



SIGMA

ROULETTE -KING-™

MAINTENANCE MANUAL

CODE NO. 8800-C0143

INTRODUCTION

This MAINTENANCE MANUAL is intended for qualified maintenance personnel, and provides the important information about Sigma Roulette Machines, focusing on the area where the access can be gained by the use of an access key.

It is strongly recommended to thoroughly read and understand this manual in conjunction with our Operation Manual before starting the machine. Please always keep this manual at hand, so that you can quickly refer to it whenever necessary.

TECHNICAL SUPPORT

If you have any question or request, or when you want our technical support, please contact your nearest distributor.

HANDLE THIS MACHINE SAFELY AND CORRECTLY

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

- Rated voltage:
 - a) Europe 230VAC, 50Hz
 - b) Korea 220VAC, 60Hz
 - b) Other areas 220/230/240VAC, 50/60Hz
110/120VAC, 50/60Hz
- Maximum power consumption:
2.68Kw(50Hz/60Hz)
- Maximum current draw:
 - 31.9A (60Hz) at 110VAC
 - 29.2A (60Hz) at 120VAC
 - 16.2A (60Hz) at 220VAC
 - 13.4A (50Hz) at 230VAC
 - 12.7A (50Hz) at 240VAC
- 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.

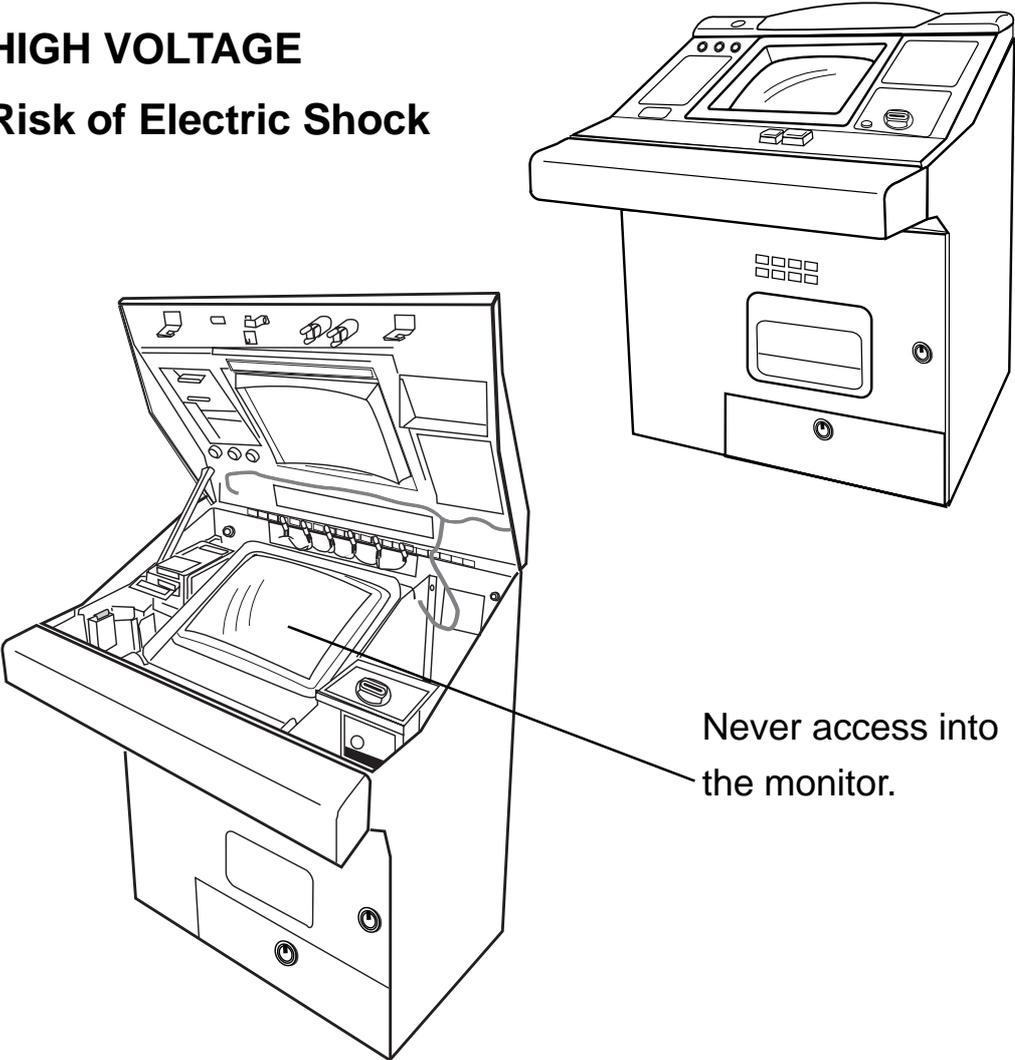
3. Handling of Monitors

Although the built-in monitor is protected from the danger of electric shock, NEVER access into the monitor.



DANGER !

HIGH VOLTAGE
Risk of Electric Shock



Never access into the monitor.

4. Grounding

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

 **WARNING !**

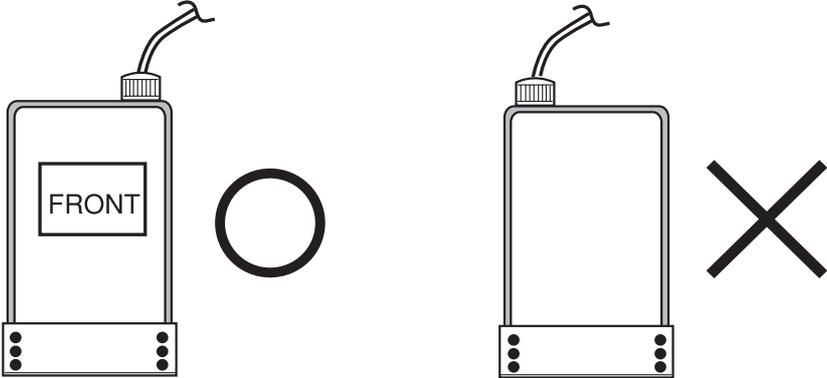
Risk of Electric Shock.

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

5. Setting Spill Bottle

Set the spill bottle as depicted below.

Failing to do so bends the rubber hose to stem the spilled water.



