SIGMA

THE DERBY MARK-VI
V8
8 HORSE SPEC.

Operation Manual

CODE NO. 8800-00182

INTRODUCTION

This OPERATION MANUAL is intended for attendants, and provides the important information about Sigma Horse Racing Machine, THE DERBY MARK-VI V8, focusing on the area where <u>the access can be gained without a door key or a tool.</u>

It is strongly recommended to thoroughly read and understand this manual. Please always keep this manual at hand, so that you can quickly refer to it whenever necessary.

To turn ON the machine, to set the software options that affect the machine's operation, and/or to perform the diagnostic test, call qaulified maintenance personnel.

<div style="border:1px solid black">

HANDLE THIS MACHINE SAFELY AND CORRECTLY

</div>

SAFETY INSTRUCTIONS

1. Definition of Safety Words

The following safety words (DANGER, WARNING, and CAUTION) are used in this manual to indicate hazard levels. Please understand each meaning to handle the machine safely.

DANGER

It warns of the immediate hazards which WILL result in severe personnel injury or death.

WARNING

It warns of the hazards or unsafe practices which COULD result in severe personal injury or death.

CAUTION

It warns of the hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

CHECK
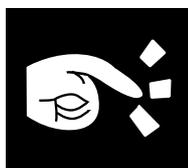
It indicates a check or reference item for preventing hazards and malfunctions.

2. Specifications

- Exclusive power source of 30A must be necessary.
- Rated voltage:
    - a) Europe   230VAC, 50Hz
    - b) Korea   220VAC, 60Hz
    - b) Other areas   220/230/240VAC, 50/60Hz
                         110/120VAC, 50/60Hz
- Power cable: Three-core cable
- Temperature: 5 to 35 degrees C
- Humidity: 30 to 60%, Free from dew condensation

⚠ WARNING !

To prevent an accident or a fire;

- Do not install this machine on unstable floor (ex. slope or difference in level).
- Keep this machine away from the direct ray of the sun.
- Keep this machine away from a dusty place.
- Keep this machine away from water.
- Keep this machine away from disaster preventive facilities
  (ex. emergency exit, emergency stairs, fire hydrant, fire extinguisher).
- Install this machine on well-constructed floor.
- Do not install this machine outdoors.
- Keep this machine away from vibration.
- Keep this machine away from dangerous articles.

3. Handling of Monitors

Although the given monitors are protected from the danger of electric shock, NEVER access into the monitors.

⚠️ **DANGER !**

HIGH VOLTAGE

Risk of Electric Shock

NEVER access into the monitors.
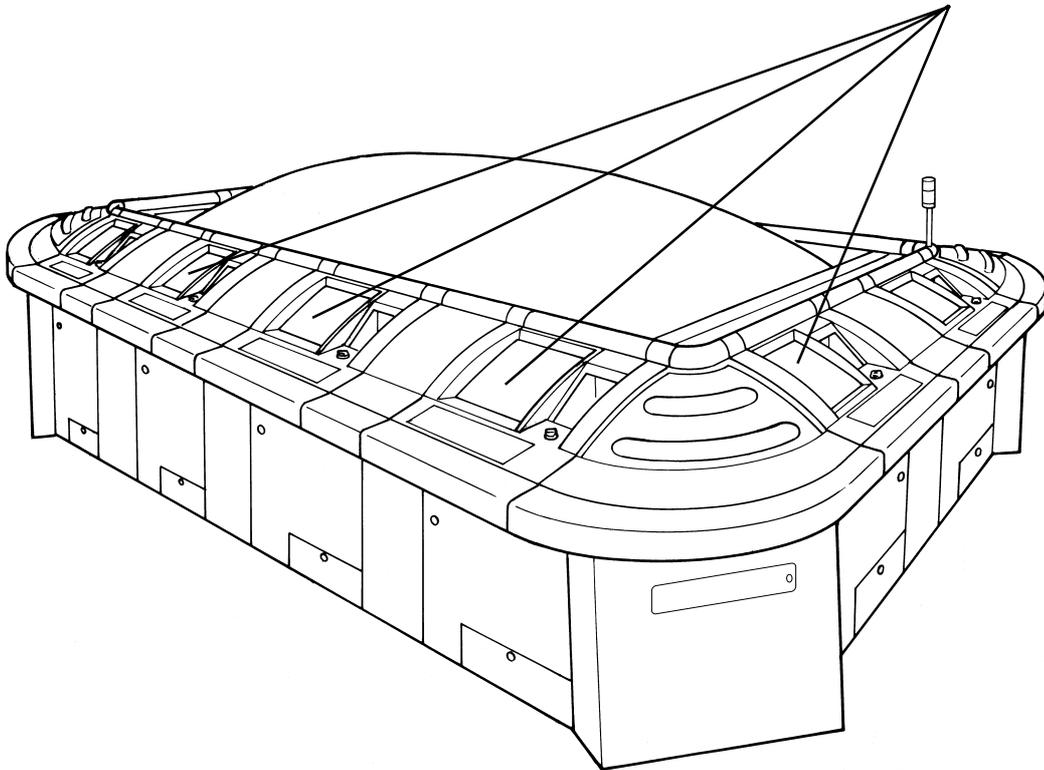
4. Grounding

Be sure to GROUND this machine to prevent a current leak.

⚠ **WARNING !**

Risk of Electric Shock.

SIGMA makes no warranty as to the accidents (including failures) caused by improper grounding.

5. Others

Please observe the following for your safety.

⚠ **WARNING !**

NEVER retrofit the machine. Retrofitting the machine could cause an accident or a failure.

SIGMA makes no warranty as to the accidents (including failures) caused by retrofit.

- Only qualified personnel can assemble, install, maintain, inspect, and troubleshoot the machine.

- Do not mount or sit on the machine. Or, do not put a heavy object on the machine. The dented machine could cause a trouble.

- As soon as smoke, a stink and/or an unknown trouble is detected, turn off the POWER switch and the power source breakers.

- Never use chemical duster, thinner, benzine, or alcohol for cleaning the machine. They will damage the surface of the machine. Diluted synthetic detergent can be used if necessary, but completely wipe it up with dry cloth thereafter.

- Use this machine in commercial area. The use in other area is prohibited.

