games played

f. Calculation of Payout Ratio

$$\text{Payout Ratio (\%)} = \frac{\text{OUT METER} + \text{ATTENDANT METER}}{\text{IN METER}} \times 100$$

When payout ratio is calculated, the difference from the previous reading should be used because the Magnetic Counters cannot be reset.

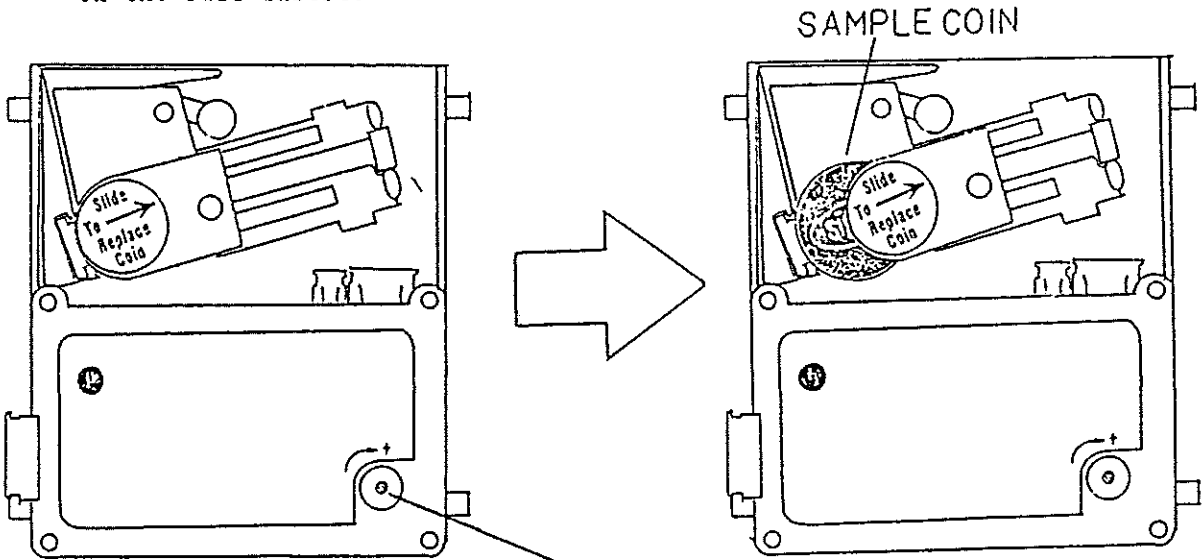
2-5. Final Check

a. Coin Acceptor

The Coin Acceptor (Coin Comparitor or Mechanical Rejector) is attached below the Coin Entry. Its function is to accept or to reject coins by detecting the thickness, diameter, and magnetism of each coin inserted.

1) Adjusting the Coin Comparitor

Looking at the front of the Coin Comparitor, slide (without lifting) the Sensor Coil assembly to the right and replace the sample coin blank with the desired coin. Then, carefully release the assembly. In most cases, the coin will automatically seat itself. When properly seated, the coin will rest firmly between the Sensor Coil assembly and between the ribs on the rail insert.



\* Potentiometer Adjustment

Each Coin Comparitor is adjusted to give excellent discrimination against slugs. However, some high quality slugs may need a finer adjustment:

- a) Adjust pot clockwise until high quality slug is rejected.
- b) Insert proper coin and make sure of accurate acceptance.
- c) Repeat steps a) and b), if necessary.

COIN SPEED RATE: 120 to 150m second.

3-4. CRT Display Meter

- a. If the CRT METER key switch is turned On, the Game Meter-1 will be displayed.
- b. If the DEAL button is pressed after the CRT METER key switch has been turned On, the Game Meter-2 will be displayed.
- c. If the CRT METER key switch is turned Off, the display will disappear. The machine can then be returned to normal operation.

NOTE 1) If a game is played with either the Machine Door or Drop Door open, the CRT METER will not function.

NOTE 2) When the details of the data are to be cleared, turn On the LAST GAME key switch, with the CRT METER key switch also being On.

\* Game Meter-1 will be displayed as follows:

1. ROM NO.	*****-***	18. MAX P/O	**%
GAME METER-1			
2. IN	0	19. D-PLAY	0
3. OUT	0	20. D-HIT	0
4. ATP	0	21. D-PUSH	0
5. DROP	0		
		22. B-BET	0
6. NJ-IN	0	23. B-WON	0
7. NJ-OUT	0	24. B-P/OZ	0.00
8. NJ-ATP	0		
9. NJ-DRP	0	25. D-BET	0
		26. D-WON	0
10. BET	0	27. D-P/OZ	0.00
11. WON	0		
12. P/OZ	0.00	28. ADC	0
		29. APO	0
13. B-PLAY	0	30. MDOOR	0
14. B-HIT	0	31. DDOOR	0
15. D-CHAL	0	32. POWER	0
16. D-WIN	0	33. JP-HIT	0
17. T-WIN	0	34. TTL-AP	0
		35. RESET	0
PRESS DEAL BUTTON FOR NEXT METER			

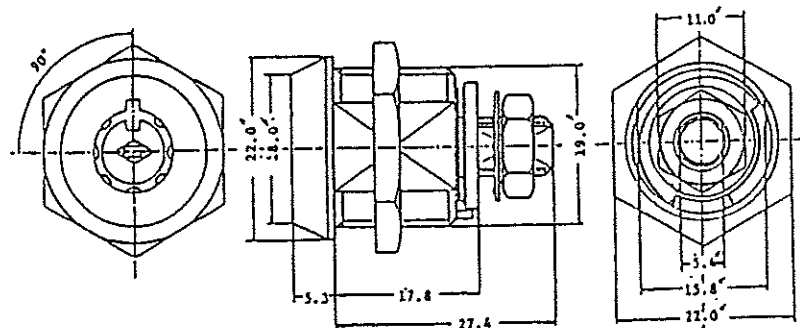


2-4. Locks

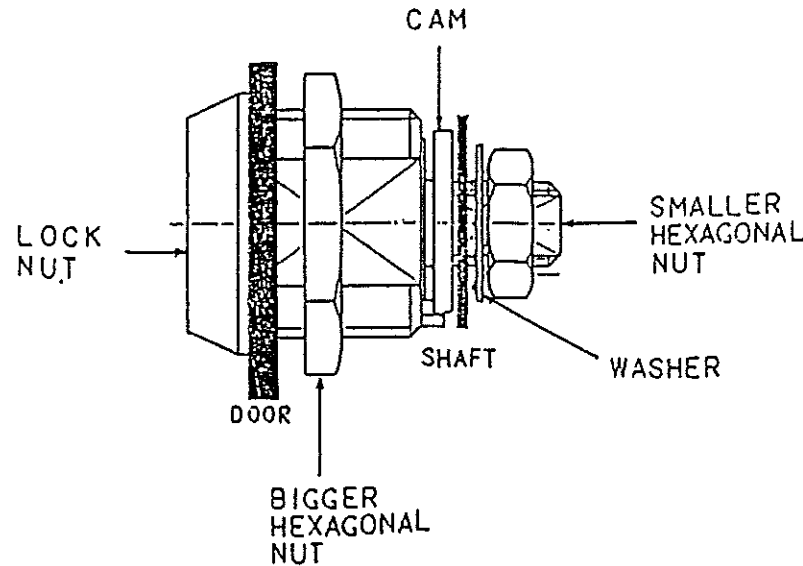
a. There are two types of locks used in the Sigma Poker Machine:

MACHINE DOOR: F8503  
P.C.B. DOOR: B2300

b. The size of the two locks is exactly the same.



c. For lock removal, refer to the figure below:



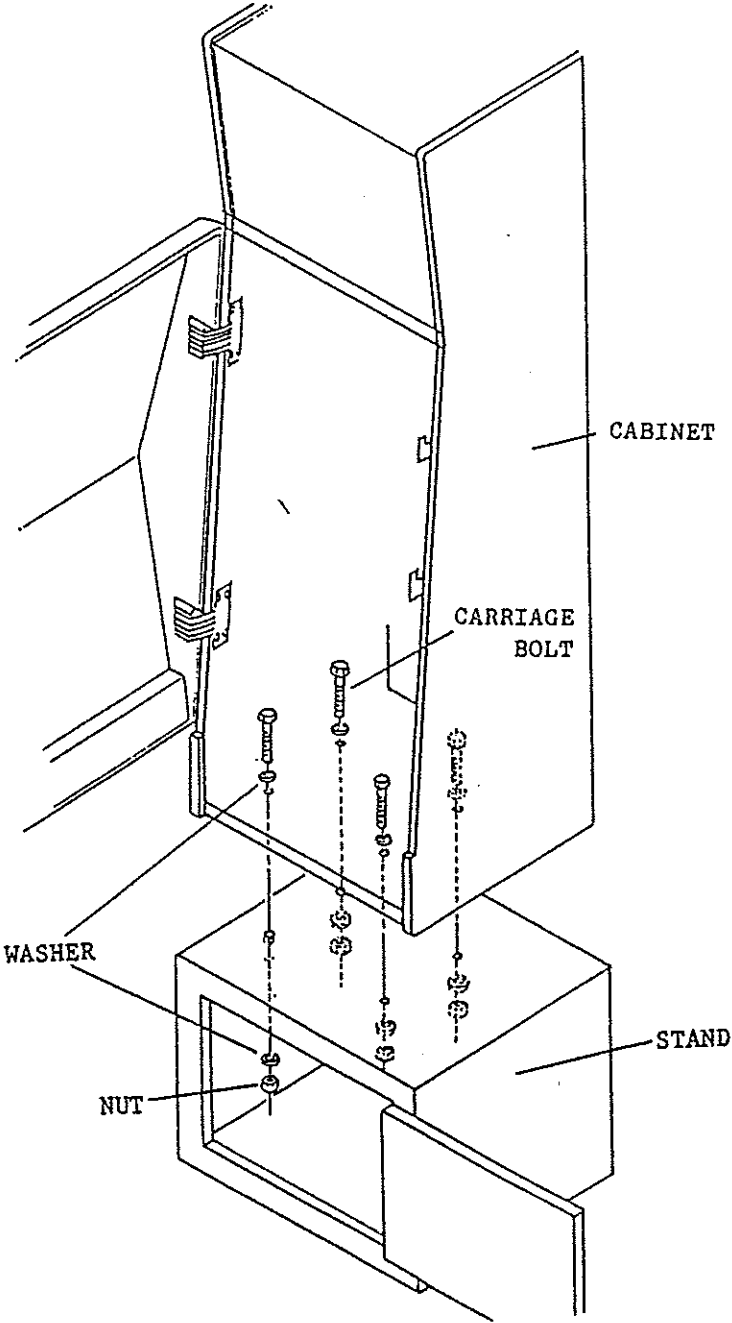
\* Explanation of each data:

1. ROM NUMBER and VERSION NUMBER
2. Number of coins Inserted
3. Number of coins paid Out of the Hopper
4. Number of coins Attendant-Paid
5. Number of coins Dropped into the Cash Box
6. Number of coins Inserted and credit bet
7. Number of coins paid Out of the Hopper and credit bet
8. Number of coins Attendant-Paid (Same as 4.)
9. Number of coins Dropped into the Cash Box (Same as 5.)
10. Total number of coins inserted and credit Bet
11. Total number of coins Won
12. Actual Payout Ratio in total games (Won/Bet X 100)
13. Number of Between games Played
14. Number of Between games Hit
15. Number of winning Between games in which Double Down games were selected to be played
16. Number of Double Down games which players were finally awarded
17. Total number of games Won
18. Set Out (Theoretical) Maximum Payout Ratio
19. Number of Double Down games Played
20. Number of Double Down games Hit
21. Number of Double Down games Pushed
22. Number of coins Inserted and credit Bet in Between games
23. Number of coins Won in Between games
24. Actual Payout Ratio of Between games
25. Number of coins Bet in Double Down games
26. Number of coins Won in Double Down games
27. Actual Payout Ratio of Double Down games
28. Number of games played After the last Door Close
29. Number of games played After the last Power On
30. Number of Machine Door Opens
31. Number of Drop Door Opens
32. Number of times Power has been switched Off
33. Number of highest win hit in Between games
34. Number of times of Attendant Pays
35. Number of times malfunctions have been Reset

b. Secure the machine using 8m/m (0.31inches) bolts.