6. 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 breaker(s).
- Do not touch the hopper just after running the hopper motor. The shield of the hopper motor may be hot. When it is necessary to detach the hopper, wait until the shield cools down.
- Do not remove a heavy hopper. Take out the coins from the hopper before removing.
- Do not touch the coin diverter. It may be hot.
- Never use chemical duster, thinner, benzine, or alcohol for cleaning the machine surface. They will damage the surface. 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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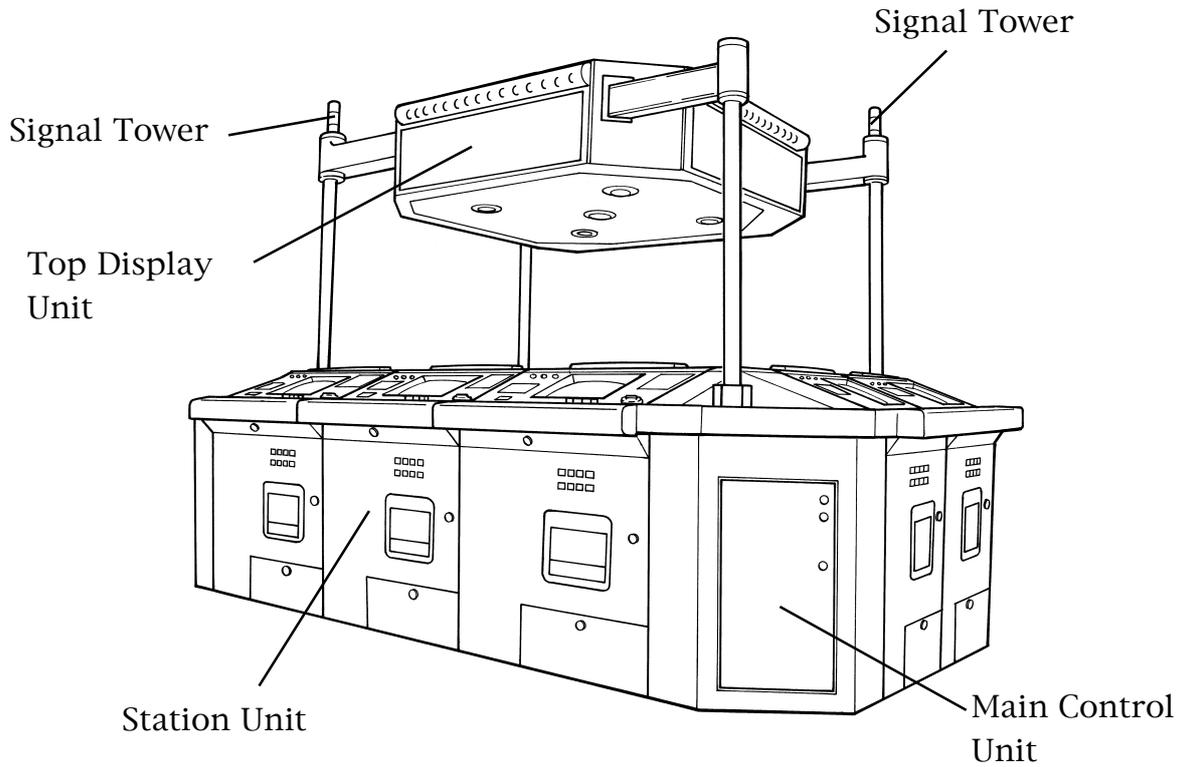
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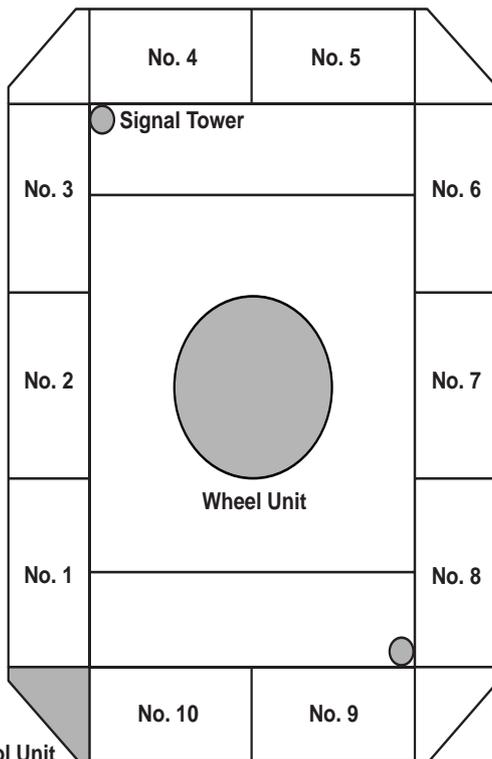
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1. MAJOR COMPONENTS