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1. MAJOR COMPONENTS

1.1 Configuration

Track unit

Signal tower   Main control unit

Station unit

Bill acceptor unit

Volume control unit

Top View

Main control unit

| # 9 | # 10 | # 11 | # 12 |

| # 8 | | | # 1 |

| # 7 | | | # 2 |

| # 6 | # 5 | # 4 | # 3 |

Station unit

Bill acceptor unit

Volume control unit
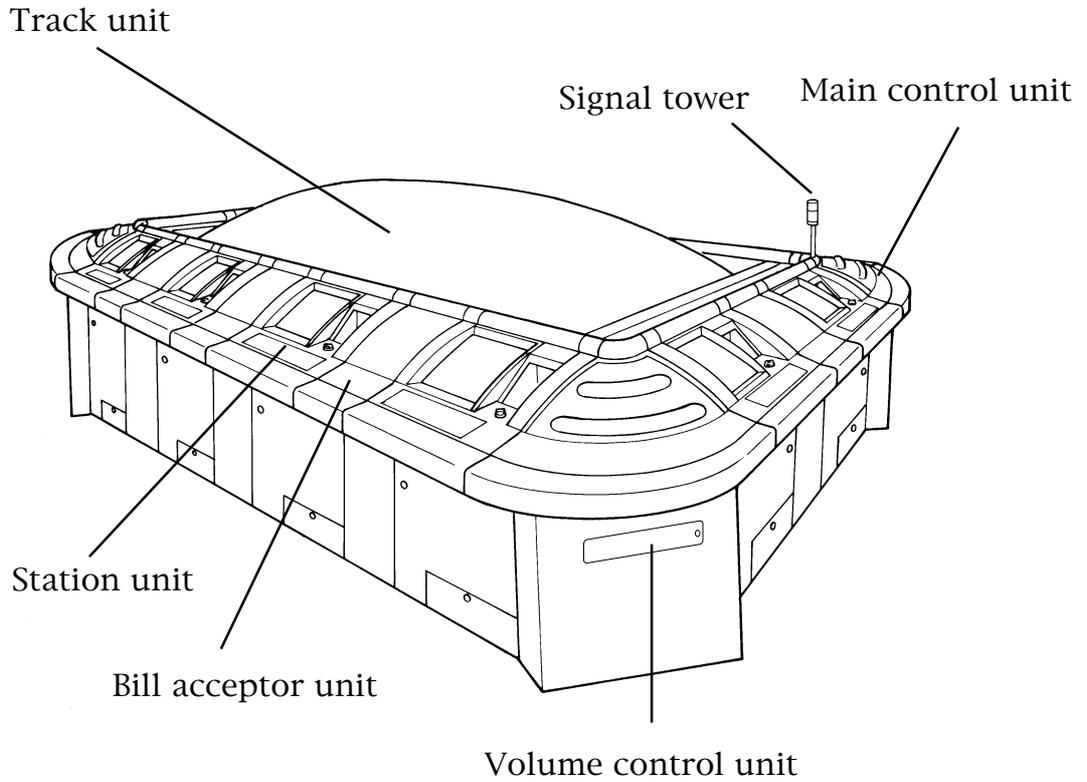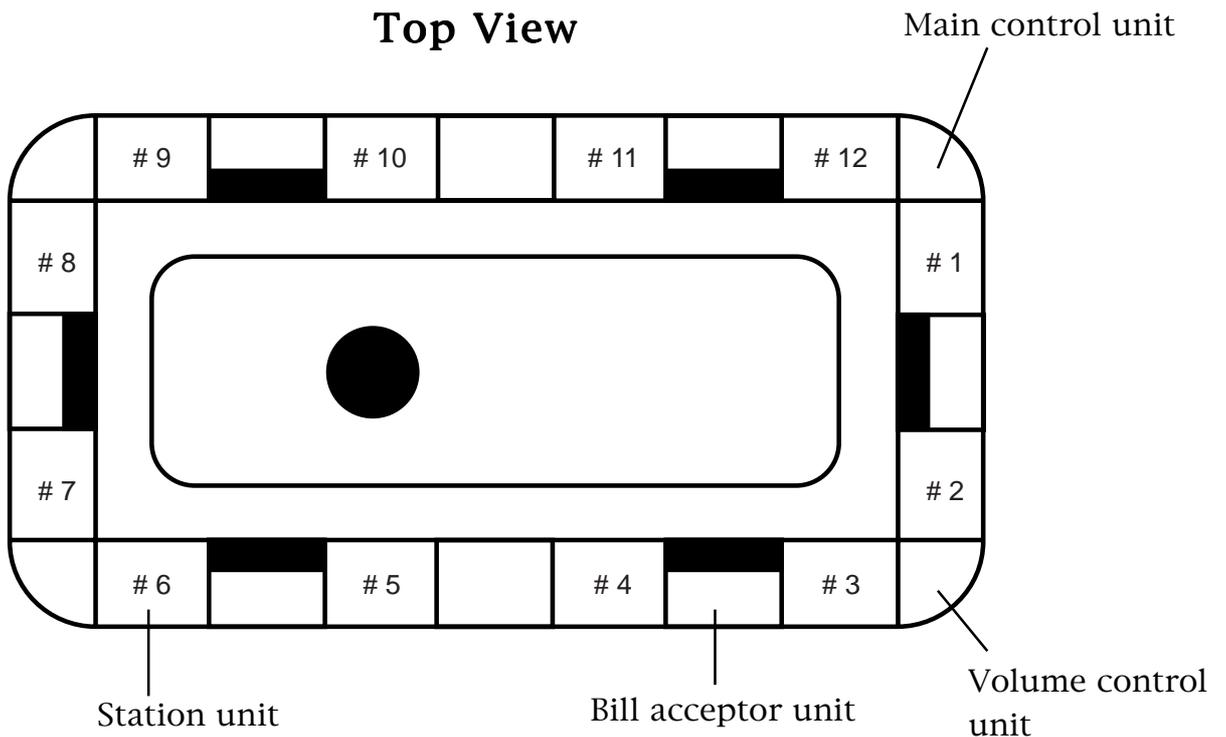
1.2 Track Unit
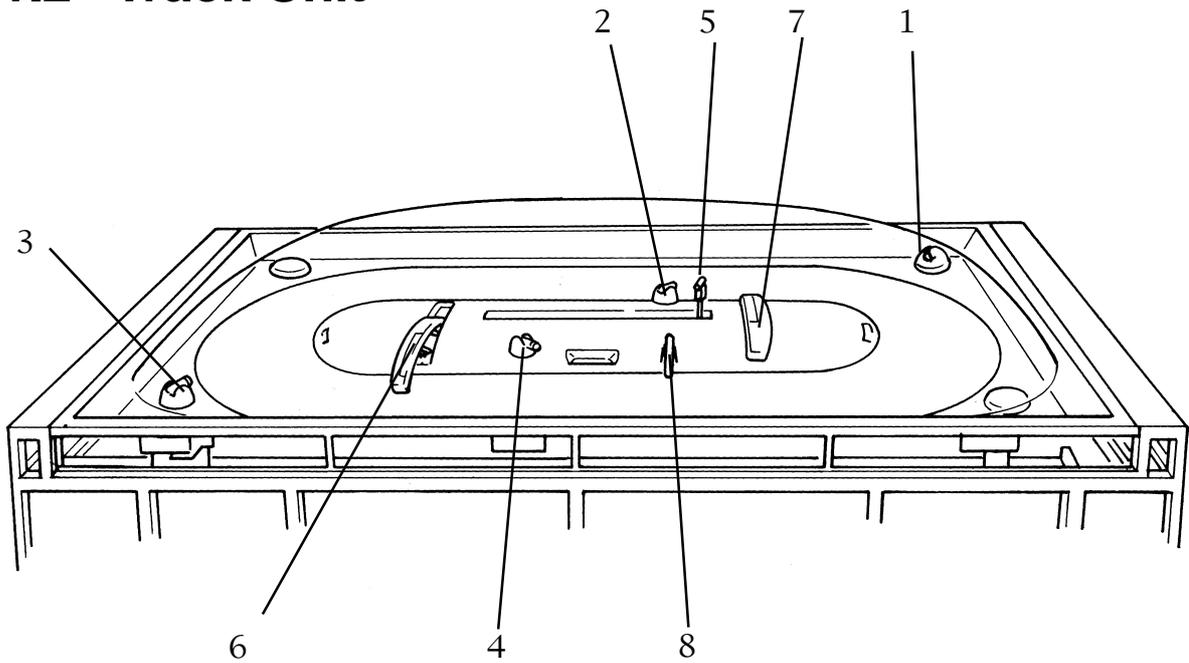
1. CCD Camera #1   2.   CCD Camera #2   3.   CCD Camera #3
4. CCD Camera #4   5.   CCD Camera # 5
6. Starting gate for long-distance race
7. Starting gate for short-distance race
8. Goal Gate

1.3 Main Control Unit
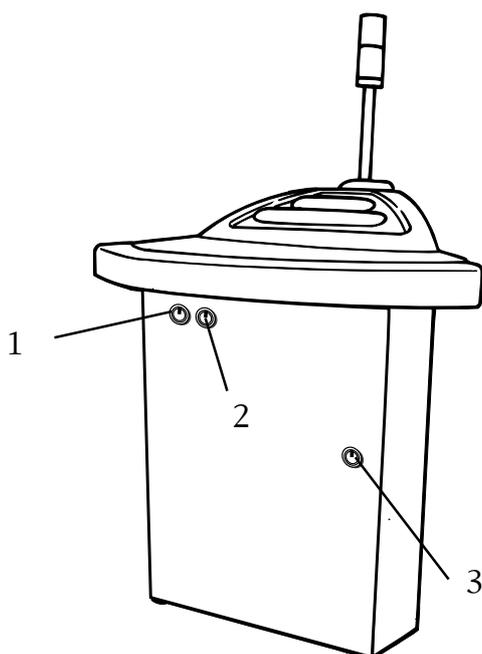
1.   RESET key switch
2.   METER key switch
3.   Door lock

1.4 Station Unit
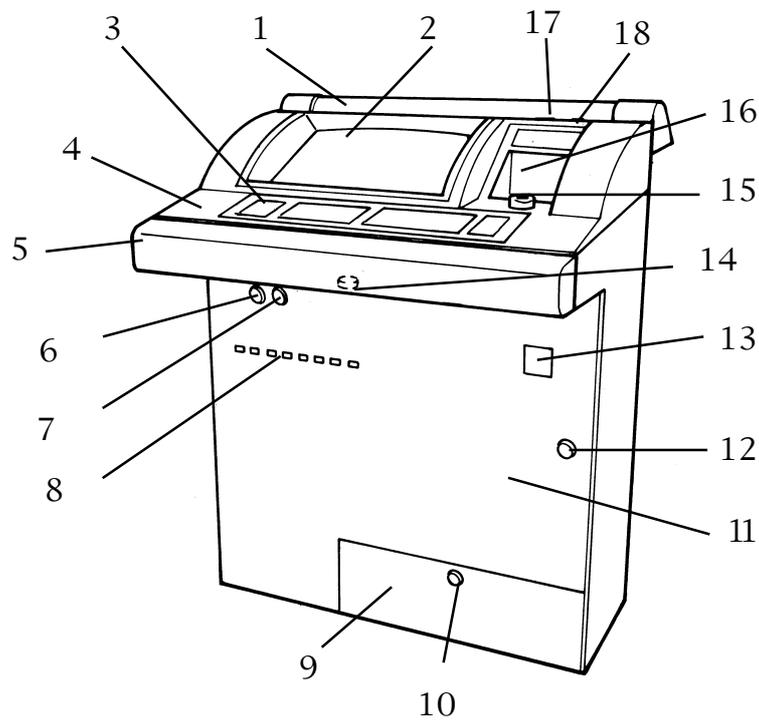
1. WIN lamp	2. Monitor	3. Betting buttons
4. Upper door	5. Arm rest	6. RESET key switch
7. METER key switch	8. Mechanical meters	9. Cash box
10. Cash box door lock	11. Front door	12. Front door lock
13. Coin return tray	14. Upper door lock	15. Coin entry
16. Coin cup	17. CALL ATTENDANT button	
18. CREDIT-UP key switch		

1.5 Bill Acceptor Unit
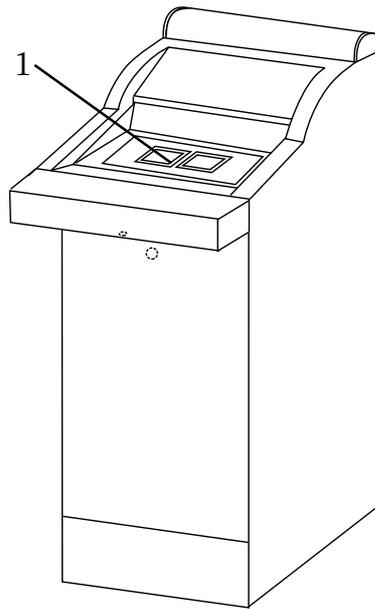
1. Bill entry

1.6 Projector Unit (Upright Unit)

1. Speaker   2.   Projector screen

2. HOW TO PLAY

2.1   Outline of Game

This is a horse racing game performed in the following flow.