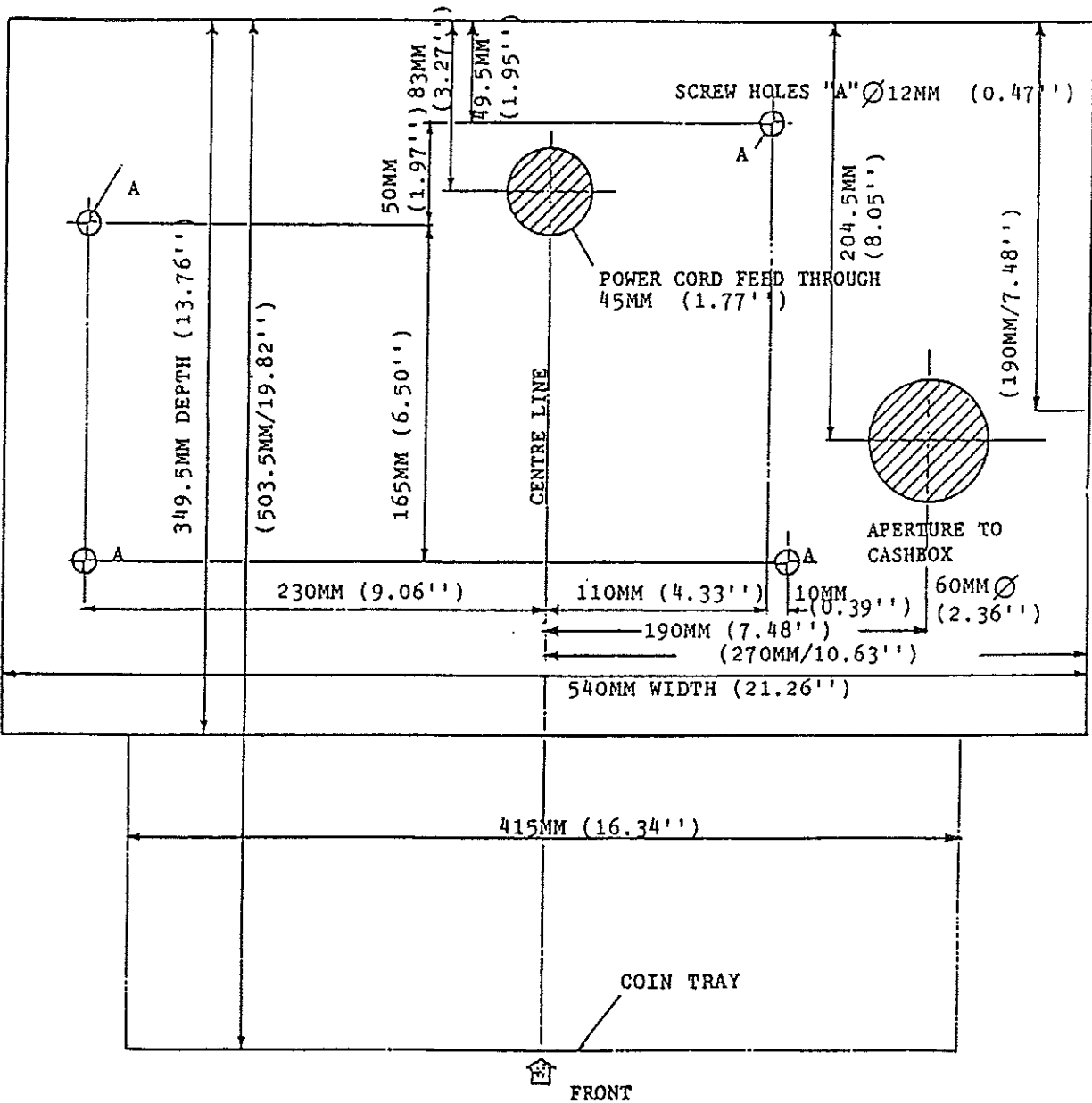
\* Game Meter-2 will be displayed as follows

ROM NO.	*****-***	MAX P/O	**Z
GAME METER-2			
1. ♠ JQK ***	0	20. ♠ JK-CH	0
2. JQK ***	0	21. ♠ JK-RS	0
3. 3-A7 ***	0	22. ♥ ♦ ♣ JK-CH	0
4. 3-JQK **	0	23. ♥ ♦ ♣ JK-RS	0
5. 3 CARD **	0	24. 1SF-CH	0
6. 1S-FL **	0	25. 1SF-RS	0
7. 1SP **	0	26. 1SP-CH	0
8. 2S-FL **	0	27. 1SP-RS	0
9. 2SP **	0	28. 2SF-CH	0
10. 3S-FL *	0	29. 2SF-RS	0
11. 3SP *	0	30. 2SP-CH	0
12. 4-11SF *	0	31. 2SP-RS	0
13. 4-11SP *	0	32. 3SF-CH	0
14. PAIR *	0	33. 3SF-RS	0
		34. 3SP-CH	0
15. B-PLAY	0	35. 3SP-RS	0
16. B-HIT	0	36. 4-11F-CH	0
17. RASE-CH	0	37. 4-11F-RS	0
18. RAISE	0	38. 4-11S-CH	0
19. RAS-HIT	0	39. 4-11S-RS	0
PRESS DEAL BUTTON FOR NEXT METER			



2-3. Placement of the Machine onto the Stand

a. Drill holes in the positions indicated in the figure.



\* Explanation of each data:

1. Odds and number of times "J-Q-K of Spades" has been hit
2. Odds and number of times "J-Q-K with Flush" has been hit
3. Odds and number of times "Three A's or 7's" has been hit
4. Odds and number of times "Three J's, Q's or K's" has been hit
5. Odds and number of times "Three of a Kind" has been hit
6. Odds and number of times "1 Card Spread with Flush" has been hit
7. Odds and number of times "1 Card Spread" has been hit
8. Odds and number of times "2 Card Spread with Flush" has been hit
9. Odds and number of times "2 Card Spread" has been hit
10. Odds and number of times "3 Card Spread with Flush" has been hit
11. Odds and number of times "3 Card Spread" has been hit
12. Odds and number of times "4-11 Card Spread with Flush" has been hit
13. Odds and number of times "4-11 Card Spread" has been hit
14. Odds and number of times "Pair Without Spread" has been hit
15. Number of Between games Played
16. Number of Between games Hit
17. Number of Chances for "Raise Bet"
18. Number of "Raise Bet" Games Played
19. Number of "Raise Bet" Games Hit
20. Number of times "♠ J-♠ K" has been dealt for the first two cards
21. Number of times of "Raise Bet" after "♠ J-♠ K" has been dealt
22. Number of times "J-K with Flush" has been dealt for the first two cards
23. Number of times of "Raise Bet after "J-K with Flush" has been dealt
24. Number of times "1 Card Spread with Flush" has been dealt
25. Number of times of "Raise Bet" after "1 Card Spread with Flush" has been dealt
26. Number of times "1 Card Spread" has been dealt
27. Number of times of "Raise Bet" after "1 Card Spread" has been dealt
28. Number of times "2 Card Spread with Flush" has been dealt
29. Number of times of "Raise Bet" after "2 Card Spread with Flush" has been dealt
30. Number of times "2 Card Spread" has been dealt
31. Number of times of "Raise Bet" after "Spread of 2" has been dealt
32. Number of times "3 Card Spread with Flush" has been dealt
33. Number of times of "Raise Bet" after "3 Card Spread with Flush" has been dealt
34. Number of times "3 Card Spread" has been dealt
35. Number of times of "Raise Bet" after "3 Card Spread" has been dealt
36. Number of times "4-11 Spread Card with Flush" has been dealt
37. Number of times of "Raise Bet" after "4-11 Card Spread with Flush" has been dealt
38. Number of times "4-11 Card Spread" has been dealt
39. Number of times of "Raise Bet" after "4-11 Card Spread" has been dealt

### 3-5. Last Game and Previous Game

The previous two games can be recalled.

#### a. How to Recall the Last Game

Details of the Last Game will be displayed as illustrated, if the LAST GAME key switch is turned On. The display will disappear, if the LAST GAME key switch is turned Off.