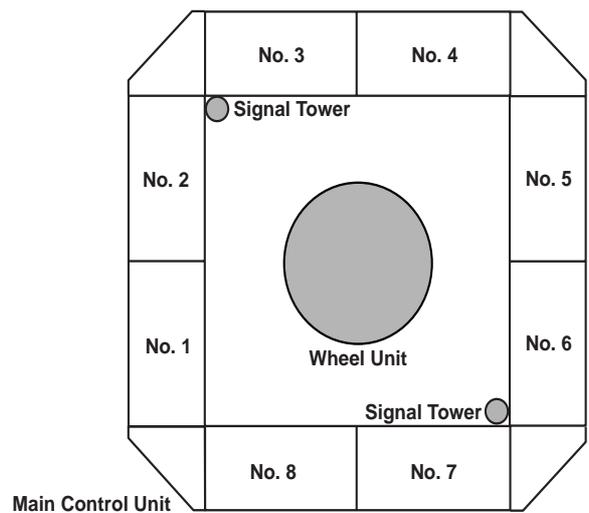
1.1 Configuration



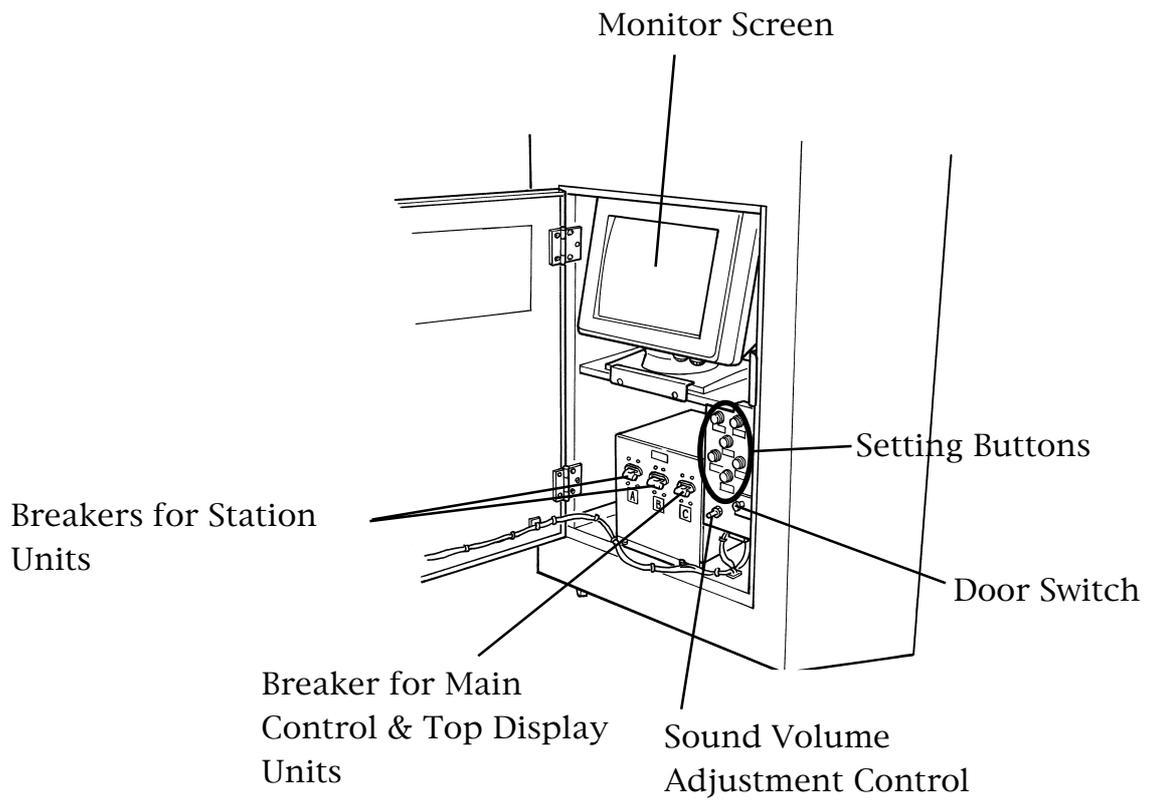
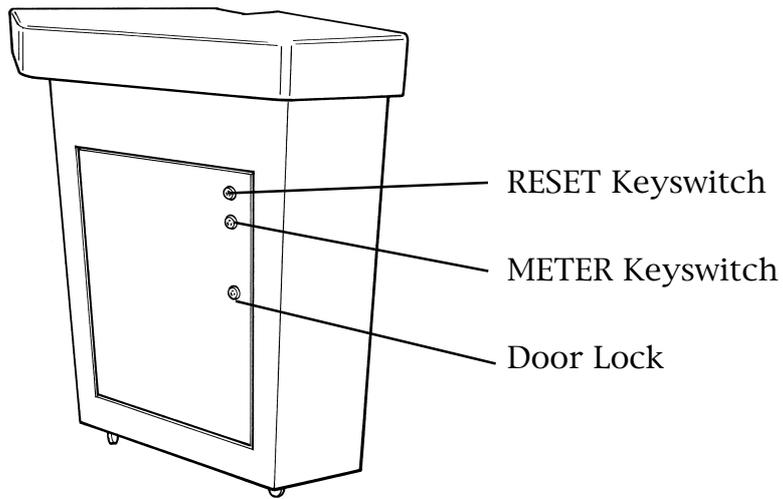
<In case of 10 station units installed>