Betting time: You can bet during this time.
The betting time is settable from 50, 60, 70, 80, and 90 seconds. (Default setting: 70 seconds)
For how to set, refer to our Maintenance Manual, Paragraph 3.4.2.

Race time: The horses race during this time.
The time will be set according to the race distance.

Winning time: The race result is displayed on the projector screen. When you make a good hit, the "Winner" is displayed on the screen, and you can get the same number of credits as "ODDS X BET count". In case of big hit, the WIN lamp blinks in red with a fanfare.

2.2   Betting Methods

You can bet in the following two methods.

WIN: Bet on the horse you expect to win.

<Example>   If you bet on Horse No.1, you make a good hit when the Horse No. 1 wins.

QUINELLA: Bet on the combination of two horses you expect to win and place.

<Example>   If you bet on Horse Nos. 1 and 2, you make a good hit when Horse Nos. 1 and 2 wins and places either way.

2.3   Game Buttons
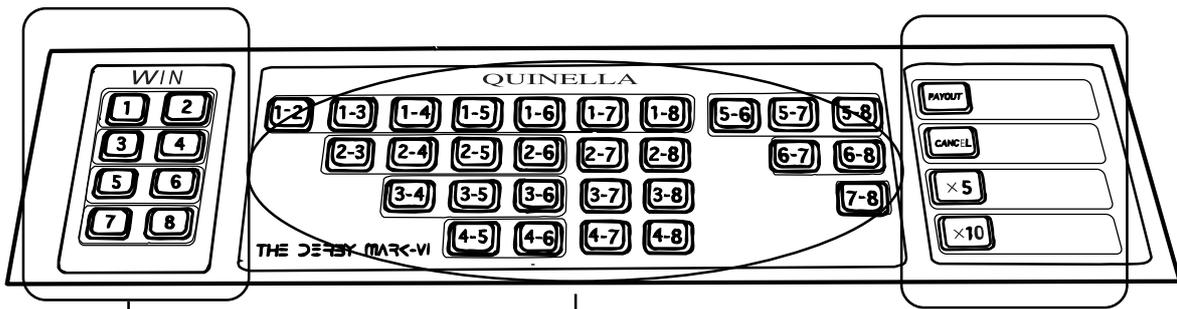
Betting Buttons for WIN

Betting Buttons for QUINELLA

Betting Buttons for WIN:
> Used to bet on the horse you expect to win.

Betting Buttons for QUINELLA:
> Used to bet on the combination of the two horses you expect to win and place.

PAYOUT button: Used to convert your credits to coins from the hopper. (The default setting of the maximum payout (HOPPER MAX PAY) is 500 coins.)

NOTE
If the INSTALLATION PAY (software setting) is ON, pressing the PAYOUT button again aborts the payout operation.

CANCEL button: Used to cancel your bets.
Every time pressing this button, the last bet is canceled up to 63 bets.

X 5 button: When pressed, you can place 5 bets by pressing a betting button once.

X 10 button: When pressed, you can place 10 bets by pressing a betting button once.

2.4   Game Screen

Race name and distance

BET TIME indicator

TOTAL wager meter

WIN meter

PAID meter

Denomination/INSERT COIN indication

CREDIT meter

CR. PAID meter

INSERT BILL indication

Race name and distance:
Displays the race name and distance.

BET TIME indicator:
Displays the available betting time.

TOTAL wager meter:
Displays the total credits you bet in the race.

WIN meter: Displays the credits you won in the race.

PAID meter: Displays the credits transfered from the WIN meter to the CREDIT meter.

Denomination/INSERT COINS indication:
Displayed until the race ends.

CREDIT: Indicates the number of credits you have in the CREDIT meter.

CR.PAID: Indicates the number of credits paid out from the hopper.

INSERT BILL: Displayed when a bill is acceptable.

2.4.1　　Information about WIN

The following information is for your betting with WIN.

No.	HORSE NAME	WIN ODDS	BET	SPEED POWER	LAST RACE	No.	HORSE NAME	WIN ODDS	BET	SPEED POWER	LAST RACE
1	DYNAMITE	10	0		-5-5	5	PIRATE BIRD	44	9		-351
2	BLACK PRINCE	3	0		-112	6	HIGHWAY STAR	32	0		----
3	TODMAN	16	0		---4	7	RAJAH	6	0		--4-
4	POPEYE	4	1		-423	8	BILLABONG	7	1		-23-

WIN ODDS:　　Displays the odds.

BET:　　　　Displays the credits you bet on each horse.

SPEED AND POWER:

> Displays the speed and power of each horse. The longer red and purple bars mean higher speed and power respectively. Generally, higher speed is advantageous to short-distance race, and higher power to long-distance race.   A horse with high value in both is a fine horse.

LAST RACE:

> Displays the performance of past 4 races in time series. The finishing order from the 1st to 5th places is displayed in a digit, and from the 6th place in the symbol of "-".

2.4.2   Information about QUINELLA

The following information is for your betting with QUINELLA.

1-2	1-3	1-4	1-5	1-6	1-7	1-8	5-6	5-7	5-8
13	61	18	176	125	27	31	529	107	125

2-3	2-4	2-5	2-6	2-7	2-8	6-7	6-8
18	6	50	36	9	10	76	89

THE DERBY
MARK VI

3-4	3-5	3-6	3-7	3-8	7-8
25	257	180	37	44	20

4-5	4-6	4-7	4-8
72	50	12	14

Horse combination   Credits bet

1-5

176 ——— Odds

2.5   Projector Screen during Betting Time

During the betting time, the projector screen shows the following three kinds of information in order.

Horse No.   Race No. and name   Race distance

Race No. and name:
>   Displays the current race number and name.

Race distance: Displays the distance of the race (1600/2400m).

Horse No: Displays the horse numbers.

HORSE NAME: Displays the horse names.

WIN ODDS: Displays the odds for WIN.

SPEED and POWER:
>   Displays the speed and power of each horse. The longer red and blue bars mean higher speed and power respectively. Generally, higher speed is advantageous to short-distance race, and higher power to long-distance race. A horse with high value in both is a fine horse.

QUINELLA TIP: Displays the favorites and the long shots of QUINELLA.

Then, the results of the last 10 games are displayed.

Finally, the information of each horse is displayed.

2.6   Starting Game

Insert coins or bills into the COIN or BILL entry on your station unit. Check that your credit meter reads the same valued credits as your inserted coins/ bills.

> ### *NOTE*
> *An improper coin will be back to the coin return tray under the arm rest.*

2.7   Betting with WIN

Bet on the horse you expect to win.

Eight buttons from 1 to 8 are provided for WIN. These buttons are corresponding to the horse numbers. You can bet in the following procedure when you have at least 1 credit.

Procedure

1.   When the betting time has come, the buttons light up.

2.   Choose the horse you expect to win, and press the corresponding button to bet on.

      To place 5 bets on your choice, press the X 5 button before pressing the corresponding button.

      To place 10 bets, use the X 10 button.

3.   Repeat the step No. 2 for multiple betting.

> ### *NOTE*
> *If you try to bet beyond the preset MAX BET, the buttons turn to red to prohibit the betting.*
>
> *Use the CANCEL button to cancel your bet(s).*
>
> *By pressing the CANCEL button repeatedly, up to your last 63 bets can be canceled.*

4.   When the betting time ends, the message of "No more bet" is displayed.

2.8   Betting with QUINELLA

Bet on the combination of the two horses you expect to win and place by pressing the corresponding button.

> ### *NOTE*
>
> *To place 5 bets on your choice, press the X 5 button before pressing the corresponding button.*
>
> *To place 10 bets, use the X 10 button.*
>
> *If you try to bet beyond the preset MAX BET, the buttons turn to red to prohibit the betting.*
>
> *Use the CANCEL button to cancel your bet(s). By pressing the CANCEL button repeatedly, up to your last 63 bets can be canceled.*

2.9   Real Time Information during Race Time

Besides on the projector screen, the real time race order is displayed on the lower right of your game screen.

2.10   After Race (Winnng Time)

In the winnng time, the race result is displayed on the projector screen, and your own results at the lower middle of your game screen. When you make a good hit, the pop-up message of "Winner" appears.

The total credits you won in this race are indicated on the WIN meter, then immediately transferred to the CREDIT meter through the PAID meter.

If your credit meter hits the preset CREDIT UP LIMIT (the default setting is 100,000), your WIN lamp blinks in red to call an attendant. You cannot go back to the game until the win is paid by hand.

2.11   Calling Attendant for Help

When you need the help of an attendant, press the CALL ATTENDANT button. Your WIN lamp blinks in red, and the middle tier of the signal tower (lower tier in case of 2 tier-type) lights up to call an attendant.

2.12   Canceling Credits by Attendant

When you want to leave and have lots of credits, press the CALL ATTENDANT button to cancel your credits by hand.

> *NOTE*
> *This function is available only when the software setting of CREDIT CLEAR is ON.*

3 ATTENDANT'S SERVICE FOR ASSISTING GAME

This section explains the attendant's service that will be necessary during the operating time.

3.1   Attendant Pay

3.1.1   Attendant pay against HOPPER MAX PAY

When pressing the PAYOUT button in the state where the reading of the CREDIT meter exceeds the preset HOPPER MAX PAY (software setting -- default: 500 coins), the WIN lamp of the station unit flashes in red to call an attendant.   Perform the following hand pay accoring to your setting of ATTENDANT PAY TYPE (software setting). The player cannot resume the game before this hand pay is finished.   For the setting of HOPPER MAX PAY and ATTENDANT PAY TYPE, refer to our Maintenance Manual, Paragraphs 5.1.3 and 5.1.8.