1. POWER		LAST GAME		2. M-DOOR-D	
BETWEEN PLAY (Details of Between game)					
DEAL		3♥		A♦	
DRAW	K♦	6♥	4♦	10♥	7♥
SELECT			7♥		
DOUBLE DOWN (Details of the last 5 Double Down games)					
		DEALER		PLAYER	
PLAY 3		2♥		3♦	
PLAY 4		5♦		10♥	
PLAY 5		7♥		J♦	
PLAY 6		10♦		A♥	
PLAY 7		4♥		5♦	
3. WAGER	2		7. COIN IN	1	
4. WIN	512		8. CREDITS	0	
5. PAID	400		9. PAID	0	
6. ATTD	112		10. ATTD	0	
LAST JACKPOT					
OVER 400 (1000) COINS					
BETWEEN HAND (The name of the Winning Hand) 4-11 Cards Spread					
DOUBLE DOWN HIT (Number of Double Down Hit) 7					
11. WAGER	2		12. WIN	512	

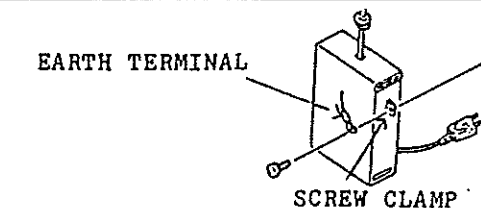
1. Power Off during the game.
2. The Machine (M) Door or Drop (D) Door has been opened during the game.
3. Number of coins inserted and bet in the game
4. Number of coins Won in the game
5. Number of coins Paid out of the Hopper after the game is over
6. Number of coins Attendant-Paid after the game is over
7. Number of coins Inserted
8. Amount of Credit when the game is over
9. Number of credited coins paid out of the Hopper
10. Number of credited coins Attendant-Paid
11. Number of coins inserted and bet in the last Jackpot game
12. Number of coins won in the last Jackpot game

#### b. How to Recall the Previous Game

Turn the LAST GAME key switch On to recall the Last Game. Then push the DEAL/DRAW button. Details of the Previous Game will be displayed in the same way as the Last Game. The display will disappear if the LAST GAME key switch is turned Off.

Note ) Games played with the door open cannot be recalled.

- a. Insert the plug into a plug receptacle and turn the power switch On. The power switch is located inside the cabinet on the lower right-hand side. The plug is a 3 prong plug with an earth ground.
- b. If a two-pole plug without an earthing contact is used, the machine should be grounded at the Screw Clamp on the side of the Cord Box located behind the Hopper, as illustrated. In this case, the machine must be grounded to protect the user from an electric shock.



- c. There are two outlets for the plug, - one is located on the rear wall, and the other is at the bottom of the cabinet. Either outlet can be used, depending on which is more convenient for the operator.

If the plug runs from the outlet on the wall, the Cord Box should be attached through the rail on the wall with one side (which has the cord running out of it) being face to face to the wall (See Figure 1.); while if it runs from the outlet at the bottom, the other side should be facing the wall (See Figure 2.).

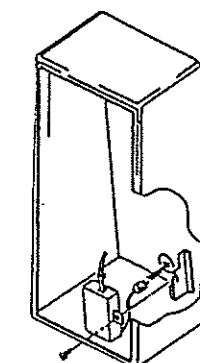


Figure 1.

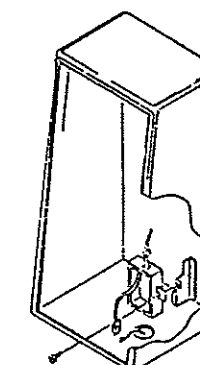


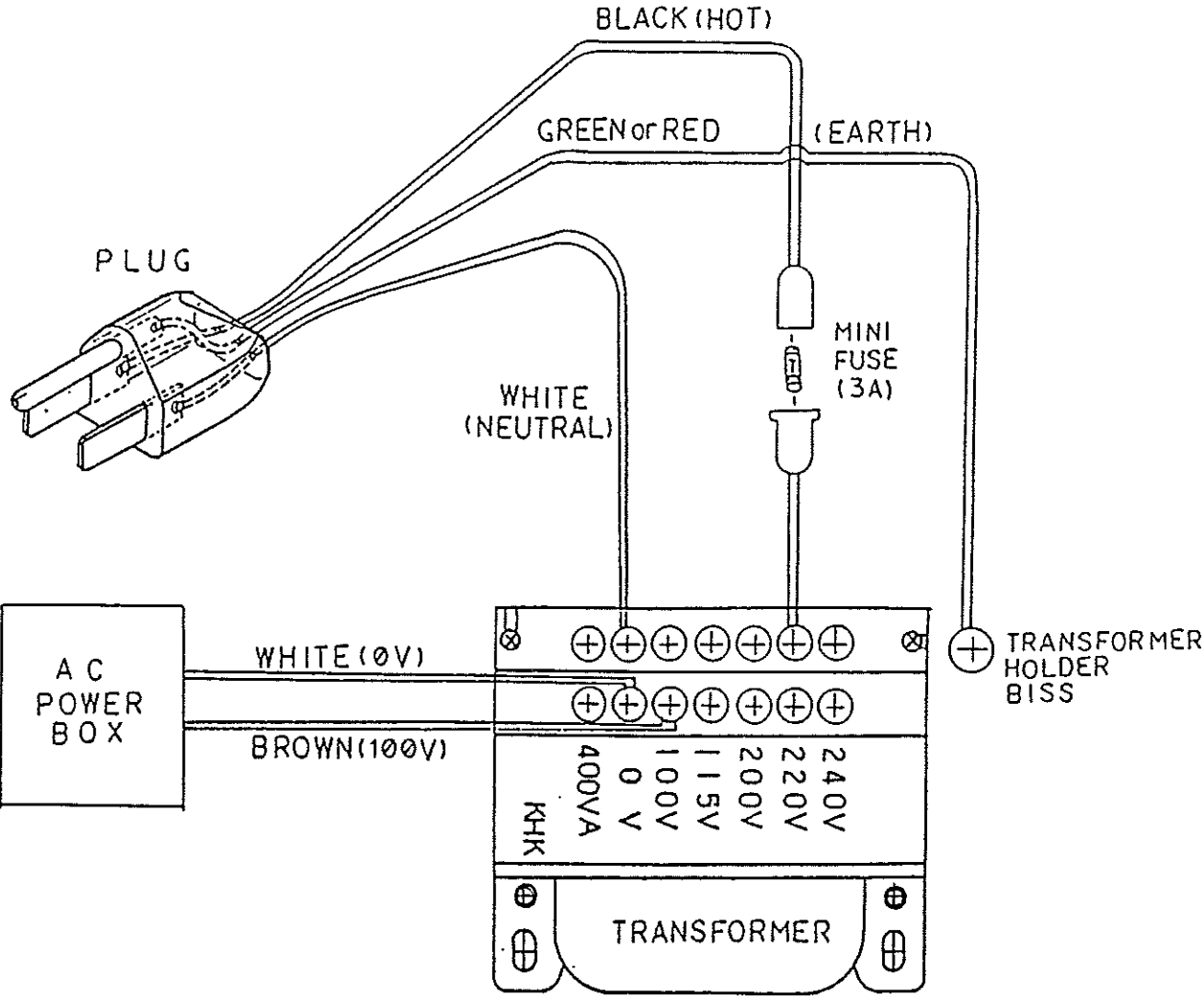
Figure 2

- d. Turn Off the power when changing parts or unhooking any of the connectors.