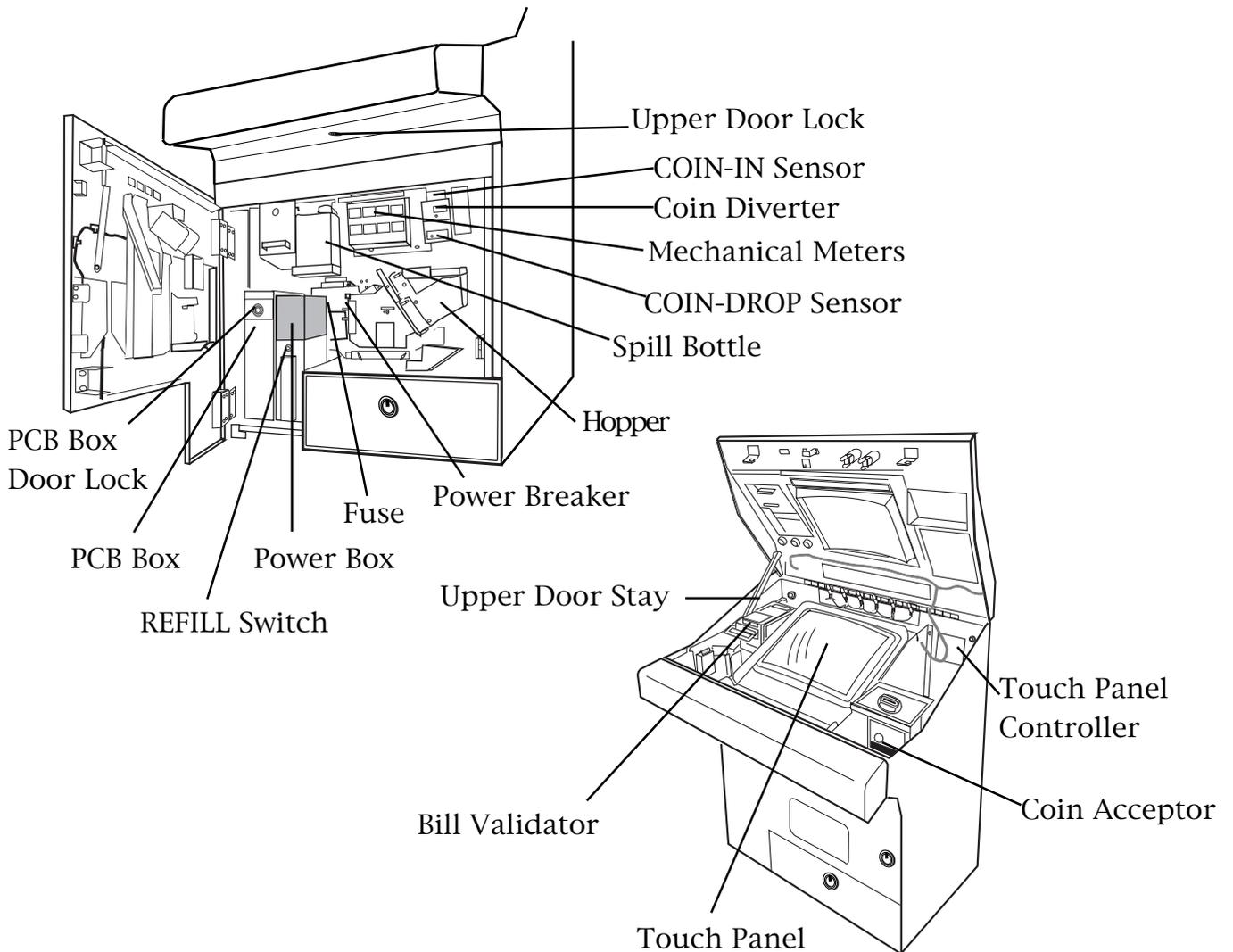
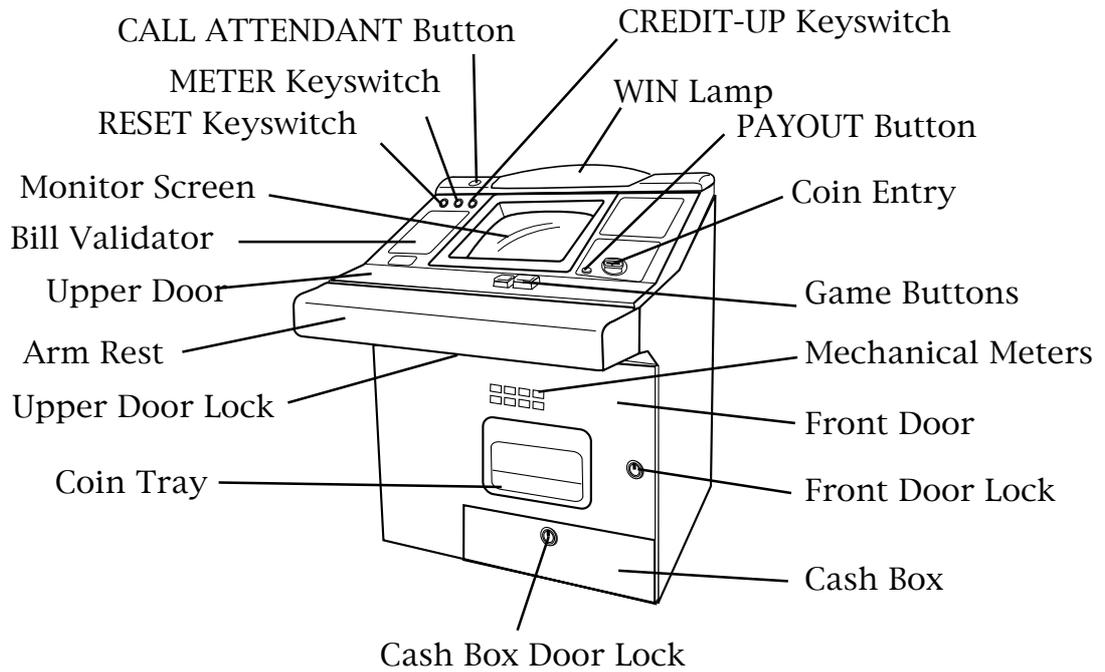
<In case of 8 station units installed>



1.2 Main Control Unit



1.3 Station Unit



2. POWER-UP

2.1 Checking Machine

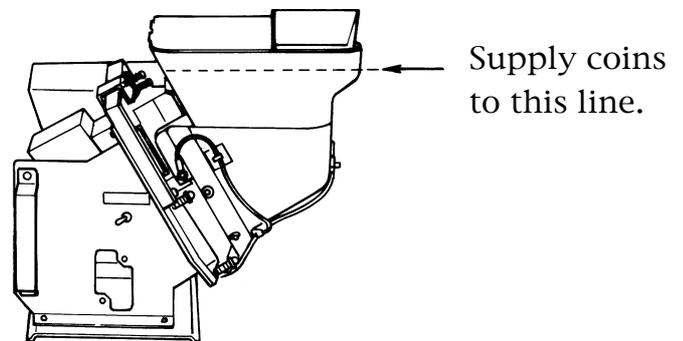
Check the machine. If any damage or loose connection is found, take the necessary action.

2.2 Supplying Coins into Hopper

Supply coins to the hopper in each station unit in the following procedure.

Procedure

1. Open the front door of the station unit.
2. Supply coins from the opening of the hopper as needed.
3. Close the front door.



2.3 Setting Coin Acceptor

Set the coin acceptor in the following procedure.



WARNING !

Risk of Hurt

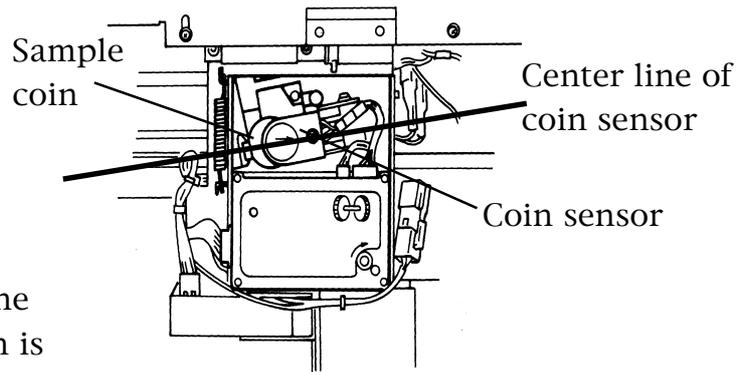
When opening the upper door, be sure to lock the stay by hand.

2.3.1 When CC-16 coin acceptor is used

Procedure

1. Open the front and upper doors of the station unit to locate the coin acceptor just below the coin entry.
2. Disconnect the connector from the coin acceptor.

3. Unlatch the coin acceptor to take it out.
4. Remove the dummy coin from the sample coin holder.
5. Insert a sample coin into the coin holder so that the center of the sample coin is on the extended center line of the coin sensor.
6. Return the coin acceptor to the previous position.
7. Connect the connector that was removed in Step 2.
8. Close the front and upper doors.