> **When your setting is BALANCE PAY;**
>
> Because the hopper pays the same number of coins as the HOPPER MAX PAY, hand-pay the balance after "HOPPER MAX PAY".
>
> **When your setting is ALL ATTENDANT PAY**
>
> Because the hopper pays no coin, hand-pay for the entire credits.
>
> **ALL ATTENDANT PAY/RETURN TO GAME**
>
> This is same as ALL ATTENDANT PAY.
> However, calling an attendant can be cancelled by pressing the PAYOUT button again to continue the game (the WIN lamp turns OFF).

Procedure
1.   Jot down the count of the credit meter.

2.   Turn ON the RESET keyswitch to clear the credit meter to zero.

3. Turn OFF the RESET keyswitch to go back to the game mode.

4. Pay the same valued money as the above count to the player.

3.1.2 Attendant pay against CREDIT UP LIMIT

When the credit meter hits the preset CREDIT UP LIMIT, use the same procedure as in Paragraph 3.1.1 to clear the meter to zero.

3.1.3 Attendant pay for canceling accumulated credits

When a player wants to leave and has lots of credits, an attendant may be called by the player for canceling the credits. In such case, use the same procedure as in Paragraph 3.1.1.

> #### *NOTE*
> *This function can be used only when the software setting of CREDIT CLEAR is ON. Refer to our Maintenance Manual, Paragraph 5.1.9.*

3.2 Clearing RAM Error

If a RAM error occurs on a station unit, the error message window pops up on the game screen with the message of **"DATA IN STOCK IS WRONG"** highlighted.

Call qualified maintenance personnel to clear the RAM error by turning ON and OFF the RESET key switch. In such case, the software setting returns to the factory setting (default values). Refer to Paragraph 5.1.1 for the factory setting.

3.3　Manually Posting Credits (Credit-Up)

Manually posting credits is available only when the station unit DIP switch post #1 has been set to ON by qualifed personnel.

⚠ CAUTION !

Changing the DIP switch setting affects the machine operation. Only qualified personnel should change the setting.

Procedure

1. Check that no bet or error exists on the station unit.

2. Turn ON the CREDIT-UP key switch just beside the CALL ATTENDANT button to display the following pop-up screen.

```
    CREDIT UP
        0 CREDITS
   1-4   : 500 UP
   1-5   : 100 UP
   1-6   :  10 UP
   CANCEL : CANCEL
   KEY OFF: EXIT
```
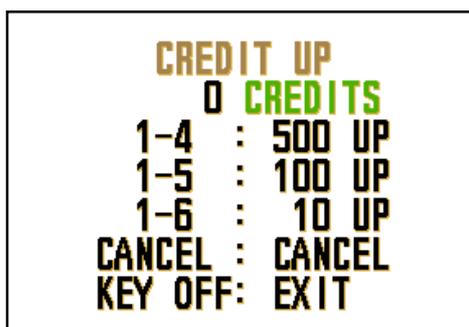
3. Key-in the same valued credits as the player-paid bill(s) by pressing the 1-4 button for 500 credits increments, the 1-5 button for 100 credits increments, and the 1-6 button for 10 credits increments.

4. Turn OFF the CREDIT UP key switch to enter the credits and to go back to the game mode. To cancel it, press the CANCEL button.

5. The entered number of credits will be posted to the credit meter as soon as the game mode is back.

3.4　WIN Light of Station Unit

The WIN light informs you about the status of the station unit.
Use this WIN light in conjunction with the signal tower on the main control unit described in Paragraph 3.5.

Event	WIN Light
1. An error occurred.	Flashes in red and blue.
2. An "OUT OF ORDER" error (ex. DOOR OPEN) occurred.	Flashes in red.
3. The CALL ATTENDANT button was pressed.	Flashes in red.
4. The PAYOUT button was pressed.	Flashes in red.
5. An attendant pay occurred.	Flashes in red.

3.5   Signal Tower on Main Control Unit

The signal tower on the main control unit inform you about the whole machine status during the operation.

Use this signal tower in conjunction with the WIN light on each station unit described in Paragraph 3.4.

Event	Signal Tower
1. An error occurred on a station unit.	The upper tier flashes.
2. An error occurred on the track unit.	The upper tier flashes.
3. The front door of the main control unit is open.	The middle tier (or lower tier in case of 2-tier type) flashes.
4. The front/top door of a station unit is open.	The middle tier (or lower tier in case of 2-tier type) flashes.
5. The CALL ATTENDANT button was pressed on a station unit.	The middle tier (or lower tier in case of 2-tier type) lights up.

4. ATTENDANT MENU OF STATION UNIT

ATTENDANT MENU can be invoked on the monitor screen of each station unit to control the operatrion.

4.1   Calling Main Menu (Main Routine)

Call the Main Menu in the following procedure.

Procedure

1.   Check that there is no pending bet or error on the station unit.

2.   Turn ON and OFF the METER key switch to display the ATTENDANT MENU (Main Menu).
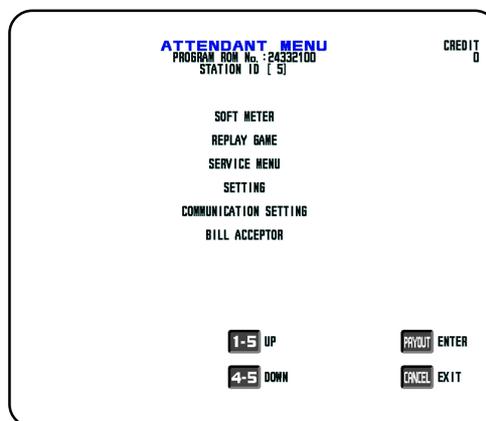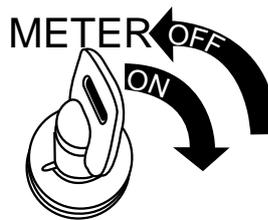
4.2   Calling Sub-Routines

Call the sub-routines by using the following buttons.
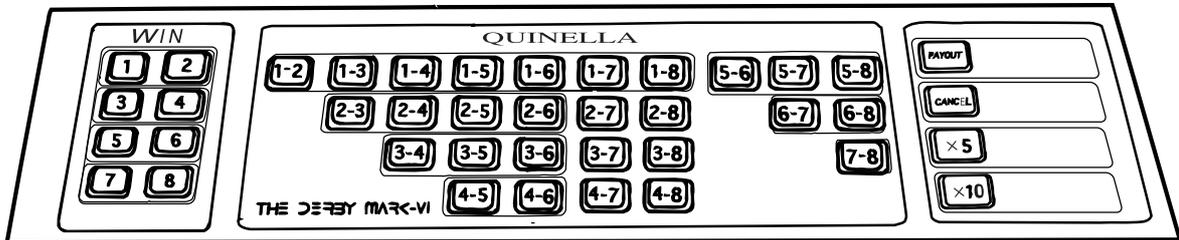
PAYOUT button: Used to enter your choice/setting

CANCEL button: Used to exit from currently displayed screen.

1-5 button: Used to move the cursor up.

4-5 button: Used to move the cursor dwon.

2-4 button: Used to move the cursor left.

2-6 button: Used to move the cursor right.

1-6 button: Used only in SOUND TEST & VOLUME SETTING mode to move the cursor up.

4-6 button: Used only in SOUND TEST & VOLUME SETTING mode to move the cursor down.

Tree Structure of Station Unit

LEVEL 1	LEVEL 2	LEVEL 3

SOFT METER

GENERAL STATISTICS
- BET
- WON
- ATTENDANT PAY
- DROP
- COIN IN
- COIN OUT
- PLAY
- ERROR TIMES
- POWER UP
- GPSL POWER UP
- GPSL DOOR OPEN

GENERAL STATION METER
- BET
- WON
- H/G%
- P/O%
- PLAY TIMES
- WON TIMES
- HIT%
- COIN IN
- COIN OUT
- DROP COIN IN
- HOPPER REFILL COIN IN
- ATTENDANT PAY
- CREDIT UP IN
- BILL TO CREDIT
- BILL IN +DROP IN
- CREDIT OUT
- HOPPER LEVEL

ATTENDANT/SECURITY METER
- ATTENDANT METER
  - ATTENDANT PAY COUNT
  - ATTENDANT PAY TIMES
- SECURITY METER
  - POWER DOWN TIMES
  - HOPPER RUNNING TIMES
  - HOPPER REFILL TIMES
  - HOPPER TEST COIN OUT
  - HOPPER MALFUNCTION COIN OUT
- DOOR METER
  - MACHINE FRONT DOOR OPEN TIMES
  - MACHINE UPPER DOOR OPEN TIMES
  - CASH BOX DOOR OPEN TIMES
  - LOGIC ACCESS DOOR OPEN TIMES
  - BILL VALID TOP/FRONT DOOR OPEN TIMES
  - TAKE OFF BILL STACKER TIMES

LEVEL 1   LEVEL 2   LEVEL 3

ERROR METER
- ERROR RESET TIMES
- HOPPER RUNAWAY ERROR TIMES
- HOPPER OVER PAY ERROR TIMES
- COIN IN REVERSE ERROR TIMES (YO-YO)
- COIN IN TIME OUT ERROR TIMES
- DROP COIN IN TIME OUT ERROR TIMES
- HOPPER EMPTY ERROR TIMES
- HOPPER JAM ERROR TIMES
- COIN IN DIVERTER ERROR TIMES
- MECH METER WIRE CUT ERROR TIMES
- BATTERY LOW ERROR TIMES
- RAM ERROR TIMES (DATA IN STOCK ERROR)
- ROM ERROR TIMES
- BILL VALID ERROR TIMES
- BILL VALID STACKER FULL TIMES
- TAKE OFF HOPPER TIMES
- CC-16 COIN PULSE ERROR TIMES
- CC-16 COIN PULSE TIME OUT ERROR TIMES
- BET PANEL ERROR TIMES
- NETWORK ERROR TIMES
- GAME SEQUENCE ERROR TIMES

BET TYPE METER — BET TYPE
- WIN
- QUINELLA

CLEAR PERIOD METER

REPLAY GAME
- LAST GAME 1 — GAME NO, HIT NO, CREDIT, WAGER, WIN, PAID,......
- LAST GAME 2 — GAME NO, HIT NO, CREDIT, WAGER, WIN, PAID,......
- LAST GAME 3 — GAME NO, HIT NO, CREDIT, WAGER, WIN, PAID,......
- LAST GAME 4 — GAME NO, HIT NO, CREDIT, WAGER, WIN, PAID,......
- LAST GAME 5 — GAME NO, HIT NO, CREDIT, WAGER, WIN, PAID,......