2-2. Connecting the Power

If a transformer is used, it is located on the right, inside the cabinet, behind the Hopper. Black (HOT), white (NEUTRAL), and green (EARTH) lines running from the power plug are connected to the transformer. White and brown lines run from the transformer to the power supply.

A fuse (3A) will be attached as illustrated. Check that the fuse is functioning correctly. If the fuse has blown out, turn Off the power, and replace it.



3-6. Malfunction Codes

If there is any malfunction during a game, the following steps will automatically occur:

- a. The game will be interrupted.
- b. "Trouble Sound" will be generated.
- c. The upper part of the Signal Tower will light up.
- d. One of the Malfunction Codes will be shown on the lower part of the Monitor.

If the RESET key switch is turned On-Off after the malfunction is cleared, the machine will return to normal operation and the game can be continued.

MALFUNCTION CODE	CONTENT
COIN-IN JAM or TIME OUT	It takes too long for coins passing through the Coin-In Sensor or coins are jammed.
COIN-IN REVERSED	Coins are reversed. (This is a countermeasure for attempted cheating or stringing.)
COIN-DROP JAM or TIMEOUT	Coins take longer than stipulated to pass through the Coin-Drop Sensor.
HOPPER JAM or TIME OUT	Coin counting cannot be done by the Hopper or coins are stuck within the Hopper Mechanism.
HOPPER EMPTY	There are no coins in the Hopper or the Hopper Disc cannot be rotated.
HOPPER OVER PAID #	Number (indicated by #) of coins that have been overpaid.
HOPPER RUNAWAY #	Hopper Runaway. (Number of coins paid is indicated by #.)

\* Each of Malfuntion Codes and "Please Call Attendant" will be displayed alternately.

### 3-7. Malfunction Meter and Security Timer

- If the CRT METER key switch is turned On and the DEAL/DRAW (DEAL) button is pressed, the message illustrated below will be displayed on the Monitor.
- If the CRT METER key switch is turned Off, the machine will return to normal operation.

NOTE 1) Details of the data will be cleared at the same time as the CRT Display Meter is cleared.

NOTE 2) Details will not be recorded on the Malfunction Meter, if the door is open.

NOTE 3) The Security Timer will stop counting while the power is Off.

\* The Malfunction Meter and Security Timer will be displayed as follows:

ROM NO. *****-**		MAX P/O **%	
TROUBLE METER (MALFUNCTION METER)			
A	0	COIN IN TIME OUT OR JAM	
B	0	COIN IN REVERSED	
C	0	COIN DROP TIMEOUT/JAM	
D	0	HOPPER TIMEOUT/JAM	
E	0	HOPPER EMPTY	
F	0	HOPPER OVERPAID	
G	0	HOPPER RUNAWAY	
	0	TOTAL	
SECURITY TIMER			
	H	M	(H=HOUR, M=MINUTE)
A	0	0	FROM LAST MAX JACKPOT
B	0	0	FROM LAST CRT METER CLEAR
C	0	0	FROM LAST TROUBLE RESET
	H	M	(MALFUNCTION)
D	0	0	FROM LAST MECHA DOOR OPEN
E	0	0	FROM LAST DROP DOOR OPEN
F	0	0	FROM LAST POWER ON
G	0	0	FROM INITIATE
	H	M	(Replacement of the ROM)

(Maximum Hour/Minute that can be displayed is 9999H : 59M.)

## 2. Setup and Installation

### 2-1. Inspection

- Carefully remove the machine from its shipping crate.
- Inspect the machine's exterior for any signs of damage.

- \* Any scratches ?      Dents ?      Cracks ?
- \* Any broken controls ?
- \* Any broken glass panels or plastic parts ?
- \* Check the machine carefully and list any signs of damage.

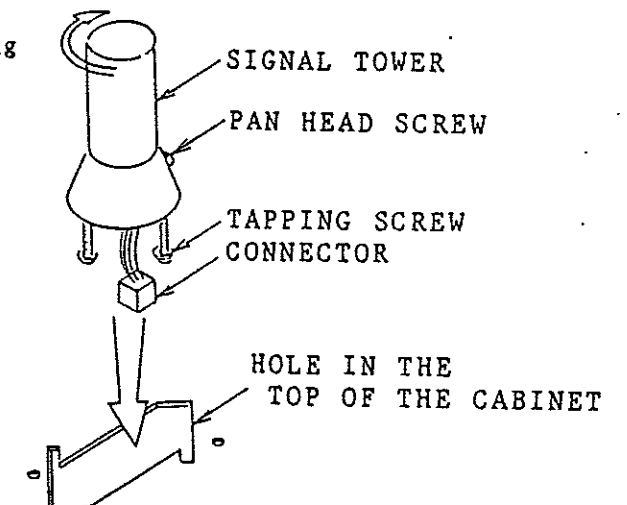
- Open the front door of the machine and inspect its interior for any signs of damage. Confirm that all the plugs in the connectors on the wiring harnesses are firmly seated. Each plug must be inserted into its corresponding connector properly, otherwise it cannot be plugged in correctly. If it cannot be easily inserted, do not apply too much force.

- Take the Signal Tower out of the cabinet, where it is stored, and attach it to the top of the machine, as illustrated.

- 1) Insert the Connector and 2 Tapping Screws (M3 X 16) through the Hole in the top of the cabinet.

- 2) Turn the Signal Tower clockwise until it is fixed firmly. (At this time, the Pan Head Screw should be located toward the rear position of the machine.)

- 3) Attach the Connector and fasten the 2 Tapping Screws from the inside of the cabinet.



- Confirm that all the Printed Circuit Boards (P.C.B.'s) are firmly seated in their connectors.

- Confirm that the main components are mounted properly.

Note) Handle this machine with care during transport.

1-3. Specifications

a. Power Source ..... 100 ~ 240 VAC ± 15%, 50/60Hz

\* Change the connection of the Transformer's taps when a different supply voltage is to be applied.

b. Power Consumption

Average: 150W  
Maximum: 250W

c. Operating Conditions

Temperature: 0 ~ 40° C (32 ~ 104° F)  
Humidity: 5% ~ 95%

d. Dimensions

Height: 1,116mm (45.71inches) (Maximum)  
Width: 466mm (18.35inches) ( " )  
Depth: 560mm (22.05inches) ( " )

e. Weight ..... Net: 93Kg. (204.97lbs)

f. Hopper Capacity

US 5¢: 2,800 coins  
US 25¢: 2,000 coins  
\$ Token: 600 coins

\* Specifications are subject to change without notice.