2.3.2 When CONDOR coin acceptor is used

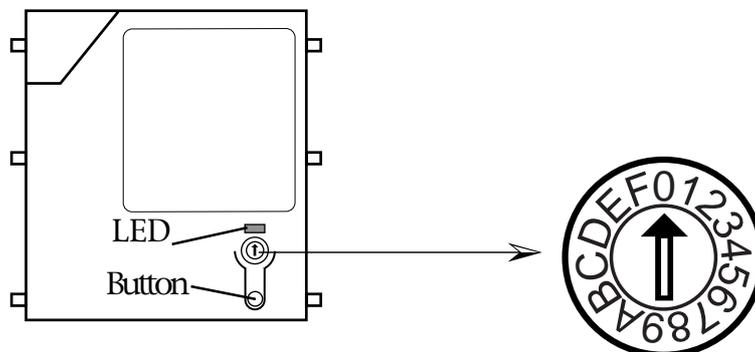
NOTE

Use the following procedure after turning ON the power as described in Paragraph 2.4.

This procedure may not be used under your legislation.

Procedure

1. Open the front and upper doors of the station unit to locate the coin acceptor just below the coin entry.



2. Check the coin acceptor is powered up . (The LED is ON.)
3. Turn the arrow indicator to 1.
4. Press the button just below the arrow indicator. (The LED turns red.)

5. Feed coins into the coin acceptor until the LED blinks in green.

NOTE

The thickness of these coins should slightly vary to prevent too strict reactivity.

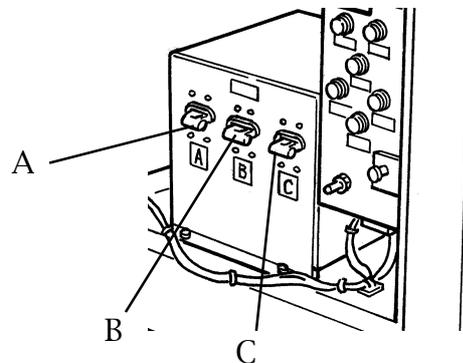
6. Press the button again. (The LED lights up in green).
7. Return the arrow indicator to zero.
8. Close the front and upper doors.

2.4 Turning ON Machine

Turn ON the machine in the following procedure.

Procedure

1. First, turn ON the main control and wheel units as below.
 - 1) Open the door of the main control unit to turn ON the 3 breakers just below the monitor screen.
The breakers A and B are for the station units, and the breaker C is for the main control and wheel units.
 - 2) Close the door.



2. Next, turn ON each station unit as below.

NOTE

Unless turning ON the breakers A and B in the above step, the station units cannot be turned ON.

- 1) Open the front door of a station unit.
- 2) Turn ON the power breaker located deep inside the cabinet.
- 3) Close the front door.

POWER-ON CHECK LIST

Check the following after turning ON the machine.

1. Verify no error occurred during the self test.
2. Verify the illumination lamps are ON.
3. Verify the inserted coins are correctly counted.
4. Verify the game buttons and the keyswitches are properly actuated.
5. Verify the monitor screen properly outputs image.
6. Verify the hopper properly pays out coins.

2.5 Setting HOPPR REFILL for Bookkeeping Purpose

The HOPPER REFILL window can be invoked on the monitor screen of the station unit for the bookkeeping purpose.

Procedure

1. Open the front door of the station unit to find the REFILL switch on the power box.
2. Press the REFILL switch to call the following pop-up window on the monitor screen.



3. Every time pressing the REFILL switch, the number of coins is incremented by 100 (Upper limit: 9900).

To clear the count to zero, turn the METER keyswitch.

4. To exit from the HOPPER REFILL window, turn the RESET keyswitch OFF and ON then OFF.

2.6 Adjusting Sound Volume

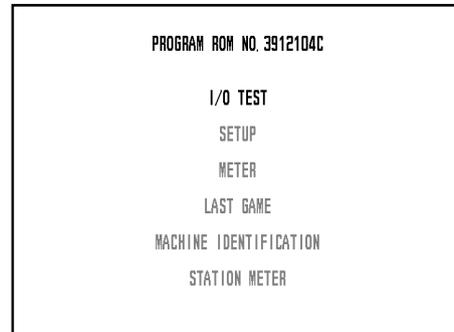
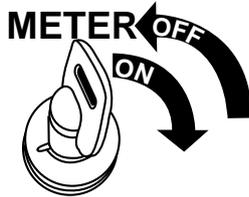
Adjust the game sound volume in the following procedure.

2.6.1 Adjusting sound volume of background music

Adjust the sound volume of background music on the main control unit.

Procedure

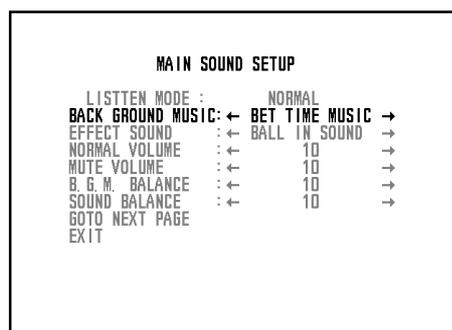
1. Open the door of the main control unit to find the monitor screen.
2. Turn ON and OFF the METER keyswitch on the door to invoke the Main Menu on the screen.



3. Referring Paragraph 3.1, select the "SETUP" by using the **UP/DOWN** button, and then enter it by the **SW2** to display the SETUP menu.



4. Open the SOUND SETUP menu to display the following setting screen.



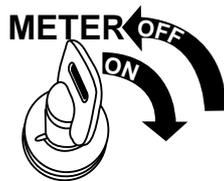
5. Adjust the sound volume referring to Paragraph 3.3.3.
6. Select "EXIT" by using the **UP/DOWN** button, then enter it by the **SW2** to go back to the game mode.
7. Close the door.

2.6.2 Adjusting event sound volume on station unit

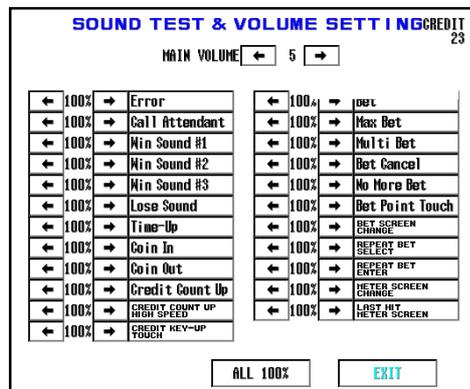
Adjust the event sound volume on each station unit.