SERVICE MENU
- COLOUR BARS
- CROSS HATCH
- SWITCH/LIGHT TEST
- BET PANEL TEST
- SOUND TEST & VOLUME SETTING
- MPSC TEST
- HOPPER TEST
  - HOPPER TEST 10 COIN MODE
  - HOPPER TEST ALL COIN MODE
- BILL ACCEPTOR TEST

LEVEL 1   LEVEL 2   LEVEL 3

SETTING ──────────────── DENOMINATION
                        ├─MAX BET
                        ├─HOPPER MAX PAY
                        ├─COIN ACCEPTOR TYPE
                        ├─INSTALLMENT
                        ├─CREDIT IN LIMIT
                        ├─CREDIT UP LIMIT
                        ├─ATTENDANT PAY TYPE
                        ├─CREDIT CLEAR
                        └─DIP S/W SETTING

COMMUNICATION SETTING ──── NOT USED
                        ├─SYCOM 5000 ─────────────────────────── MACHINE ADDRESS
                        └─IGT SAS ──────────────────────────── SERIAL NUMBER

BILL ACCEPTOR ────────── VALIDATOR STATISTICS
                        └─NOTE HISTORY

NOTE
Some routines may not be used according to your specifications.

4.3 SOFT METER

Open the SOFT METER to see the various soft meter counts.

```
            SOFT METER              CREDIT
                                      87


          GENERAL STATISTICS
         GENERAL STATION METER
       ATTENDANT/SECURITY METER
             ERROR METER
            BET TYPE METER
          CLEAR PERIOD METER




           1-5 UP          PAYOUT ENTER

           4-5 DOWN        CANCEL EXIT
```

In SOFT METER sub-routine, the meter counts are displayed in **PERIOD** and **PARMANENT**.

The **PERIOD** means temporary meters, and indicates the cumulative accounting information since the most recent PERIOD meter clear described in Paragraph 4.3.6 or RAM clear described in Paragraph 3.2.

On the other hand, the **PERMANENT** indicates the cumulative accounting information since the most recent RAM clear.

⚠️ CAUTION!

Clearing the PERMANENT meters is not necessary in normal operation. However, if necessary, jot down the meter counts before clearing them. They cannot be retrieved.

4.3.1 GENERAL STATISTICS

As soon as opening the GENERAL STATISTICS from the SOFT METER menu, the following screen appears.

BET: Indicates the number of credits bet.

WON: Indicates the number of credits won.

ATTENDANT PAY:

               Indicates the number of credits paid by an attendant.

DROP: Indicates the number of coins diverted to the cash box.

COIN IN: Indicates the number of coins accepted by the station unit.

COIN OUT: Indicates the number of coins paid out from the hopper.

PLAY: Indicates the number of games actually played.

ERROR TIMES:

               Indicates the number of station unit errors.

POWER UP: Indicates how many times the power to the station unit was turned ON.

GPSL POWER UP:

               Indicates the number of games actually played since the most recent POWER-ON.

GPSL DOOR OPEN:

               Indicates the number of games actually played since the most recent door-OPEN.

4.3.2   GENERAL STATION METER

As soon as opening the GENERAL STATION METER from the SOFT METER Menu, the following screen appears.

BET: Indicates the number of credits actually bet.

WON: Indicates the number of credits actually won.

H/G: Indicates the number of credits calculated by "BET - WON".

P/O%:   Indicates the payout percentage calculated by "WON/BET x 100".

PLAY TIMES:

              Indicates the number of the games played.

WON TIMES:

              Indicates the number of the games won.

HIT%:   Indicates the percentage of the games won.

COIN IN: Indicates the number of coins inserted from the coin entry.

COIN OUT: Indicates the number of the coins paid out from the hopper.

DROP COIN IN:

              Indicates the number of the coins diverted to the cash box.

HOPPER REFILL COIN IN:

              Indicates the number of coins set for HOPPER REFILL function.

ATTENDANT PAY:

              Indicates the number of credits paid by an attendant.

CREDIT UP IN:

              Indicates the number of credits accepted by the station unit.

BILL TO CREDIT:

> Indicates the number of credits accepted by inserting bills.

BILL IN + DROP IN:

> Indicates the number of credits based on "DROP COIN IN +BILL TO CREDIT".

CREDIT OUT:

> Indicates the number of credits lost by CREDIT-CLEAR and HOPPER-PAYOUT.

HOPPER LEVEL:

> Indicates the number of coins based on "(HOPPER REFILL COIN-IN + INSERTED COIN-IN) - (HOPPER MALFUNCTION COIN-OUT + HOPPER TEST COIN-OUT + PAYOUT BUTTON COIN-OUT).

4.3.3   ATTENDANT/SECURITY METER

Open the ATTENDANT/SECURITY METER from the SOFT METER menu to display following meter counts.

<ATTENDANT METER>

ATTENDANT PAY COUNT:

> Indicates the number of credits paid by an attendant.

ATTENDANT PAY TIMES:

> Indicates how many times hand-pay was performed by an attendant.

<SECURITY METER>

POWER DOWN TIMES:

> Indicates how many times the power to the station unit was turned OFF.

HOPPER RUNNING TIMES:

> Indicates how many times the hopper was activated.

HOPPER REFILL TIMES:

> Indicates how many times the HOPPER REFILL function is used.

HOPPER TEST COIN OUT:

> Indicates the number of coins paid-out by HOPPER TEST.

HOPPER MALFUNCTION COIN OUT:

> Indicates the number of coins paid-out by HOPPER RUN-AWAY and OVERPAID errors.

<DOOR METER>

MACHINE FRONT DOOR OPEN TIMES:

> Indicates how many times the front door was opened.

MACHINE UPPER DOOR OPEN TIMES:

> Indicates how many times the upper door was opened.

CASH BOX DOOR OPEN TIMES:

> Indicates how many times the cash box door was opened.

LOGIC ACCESS DOOR OPEN TIMES:

> Indicates how many times the logic access door (PCB box door) was opened.

BILL VALID TOP/FRONT DOOR OPEN TIMES:

> Indicates how many times the upper/front door of the bill validator unit was opened.

TAKE OFF BILL STACKER TIMES:

> Indicates how many times the bill stacker was removed.

4.3.4   ERROR METER

Open the ERROR METER from the SOFT METER menu to display following meter counts.

ERROR RESET TIMES:

Indicates the number of station unit errors cleared.

HOPEER RUNAWAY ERROR TIMES:

Indicates the number of HOPPER RUNWAY errors cleared.

HOPPER OVER PAY ERROR TIMES:

Indicates the number of HOPPER OVERPAY errors cleared.

COIN IN REVERSE ERROR TIMES (YO-YO):

Indicates the number of COIN IN REVERSE errors cleared.

COIN IN TIME OUT ERROR TIMES:

Indicates the number of COIN TIMEOUT errors cleared.

DROP COIN IN TIME OUT ERROR TIMES:

Indicates the number of DROP COIN IN TIMEOUT errors cleared.

HOPPER EMPTY ERROR TIMES:

Indicates the number of HOPPER EMPTY errors cleared.

HOPPER JAM ERROR TIMES:

Indicates the number of HOPPER JAM errors cleared.

COIN IN DIVERTER ERROR TIMES:

Indicates the number of COIN IN DIVERTER errors cleared.

MECH METER WIRE CUT ERROR TIMES:

Indicates the number of MECH METER WIRE CUT errors cleared.

BATTERY LOW ERROR TIMES: Not used.

RAM ERROR TIMES (DATA IN STOCK ERROR):

Indicates the number of RAM errors cleared.

ROM ERROR TIMES:

Indicates the number of ROM errors cleared.

BILL VALID ERROR TIMES:

Indicates the number of BILL VALID errors cleared.

BILL VALID STACKER FULL TIMES:

Indicates how many times the bill stacker got full.

TAKE OFF HOPPER TIMES:

Indicates how many times the hopper was removed.

CC-16 COIN PULSE ERROR TIMES:

Indicates the number of CC-16 COIN PULSE errors cleared.

CC-16 COIN PULSE TIME OUT ERROR TIMES:

Indicates the number of CC-16 COIN PULSE TIMEOUT
errors cleared.

BET PANEL ERROR TIMES:

Indicates the number of BET PANEL errors cleared.