3-8. Door Open and Power Down

If the door is opened or power is turned Off and then On while the machine is in operation, the machine will respond as follows:

- a. The lower part of the Signal Tower will light up.
- b. The "Door Open Sound" will be generated, if the door has been opened.
- c. The display will be shown on the lower part of the Monitor as follows:

DISPLAY	SITUATION
POWER	Power has been turned Off and On.
M - DOOR	Machine Door has been opened.
DOOR - D	Drop Door has been opened.
M - DOOR - D	Machine Door and Drop Door have been opened.

- NOTE 1) This indication will disappear when the DEAL/DRAW (DEAL) button is pushed in the next game. (However, it will not disappear if the door is kept open.)
- 2) The game can be continued even if the door has been opened during the game.
  - 3) If the power has been turned Off during the game, the status of the game at the time when the power was turned Off, will reappear after the power has been turned On and the game may be continued.
  - 4) If the door is opened during READY-TO-PLAY Mode, TEST PLAY Mode will occur. In the TEST PLAY Mode, games can be played. However, the details will not be recorded and the games cannot be recalled as the Last Game.

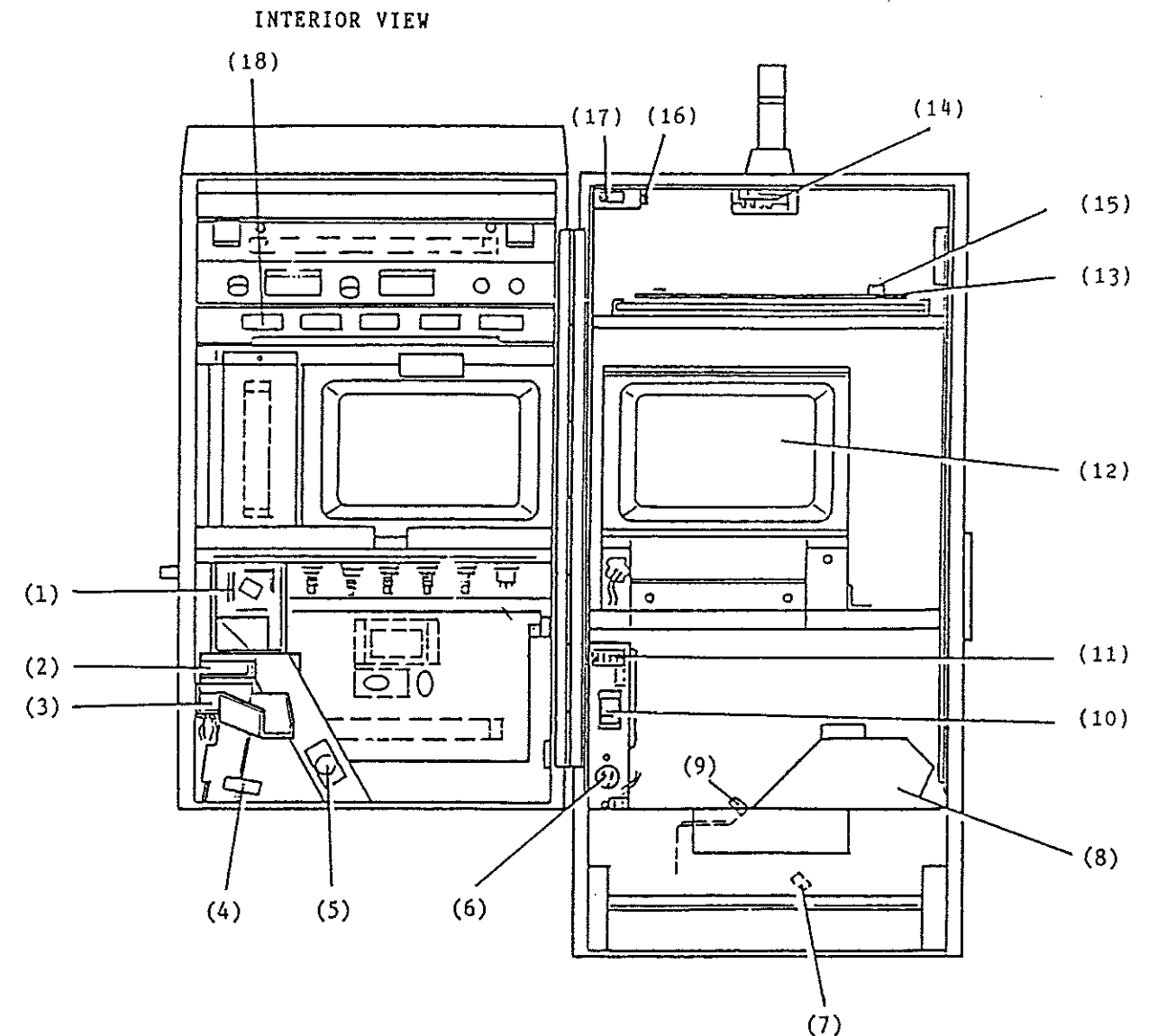
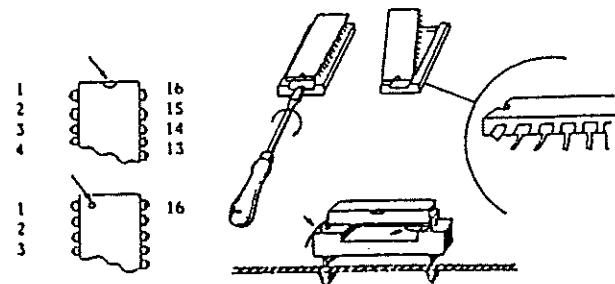
#### 4. Various Settings

Condition of games can be changed by replacing the ROM(s), or changing the status of the Dip Switches. They are located on the MAIN P.C. Board, as illustrated in the figure on the following page.

##### 4-1. ROM

When the ROM(s) is to be replaced, follow the procedures listed below:

- a) Turn Off the power.
- b) Insert a suitable screwdriver between the ROM and socket, NOT under the socket.
- c) Lift up one side of the ROM slowly until it is inclined a little to prevent it from jumping up.
- d) Detach it carefully and gently so as not to break or bend the pins of the ROM.
- e) When a new one is inserted, make sure that all pins are lined up and check that none are left out or folded under.
- f) Check that the endmarking on the ROM is on the correct side. Never insert it backwards. If the power is turned On with the ROM in an backward position, the ROM will fail.
- g) If the PROGRAM ROM(s) has been replaced, all data stored in the RAM's on the MAIN P.C.B. will be cleared. Therefore, all information shown in the CRT Monitor must be recorded, prior to removing the PROGRAM ROM.