Procedure

1. Turn ON and OFF the METER keyswitch on the deck to invoke the ATTENDANT MENU.



2. Touch the SERVICE MENU to call the SOUND TEST & VOLUME SETTING menu.



3. Adjust the sound volume referring to Paragraph 6.5.
4. Repeatedly touch "EXIT" to go back to the game mode.

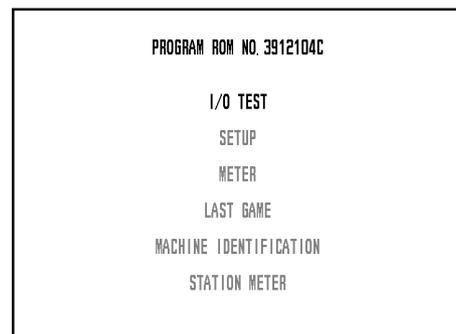
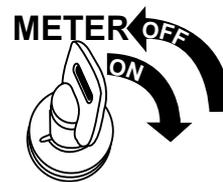
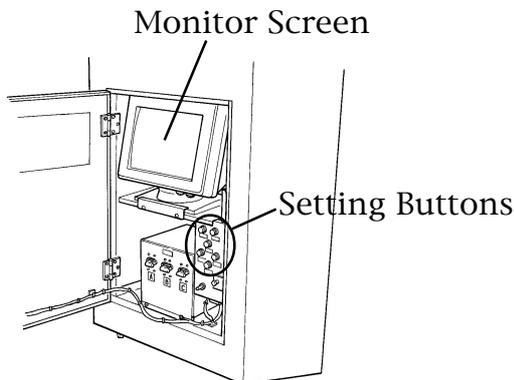
3. MAIN CONTROL UNIT

3.1 Calling Control Mode

The operation of the wheel unit can be controlled by calling the Control Mode on the monitor screen inside the main control unit.

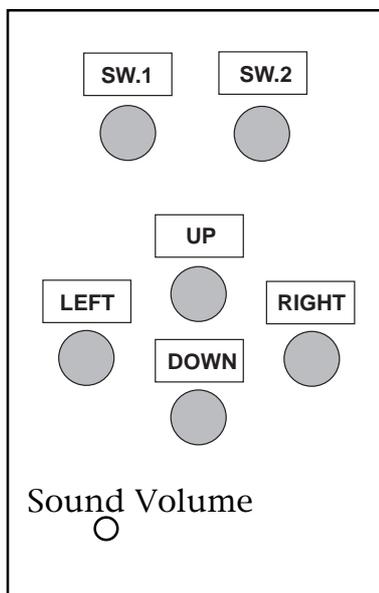
Procedure

1. Open the door of the main control unit to find the monitor screen.



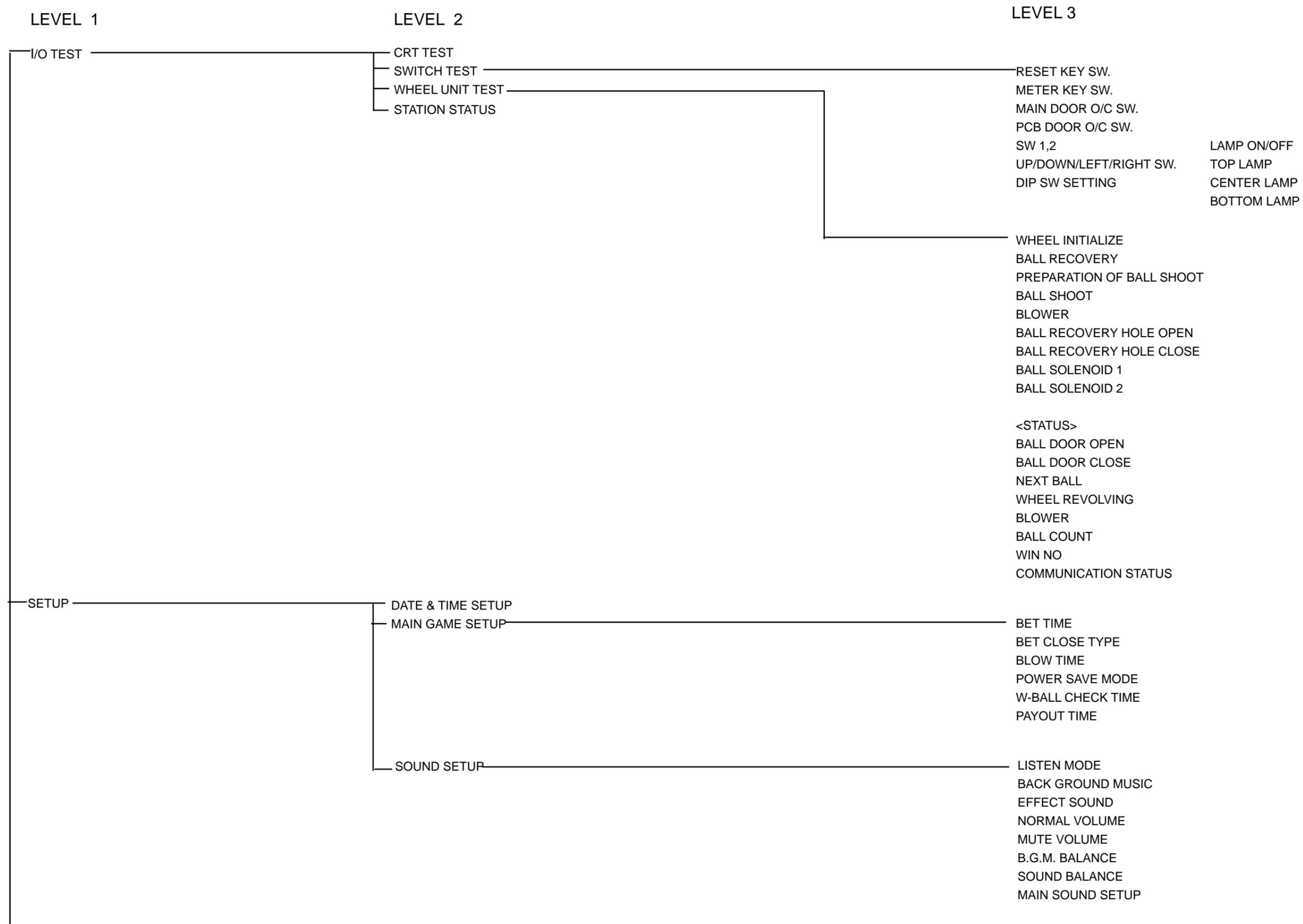
2. Turn ON and OFF the METER keyswitch on the door to invoke the Main Menu.