NETWORK ERROR TIMES:

Indicates the number of NETWORK errors cleared.

GAME SEQUENCE ERROR TIMES:

Indicates the number of GAME SEQUENCE errors cleared.

4.3.5   BET TYPE METER

Open the BET TYPE METER from the SOFT METER menu to display following
game data.

      <BET TYPE>
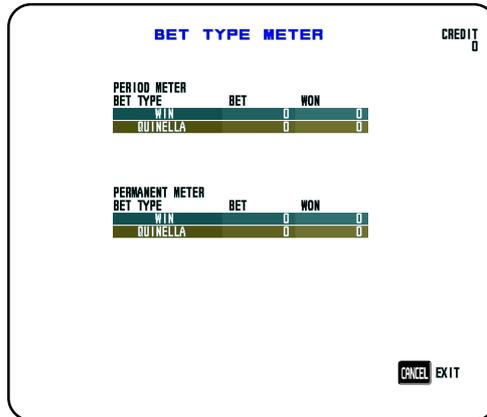
           WIN: Indicates the bet data of WIN.

           QUINELLA: Indicates the bet data of QUINELLA.

4.3.6   CLEAR PERIOD METER

Use the CLEAR PERIOD METER from the SOFT METER menu to clear all the
PERIOD meter counts at a time.

Procedure

    1.   Open the CLEAR PERIOD METER from the SOFT METER menu to display
          the following screen.
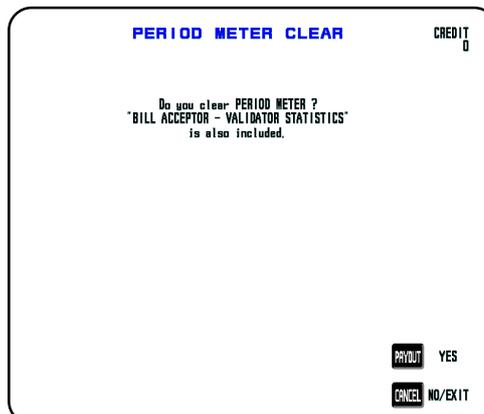
2. Press the PAYOUT (YES) button to display the following confirmation
    screen.

```
┌─────────────────────────────────────────┐
│                                          │
│  PERIOD METER CLEAR            CREDIT     │
│                                  0       │
│                                          │
│          Do you clear PERIOD METER ?     │
│       "BILL ACCEPTOR - VALIDATOR STATISTICS" │
│                is also included.         │
│                                          │
│            Is it really good ?           │
│                                          │
│                                          │
│                                          │
│                                          │
│                                          │
│                                          │
│                          PAYOUT NO/EXIT  │
│                                          │
│                          CANCEL YES/EXIT │
│                                          │
└─────────────────────────────────────────┘
```
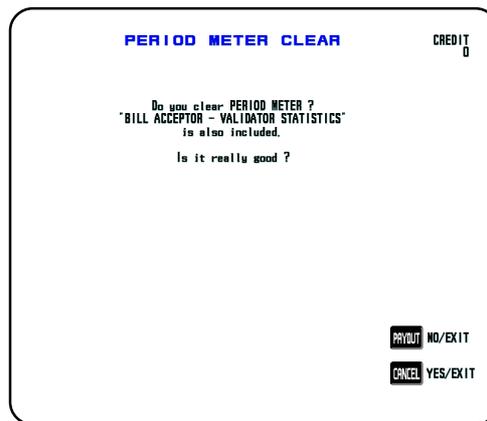
3. Press the CANCEL (YES/EXIT) button to clear the period meters and to
    go back to the SOFT METER Menu.
    When the SOFT METER menu is back , the message of **"PERIOD
    METER was cleared"** is displayed.

```
┌─────────────────────────────────────────┐
│                                          │
│          SOFT METER            CREDIT     │
│                                  0       │
│                                          │
│            GENERAL STATISTICS            │
│           GENERAL STATION METER          │
│         ATTENDANT/SECURITY METER         │
│              ERROR METER                 │
│             BET TYPE METER               │
│    CLEAR PERIOD METER(PERIOD METER was cleared.) │
│                                          │
│                                          │
│                                          │
│       1-5 UP          PAYOUT ENTER       │
│                                          │
│       4-5 DOWN        CANCEL EXIT        │
│                                          │
└─────────────────────────────────────────┘
```
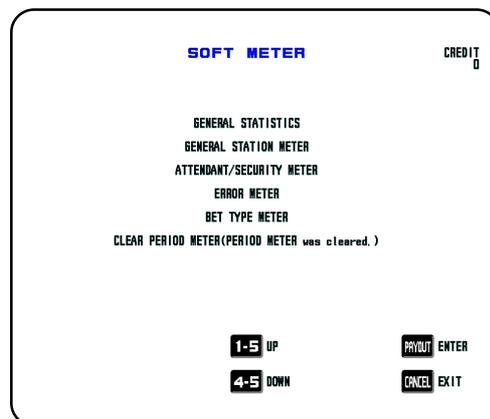
    To cancel the clear, press the PAYOUT (NO/EXIT) button.

4.4   REPLAY GAME

Use the REPLAY GAME to view the most recent 5 games.

```
              REPLAY GAME              CREDIT
                                          0


                  LAST GAME 1
                  LAST GAME 2
                  LAST GAME 3
                  LAST GAME 4
                  LAST GAME 5

           LAST CREDIT :      0
           CREDIT IN   :      0
           COINS PAY   :           0
           ATTND. PAY  :           0


                  1-5 UP            PAYOUT ENTER

                  4-5 DOWN          CANCEL EXIT
```
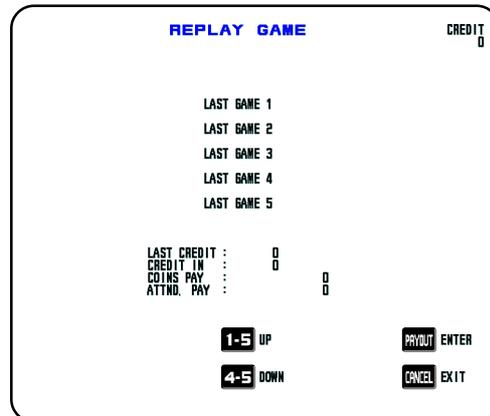
LAST GAME 1:   Replays the most recent game.

LAST GAME 2:   Replays the game prior to the most recent game.

LAST GAME 3:   Replays the game prior to LAST GAME 2.

LAST GAME 4:   Replays the game prior to LAST GAME 3.

LAST GAME 5:   Replays the game prior to LAST GAME 4.

LAST CREDIT:

Indicates the number of credits left on the CREDIT meter at the end of the previous game.

CREDIT IN: Indicates the number of credits that have been added to the credit meter since the end of the previous game.

COINS PAY:

Indicates the number of credits that have been paid out from the hopper since the end of the previous game.

ATTND.PAY:

Indicates the number of credits that have been hand paid by an attendant since the end of the previous game.

Open your desired game from the REPLAY GAME menu.

Using the PAYOUT button, the following information pop-up window can be displayed.
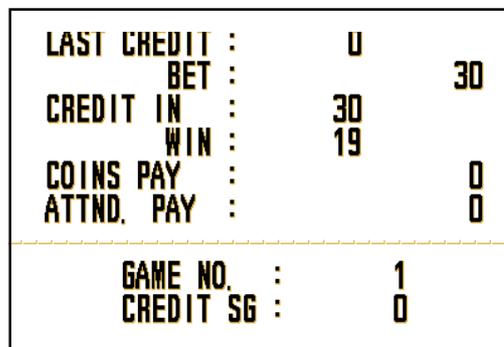
LAST CREDIT:	Indicates the number of credits left on the credit meter at the end of this game.
BET:	Indictates the number of creidts bet in this game.
CREDIT IN:	Indicates the number of credits posted to the credit meter after the previous game and before the end of this game. (The credits won is excluded.)
WIN:	Indicates the number of credits won in this game.
COINS PAY:	Indicates the number of credits paid out from the hopper after the previous game and before the end of this game.
ATTND. PAY:	Indicates the number of credits hand-paid by an attendnat after the previous game and before the end of this game.
GAME NO.:	Indicates the game No. used to communicate with the main control unit.
CREDIT SG:	Indicates the number of credits left on the credit meter when this game started.

4.5   SERVICE MENU

The following diagnostic test can be performed by opening the SERVICE MENU from the ATTENDANT MENU.

Refer to our Maintenance Manual, Section 6 for the details.

> SERVICE MENU   CREDIT
>   0
>
> COLOUR BARS
> CROSS HATCH
> SWITCH/LIGHT TEST
> BET PANEL TEST
> SOUND TEST & VOLUME SETTING
> MPSC TEST
> HOPPER TEST
> BILL VALIDATOR TEST
>
>
> [1-5] UP   [PAYOUT] ENTER
> [4-5] DOWN   [CANCEL] EXIT
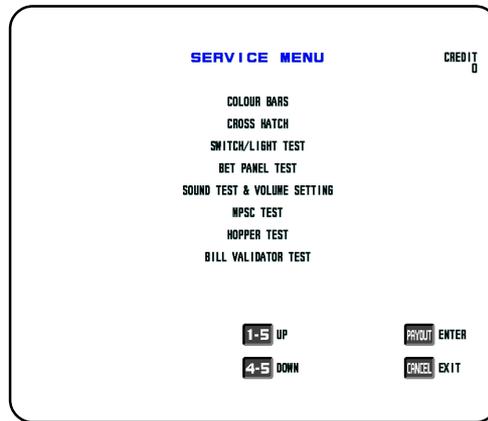
      Monitor test

      Switch/light test

      Bet panel test

      Sound test & volume setting

      MPSC test

      Hopper test

      Bill Validator test

4.6   SETTING

The software machine options of each station unit can be configured by opeing the SETTING from the ATTENDANT Menu.