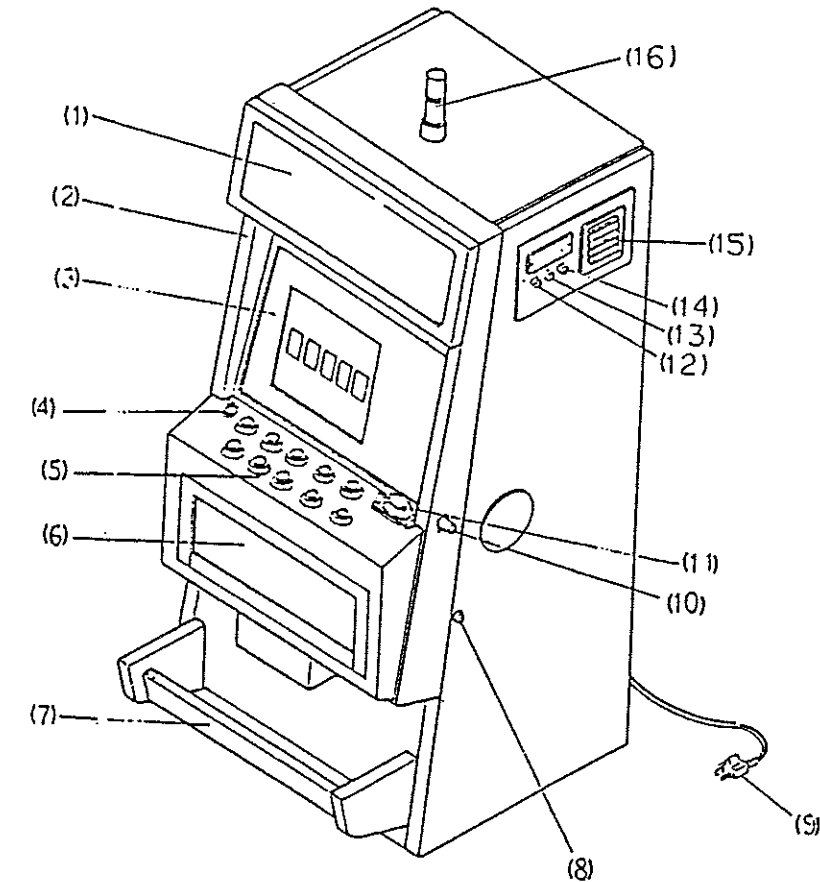
- (1) COIN ACCEPTOR
- (2) COIN-IN SENSORS
- (3) COIN DIVERTER
- (4) COIN-DROP SENSOR
- (5) SPEAKER
- (6) SERVICE OUTLET
- (7) HOPPER WEIGHT SWITCH
- (8) HOPPER
- (9) HOPPER OUT SWITCH

- (10) POWER SWITCH
- (11) DROP DOOR SWITCH TERMINAL
- (12) MONITOR
- (13) MAIN P.C.B.
- (14) POWER SUPPLY UNIT
- (15) VOLUME CONTROL
- (16) TEST SWITCH
- (17) DOOR SWITCH
- (18) MAGNETIC COUNTERS



1-2. Illustration (Intermediate Cabinet)

EXTERIOR VIEW



- (1) TOP DISPLAY GLASS

(2) MACHINE DOOR

(3) MONITOR GLASS

(4) CHANGE/SERVICE BUTTON

(5) GAME BUTTONS

(6) BOTTOM DISPLAY GLASS (BELLY GLASS)

(7) COIN TRAY

(8) DOOR LOCK
- (9) PLUG

(10) DOOR LEVER

(11) COIN ENTRY

(12) RESET KEY SWITCH

(13) CRT METER KEY SWITCH

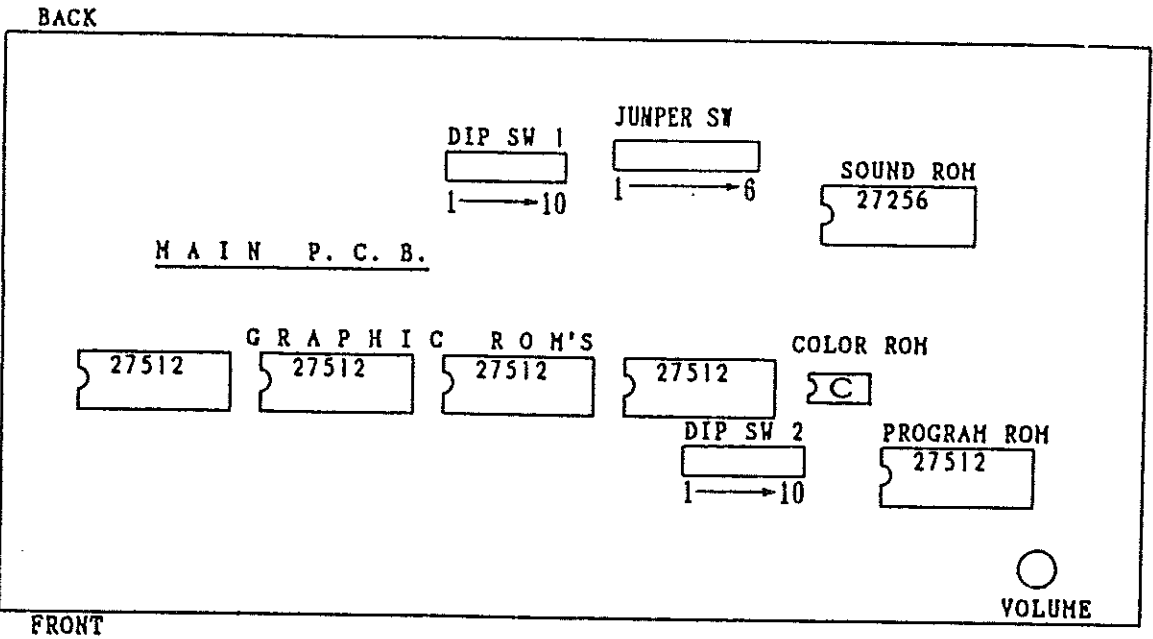
(14) LAST GAME KEY SWITCH

(15) FAN

(16) SIGNAL TOWER

4-2. Dip Switches

2 packages of Dip Switches are located on the MAIN P.C. Board, as illustrated. The condition of games can be changed by switching them On or Off.



\* DIP SW 1

	OFF	ON	
#1 MUSIC DURING THE GAME OVER	WITHOUT MUSIC	<input type="checkbox"/> 1	WITH MUSIC
#2 PROGRESSIVE	NON PROGRESSIVE	<input type="checkbox"/> 2	PROGRESSIVE
#3 MAX. HOPPER PAY	400 COINS	<input type="checkbox"/> 3	1,000 COINS
#4 CREDIT LIMIT (PER ONE GAME)	NO LIMIT	<input type="checkbox"/> 4	UP TO 1,200
#5 DOUBLE DOWN	W/O DOUBLE DOWN	<input type="checkbox"/> 5	With DOUBLE DOWN
#6 DOUBLE DOWN	ONLY ONCE	<input type="checkbox"/> 6	UP TO 10,000 COINS
#7 PLAY MODE	COIN	<input type="checkbox"/> 7	CREDIT
#8 PAY TABLE	With PAY TABLE	<input type="checkbox"/> 8	W/O PAY TABLE
#9 CARDS	REAL	<input type="checkbox"/> 9	LARGE INDEX
#10 BACKGROUND COLOR	BLUE	<input type="checkbox"/> 10	GREEN

#1 DISPLAY OF DENOMINATION

#2 - " -

#3 NOT USED

#4 ATTENDANT PAY

#5 DEAL SPEED

#6 NUMBER OF SELECTABLE CARDS

#7 MAX BET

#8 - " -

#9 NOT USED

#10 (SHOULD BE TURNED ON)

54

NON	50	ON	25c	\$1	5	25	100
OFF	OFF	1	ON	ON	OFF	ON	ON
OFF	ON	2	OFF	ON	OFF	OFF	ON
		3			ON	ON	ON
		4	ATTENDANT PAY ONLY				
		5	HIGH SPEED				
		6	5 CARDS				
		7	3	10			
		8	ON	ON			
		9	OFF	ON			
		10					

Note 1) #2 of DIP SW1: If the machine is not linked to a Progressive System, this switch must always be Off.