3. Use the following 6 buttons to call your desired sub-routine.



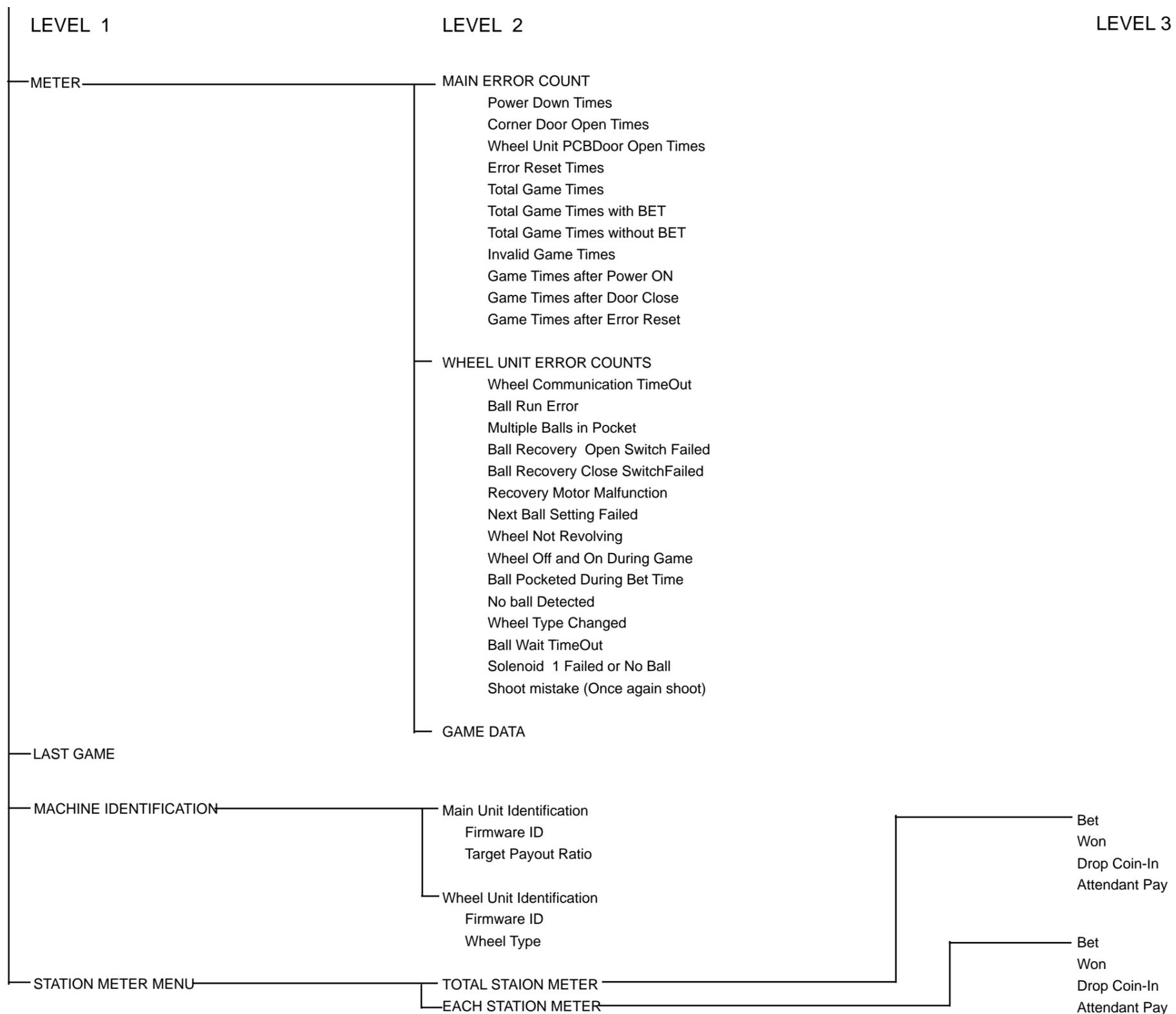
- SW.1: Used to exit from the current mode.
Used to stop a sound.
- SW.2: Used to enter your selection.
- UP: Used to move the cursor up.
- DOWN: Used to move the cursor down.
- RIGHT: Used to move the cursor right.
- LEFT: Used to move the cursor left.

Tree Structure of Control Mode



Continued to next page.

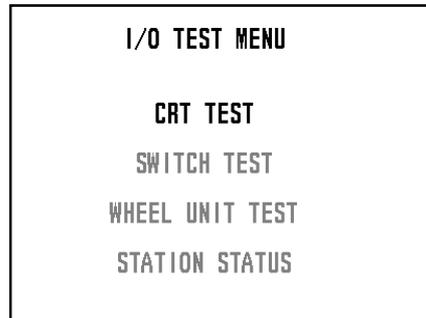
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NOTE
Some routines may not be used according to your specifications.