Refer to our Maintenance Manual, Section 5.1 for the details.


```
                        SETTING              CREDIT
                                                  0
        DENOMINATION      : $1
        MAX BET           : 20
        HOPPER MAX PAY    : 500
        COIN ACCEPTOR TYPE : CC16
        INSTALLMENT PAY   : OFF
        CREDIT IN LIMIT   : 1000
        CREDIT UP LIMIT   : 100000
        ATTENDANT PAY TYPE : ALL ATTENDANT PAY
        CREDIT CLEAR      : OFF
        DIP S/W SETTING


                        1-5 UP           PAYOUT ENTER
                        4-5 DOWN         CANCEL EXIT
```
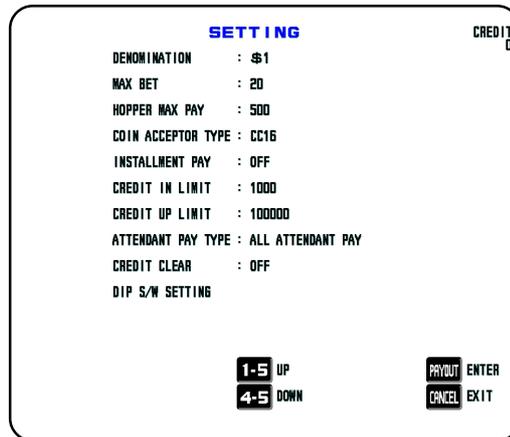

        DENOMINATION
        MAX BET
        HOPPER MAX PAY
        COIN ACCEPTOR T YPE
        INSTALLMENT PAY
        CREDIT IN LIMIT
        CREDIT UP LIMIT
        ATTENDANT PAY TYPE
        CREDIT CLEAR
        DIP S/W SETTING (display only)

4.7   COMMUNICATION SETTING

The communication with an external equipment can be configured by opeing the COMMUNICATION SETTING from the ATTENDANT Menu.

Refer to our Maintenance Manual, Section 5.2 for the details.

NOT USED

```
COMMUNICATION SETTING          CREDIT
                                    0


COMMUNICATION TYPE : NOT USED




                           1-5 UP        PAYOUT ENTER
                           4-5 DOWN       CANCEL EXIT
```

SYCOM 5000

```
COMMUNICATION SETTING          CREDIT
                                    0


COMMUNICATION TYPE : SYCOM 5000
MACHINE ADDRESS    : 0000




                           1-5 UP        PAYOUT ENTER
                           4-5 DOWN       CANCEL EXIT
```

IGT SAS

```
COMMUNICATION SETTING          CREDIT
                                    0


COMMUNICATION TYPE : IGT SAS
MACHINE ADDRESS    : 000




                           1-5 UP        PAYOUT ENTER
                           4-5 DOWN       CANCEL EXIT
```

4.8   BILL ACCEPTOR

Open the BILL ACCEPTOR from the Main Menu to display following data.

4.8.1   VALIDATOR STATISTICS

Open the VALIDATOR STATISTICS from BILL ACCEPTOR MENU to look the bill validator statistics.
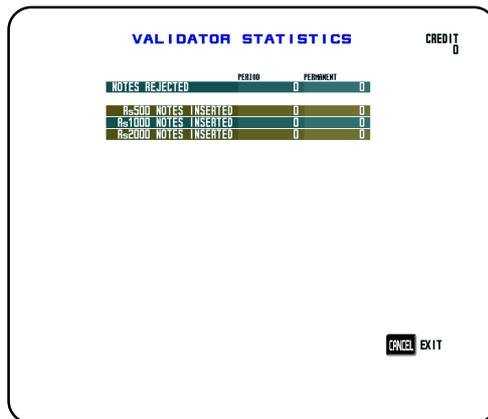
4.8.2   NOTE HISTORY

Open the NOTE HISTORY from the BILL ACCEPTOR MENU to display the history of the bills most recently inserted into the bill validator.
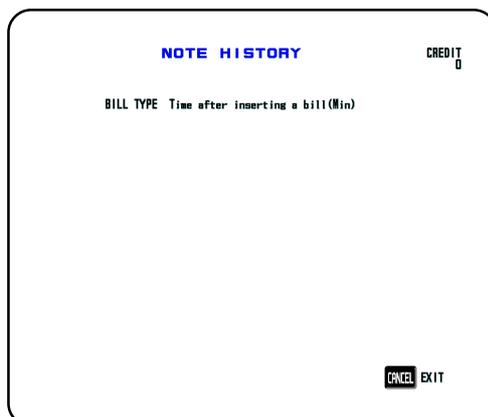
5 ERRORS ON STATION UNITS

If an error occurs on a station unit, the error message is displayed on the monitor screen with the alarm sounding, and the WIN light flashes in red and blue. At the same time, the upper tier of the signal tower on the main control unit lights up to call an attendant. The player cannot join the game before the error is cleared by qualified personnel.

5.1 Power-Up Error Messages

At the power-up, the station unit performs several self tests. If an error occurs, the error message is displayed on the screen.

Message:	**BILLVALIDATOR DOES NT WORK**
	CHECK CONNECT
Cause:	The communication with the bill acceptor could not be established.
Action:	Call qualified service personnel to check the communication cables between the station unit main PCB and the bill acceptor.

———————————————————————————————————

Message:	**ATTENTION**
	ROM TYPE IS DIFFERENT
	PREVIOUS ROM xxxxxxxx
	THIS ROM xxxxxxxx
	TURN ON-OFF RESET S/W FOR CLEARING ALL DATA STORED
Cause:	The ROM # has been changed since the last power-up.
Action:	Turn the RESET keyswitch. Refer to Paragraph 5.1.1 for the default setting after RAM clear.

———————————————————————————————————

Message:	**WARNING**
	DIP SW. OR JUMPER SETTING STATUS IS CHANGED
	TURN ON-OFF RESET S/W FOR USING NEW SETTINGS
	GAME DATA EXCEPT METERS ARE CLEARED
Cause:	The setting of the DIP switch or jumper has been changed since the last power-up.
Action:	Turn the RESET keyswitch. Refer to Paragraph 5.1.1 for the default setting after RAM clear.

———————————————————————————————————

Message:	**ATTENTION**
	MAIN ROM VERSION OR SETTING CHANGED
	TURN ON-OFF RESET S/W FOR CLEARING ALL DATA STORED
Cause:	The ROM version has been changed since the last power up.
Action:	Turn the RESET keyswitch. Refer to Paragraph 5.1.1 for the default setting after RAM clear.

—————————————————————————————————

Message:	**DATA IN STOCK IS WRONG**
	TURN ON-OFF RESET S/W FOR CLEARING ALL DATA STORED
Cause:	A data failure occurred in RAM.
Action:	Turn the RESET keyswitch. Refer to Paragraph 5.1.1 for the default setting after RAM clear.

—————————————————————————————————

Message:	**STATION ID: xxx**
	ILLEGAL STATION ID NUMBER
	CHECK DIP-SWITCH ON BACK PLANE PCB
Cause:	The setting of the station unit ID number is not correct.
Action:	Call qualified service personnel to correct the DIP switch setting on the back plane PCB.

—————————————————————————————————

Message:	**GAME HOST INOPERATIVE**
	CHECK CONNECTION
Cause:	The communication between the station unit and the main control unit could not be established.
Action:	Call qualified service personnel to check the communication cables.

5.1.1   Default setting

When clearing a power-up error by turning the RESET keyswitch (RAM Claer), the software machine options are initialized to the default values (factory setting). In this case, turning the RESET keyswitch locks the machine to display the message of "POWER OFF-ON TO USE INIT. SETTING" on the monitor screen. As instructed, turn the power OFF-ON to restart the machine with the factory setting.

For how to set those options, refer to our Maintenance Manual, Paragraph 5.1.

DENOMINATION:	$1
MAX BET:	20
HOPPER MAX PAY:	500
COIN ACCEPTOR TYPE:	CC16
INSTALLMENT PAY:	OFF
CREDIT IN LIMIT:	1000
CREDIT UP LIMIT:	100000
ATTENDANT PAY TYPE:	ALL ATTENDANT PAY
CREDIT CLEAR:	OFF

5.2 Error Messages during Game

If an error occurs during game, the error message window appears on the game screen with the relevant error highlighted.

> ### *NOTE*
> *If an error occurs after a player bets and before he/she wins, the win is posted to the credit meter as soon as the error is cleared.*

Message:	DATA IN STOCK IS WRONG
Cause:	A data failure occurred in RAM.
Action:	Call qualified maintenance personnel to turn OFF-ON the power.

——————————————————————————————————————

Message:	HOPPER RUNAWAY
Cause:	The hopper malfunctioned.
Action:	Call qualified service personnel to check the hopper. Turn ON and OFF the RESET keyswitch.

——————————————————————————————————————

Message:	HOPPER OVERPAID
Cause:	The hopper paid extra coins.
Action:	Turn ON and OFF the RESET keyswitch.

——————————————————————————————————————

Message:	COIN-IN REVERSED
Cause:	The COIN-IN sensors detected a coin moving in the reverse direction.
Action:	It means stringing. Call a security. Turn ON and OFF the RESET keyswitch.

——————————————————————————————————————

Message:	COIN-IN JAM OR TIMEOUT
Cause:	A coin jam occurred at the COIN-IN sensors.
Action:	Call qualified maintenance personnel to remove the jamming coin(s). Turn ON and OFF the RESET keyswitch.