Note 2) #4 of DIP SW1: If this switch has been turned On in Credit Play Mode and 1,200 or more coins are won in a game, 400 (1,000) coins will be automatically paid out of the Hopper and the remainder will be paid by the attendant. If this switch has been turned Off, all coins won in a game will be counted up on the Credit Meter.

Note 3) #4 of DIP SW2: If the number of coins to be paid exceeds the maximum number which the Hopper can pay out and this switch has been turned Off, 400 (1,000) coins will be automatically paid out of the Hopper, and the remainder will be paid by the attendant. If it has been turned On, all the coins should be paid by the attendant.

Note 4) #5 of DIP SW2: The Deal Speed depends on the status of this switch and denomination used, as listed below.

DENOMINATION	STATUS OF DIP SW #5	DEAL SPEED	STATUS OF DIP SW #5	DEAL SPEED
NON	ON	1.2S.	OFF	1.6S.
5c	ON	0.8S.	OFF	1.2S.
25c	ON	1.2S.	OFF	1.6S.
\$1	ON	1.6S.	OFF	2.0S.

Note 5) The power should be turned Off before the status of the Dip Switches is changed. After the change has been completed, turn the power On, and the following message will be displayed: DIP SW OR JUMPER SETTING IS CHANGED /TURN ON-OFF RESET S/W TO USE NEW SETTINGS GAME DATA EXCEPT WITH METERS IS CLEARED.

After that, turn the RESET key switch On-Off. New game feature is now available. (The message will not be displayed if the status of some Dip Switches has been changed. In this case, turn the power Off-On and the new game feature will be available.)

Please advise before the status of #2, 3, 5, 6, 7, 8 of DIP SW 1 or #1, 2, 4, 6, 7, 8 of DIP SW 2 is changed because the picture glass should be replaced and/or other modification will be required.

## 1. General Information

### 1-1. Introduction

This manual covers the setup, operation, and maintenance of the SIGMA High Resolution Video "Between" Machine.

SIGMA coin-operated gaming machines are the result of our state of the art technology. Site tests had been conducted in SIGMA's gaming arcades in Japan before offering our machines to overseas markets. Consequently, the machines can be operated virtually trouble free.

Remarkable features of the machine:

\* SELF-TEST - SELF-TEST will be automatically conducted. Details of troubles detected as well as countermeasures to be taken will be displayed. Troubles can be eliminated before they become critical.

\* MALFUNCTION CODES - Any malfunction detected during a game will be automatically displayed as one of the MALFUNCTION CODES.

\* MAGNETIC COUNTERS - Details of games will be recorded on the tamperproof MAGNETIC COUNTERS, which can be read without having to open the door.

\* CRT DISPLAY METER - Operational Data will be recorded on the CRT DISPLAY METER.

\* I/O TESTS - Some parts (such as Lamps, Game Buttons, Hopper, and so forth) which can be the cause of most troubles, can be checked by the I/O TESTS.

\* MALFUNCTION METER/SECURITY TIMER: Number of times each malfunction has occurred will be displayed on the MALFUNCTION METER. Time passed since the last door open, jackpot etc., will be displayed on the SECURITY TIMER.

\* DIP SWITCHES - Various conditions of games are available by switching the DIP SWITCHES On or Off.

\* MEMORY BACK-UP SYSTEM - Any loss of data will be prevented by the MEMORY BACK-UP SYSTEM.

\* ANTI-CHEATING FEATURES WITH AUTOMATIC SHUTDOWN (WHEN ATTEMPTED CHEATING IS DETECTED)

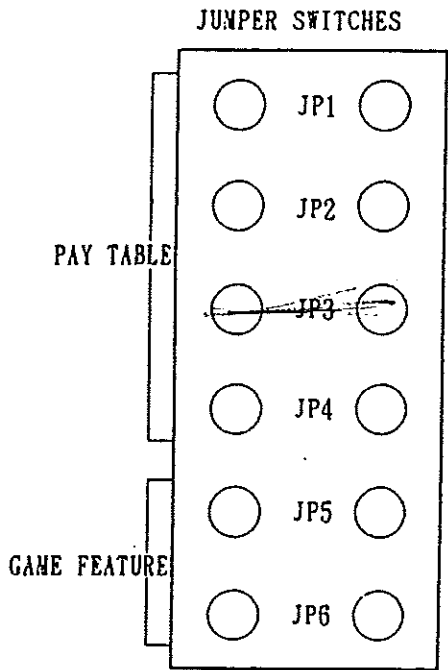
4-3. Jumper Switches

The 6 Jumper Switches are located on the Main P.C. Board. Type of Pay Table (Payout Ratio) used and availability of "Flush Odds" and "Raise Bet" can be determined by switching them On or Off.

a. Pay Table (Payout Ratio)

10 kinds of the "PAY TABLE" are available, as listed below.

JP1	JP2	JP3	JP4	PAY TABLE NO.
OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	2
OFF	ON	OFF	OFF	3
OFF	OFF	ON	OFF	4
OFF	OFF	OFF	ON	5
ON	ON	OFF	OFF	6
OFF	ON	ON	OFF	7
OFF	OFF	ON	ON	8
ON	ON	ON	OFF	9
OFF	ON	ON	ON	10



b. Flush Odds and Raise Bet

The Flush Odds and Raise Bet are available.

JP5	OFF	WITHOUT FLUSH ODDS
	ON	WITH FLUSH ODDS
JP6	OFF	WITHOUT RAISE BET
	ON	WITH RAISE BET *

\* 1 to 11 card spread with flush pays double

Note 1) With the Flush Odds, any win of "1-11 Card Spread with Flush" pays double.

Note 2) With the Raise Bet, bet can be raised up to the amount of the original bet, if the first two (2) cards are 1-11 Spread.

Note 3) The power should be turned Off before the status of the Jumper Switches is changed. After the change has been completed, turn the power On and turn the RESET key switch On-Off. New game feature is now available.

Standard Game Feature is "without Flush Odds" and "with Raise Bet". Please advise before the status of the Jumper Switches #5 and/or #6 is changed because the Top Glass should be replaced.





113712N

# SIGMA BETWEEN HR - IM

(SIGMA HIGH RESOLUTION VIDEO MACHINE)

MODEL NO. I2220

## OPERATION MANUAL

VERSION-00

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