——————————————————————————————————————

Message:	COIN-DROP JAM/TIMEOUT
Cause:	A coin jam occurred at the COIN-DROP sensor.
Action:	Call qualified maintenance personnel to remove the jamming coin(s). Turn ON and OFF the RESET keyswitch.

——————————————————————————————————————

Message: HOPPER EMPTY

Cause: No or few coins are left in the hopper.

Action: Call qualified maintenance personnel to supply coins into the hopper. Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: HOPPER JAM OR TIMEOUT

Cause: A hopper jam occurred, or the COIN-OUT sensor was active over the specified time period.

Action: Call qualified maintenance personnel to remove the jamming coin(s). Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: WIRE OF METERS IS DISCONNECTED

Cause: One or more of the mechanical meters have been disconnected, or malfunctioned.

Action: Call qualified service personnel to check the mechanical meters. Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: COIN-IN PULSE ERROR

Cause: A coin passed the COIN-IN sensor without any COIN-IN pulse from the coin acceptor.

Action: Call qualified service personnel to check the coin acceptor. Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: COIN-IN PULSE TIME OUT ERROR

Cause: Any coin did not pass the COIN-IN sensor within the specified time period after the COIN-IN pulse was generated.

Action: Call qualified service personnel to check around the coin acceptor. Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: BILL VALI. STACKER FULL

Cause: The bill stacker is full of bills.

Action: Call authorized personnel to remove the bills from the bill stacker. Turn ON and OFF the RESET keyswitch.

—————————————————————————————————

Message: BILL VALI. ERROR

Cause: An error occurred on the bill acceptor.

Action: The communication from the bill acceptor could not be established.

Call qualified service personnel to check the communication cables to the bill acceptor.

> ### *NOTE*
> *Turning the RESET keyswitch is not necessary to clear this error. The bill acceptor can be automatically initialized.*

Message: PRINTER PAPER EMPTY

Not used.

Message: PRINTER NOT READY

Not used.

Message: PRINTER ERROR

Not used.

Message: MEMORYERY LOW

Not used.

Message: ROM DATA CRC ERROR

Cause: The game ROM data has corrupted.

Action: Call qualified service personnel to replace the game ROM

Call qualified maintenance personnel to turn OFF-ON the power.

Message: SWITCH PANEL COMMUNICATION ERROR

Cause: The communication with the betting buttons coul not be extablished.

Action: Call qualified service personnel to check the communication cable to the betting buttons.

Message: GAME SEQUENCE ERROR

Cause: The game mode codes were received from the main control unit in the wrong order.

Action: Call qualified service personnel to check the communication cables. Turn ON and OFF the RESET keyswitch.

Message: HOPPER REMOVED

Cause: The hopper has been removed.

Action: Call qualified maintenance personnel to install the hopper correctly.

‒ ‒

Message: COIN DIVERTER FAULT

Cause: The coin diverter was not activated.

Action: Call qualified maintenance personnel to check the coin diverter.

Turn ON and OFF the RESET keyswitch.

NOTE
The front/top door switch has the same function with the RESET keyswitch. After clearing an error with the front/top door open, just close the door. The RESET keyswitch is invalid.

5.3 OUT OF ORDER Messages

5.3.1 DOOR OPEN Messages

If a door is opened during the operation, the 'OUT OF ORDER' pop-up window appears on the monitor screen indicating which door is open.

Message:	**FRONT DOOR OPEN**
Cause:	The front door of the station unit is open.
Action:	Close the door.
	Check the door switch.

——————————————————————————————————————

Message:	**UPPER DOOR OPEN**
Cause:	The upper door of the station unit is open.
Action:	Close the door.
	Check the door switch.

——————————————————————————————————————

Message:	**CASH BOX DOOR OPEN**
Cause:	The door of the bill stacker container is open.
Action:	Close the door.
	Check the door switch.

——————————————————————————————————————

Message:	**LOGIC DOOR OPEN**
Cause:	The door of the PCB box is open.
Action:	Close the door.
	Check the door switch.

——————————————————————————————————————

Message:	**BILL CASSETTE REMOVE**
Cause:	The bill stacker has been removed.
Action:	Replace the bill stacker.

5.3.2   Others

> ### *NOTE*
> *The following OUT OF ORDER pop-up messages
> do not appear when the error message window
> described in Paragraph 5.1 or 5.2 is on the
> monitor screen.*

Message: COMMUNICATION TIMEOUT WITH MAIN

Cause: The communication with the main control unit could not be
established for at least 20 seconds.

Action: Call qualified service personnel to check the communication
cable.

———————————————————————————————————————

Message: GAME DISABLE BY HOST

Cause: The message of GAME DISABLE was sent by the main control
unit. (ex. When the door of the main control unit is open.)

Action: Call qualified service personnel to check the main control
unit.

———————————————————————————————————————

Message: DISPLAY ERROR (TRACK UNIT)

Cause: The message of DISPLAY ERROR was sent by the main control
unit.

Action: Call qualified service personnel to check the main control
unit.

———————————————————————————————————————

Message: CHANGED MAIN ROM

Cause: The P/O percentage sent by the main control unit is not
identical to the one stored in this station unit.

**Action:**   Turn OFF and ON the station unit POWER switch.

> ### *NOTE*
> *In this case, jot down the game data other than
> softmeters because they are cleared by turning
> the POWER switch.*

6 CLEANING MACHINE

Clean the surfaces of the control, station, and projector units everyday by using the dry and soft cloth. Do not use chemical duster, thinner, benzine, or alcohol.

Diluted synthetic detergent can be used if necessary, but wipe it up completely with dry cloth thereafter.

Main control unit

Station unit

Bill acceptor unit

Volume control unit

Projector unit
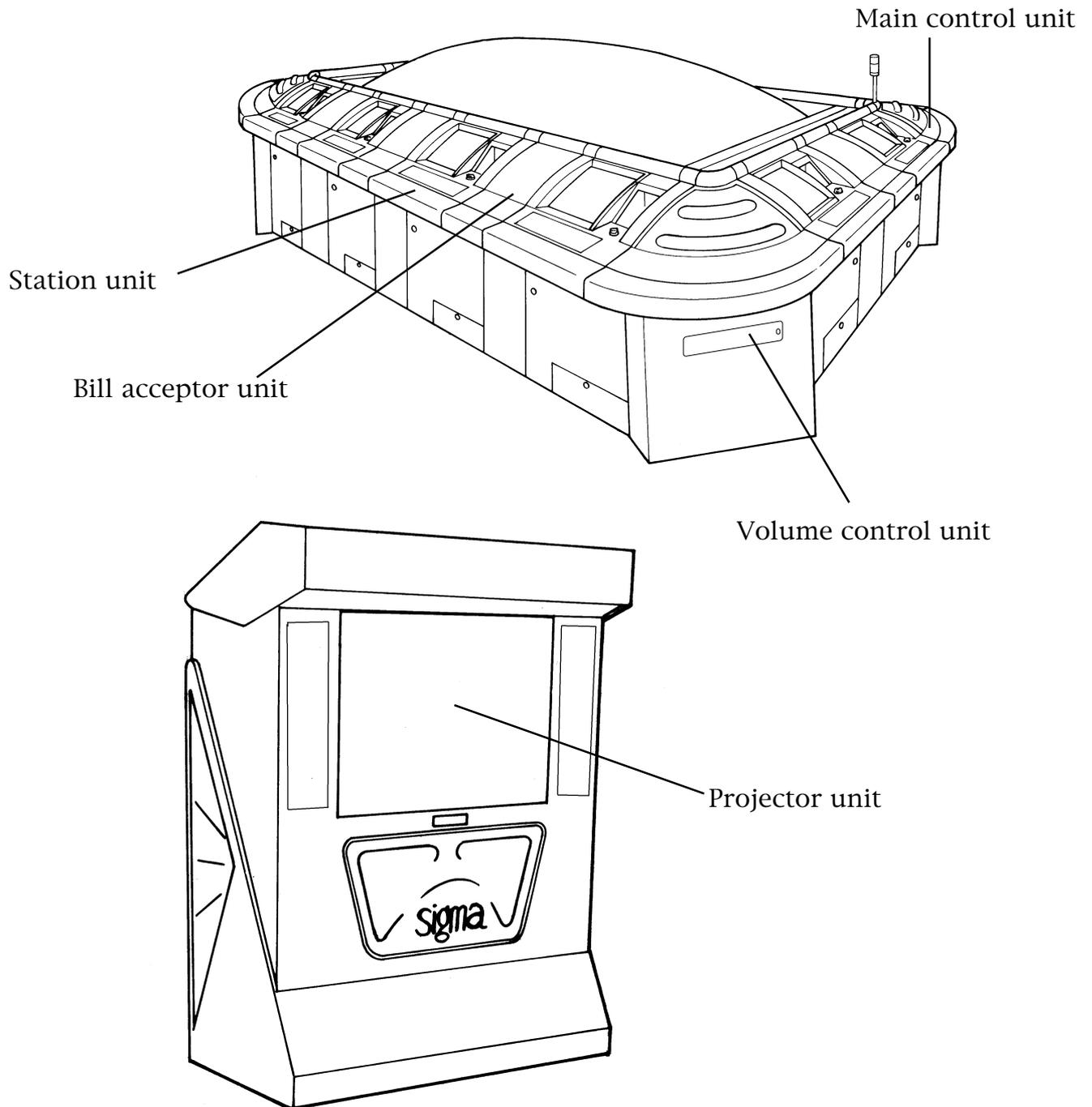
THE DERBY MK-VI V8
OPERATION MANUAL

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