3.2 I/O TEST

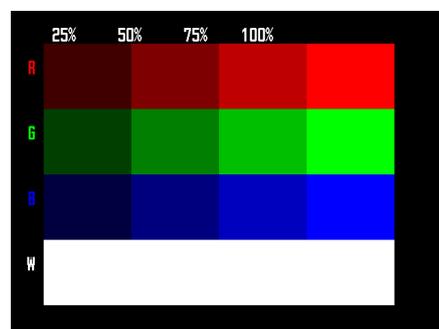
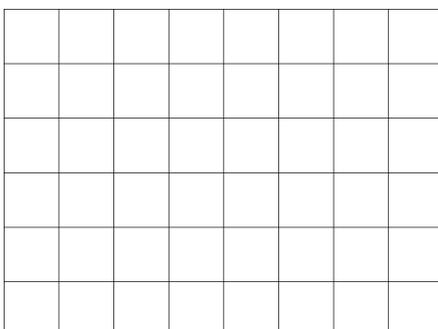
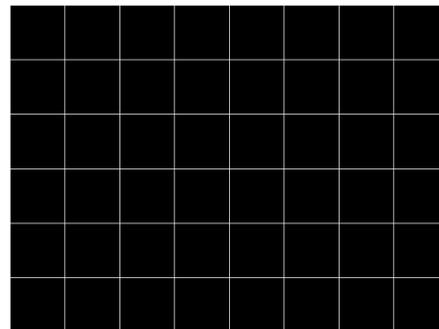
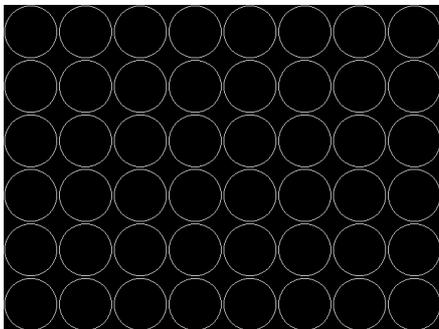
Open the I/O TEST from the Main Menu to check the major functions of the main control and wheel units.



3.2.1 CRT TEST

Open the CRT TEST from the I/O TEST menu to test the monitor screen. Four test patterns are looped. Press the **SW2** to proceed to the next pattern.

If the adjustment is necessary, use the brightness and contrast controls located at the lower right of the monitor screen.



3.2.2 SWITCH TEST

Open the SWITCH TEST from the I/O TEST menu to test the major switches and lamps on/in the main control and wheel units. Using this menu, the DIP switch setting can be also viewed.

```

                                PANEL SW. TEST

RESET KEY SW.
METER KEY SW.
MAIN DOOR O/C SW.
PCB DOOR O/C SW.

SW -- 1.                          SW -- 2.
      UP SW.                        RIGHT SW.
LEFT SW.                          DOWN SW.

DIP SW. SETTING 1 2 3 4 5 6 7 8
                0 0 0 0 0 0 0 0
LAMP ON/OFF: TOP LAMP - UP SW.
                CENTER LAMP - LEFT, RIGHT SW.
                BOTTOM LAMP - SW-2, DOWN SW.

```

Procedure

1. Actuate the switch to be tested.
2. When it is normal, the name on the monitor screen is highlighted.

3.2.3 WHEEL UNIT TEST

Open the WHEEL UNIT TEST from the I/O TEST menu to test the operation of the wheel unit.

```

                                WHEEL UNIT TEST

WHEEL INITIALIZE
BALL RECOVERY
PREPARATION OF BALL SHOOT
BALL SHOOT
BLOWER
BALL RECOVERY HOLE OPEN
BALL RECOVERY HOLE CLOSE
BALL SOLENOID 1
BALL SOLENOID 2

===== STATUS =====
BALL DOOR OPEN [0]   BALL DOOR CLOSE [1]
NEXT BALL      [0]   WHEEL REVOLVING [0]
BLOWER         [0]
BALL COUNT     [19]  WIN NO [ 0]
COMMUNICATION STATUS : 50 00000110
0 00001001 00000000 00000000
19 00000000 00000000 00000000

```

WHEEL INITIALIZE:

Initializes the wheel unit in the order of “blower activated”-> “Ball shot” -> “Ball recovered”, so that there is no ball on the wheel or the ball shooting duct.

BALL RECOVERY:

Recovers balls from the wheel.

PREPARATION OF BALL SHOOT:

Set a ball inside the ball shooting unit.

BALL SHOOT:

Shoots the ball onto the wheel.

BLOWER:

Activates the blower for the preset time period.

BALL RECOVERY HOLE OPEN:

Opens the ball recovery gate.

BALL RECOVERY HOLE CLOSE:

Closes the ball recovery gate.

BALL SOLENOID 1:

Activates the ball solenoid 1(off-on-off).

BALL SOLENOID 2:

Activates the ball solenoid 2 (off-on-off).

<STATUS>

The current status of the major components is indicated as below.

BALL DOOR OPEN [0 or 1]:

Indicates the current status of the ball recovery gate.

[0]: The gate door is closed.

[1]: The gate door is open.

BALL DOOR CLOSE [0 or 1]:

Indicates the current status of the ball recovery gate.

[0]: The gate door is open.

[1]: The gate door is closed

NOTE

If both of the BALL DOOR OPEN and BALL DOOR CLOSE shows [1], it means the failure of the microswitch or the door.

NEXT BALL [0 or 1]:

Indicates the ball presence between the solenoids 1 and 2.

[0]: A ball exists.

[1]: No ball exists.

WHEEL REVOLVING [0 or 1]:

Indicates if or not the wheel is now revolving.
 [0]: The wheel is revolving.
 [1]: The wheel has stopped.

BLOWER [0 or 1]:

Indicates if or not the blower is now activated.
 [0]: The blower is activated.
 [1]: The blower is not activated

BALL COUNT []:

Indicates the number of balls detected by the BALL RUN sensor in one ball shooting cycle.

WIN NO []:

Indicates the pocket NO. in which a ball fell.
 If multiple pockets have balls, the numbers alternate.

COMMUNICATION STATUS:

Indicates the communication status.
 When normal, the backslash is revolving.

3.2.4 STATION STATUS (COMMUNICATION STATUS)

Open the STATION STATUS from the I/O TEST menu to see the current communication status with the station units.

```

COMMUNICATION STATUS

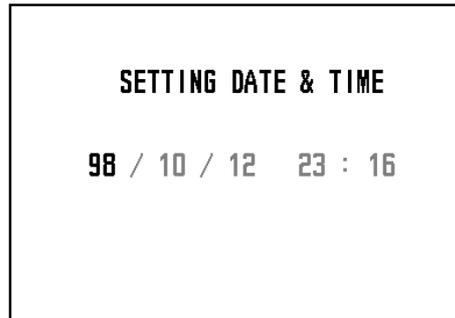
      STATION STATUS
      1 2 3 4 5 6 7 8 9 10
1-10  . . . . .
11-20 . . . . .
21-30 . . . . .
31-40 . . . . .

. = Disconnection    O = Connection
A = Call Attendant  E = Some Error
D = Door Open       B = Bet
C = Change call

Display priority . < O < C < B < D < E < A
    
```


3.3.1 DATE & TIME SETUP

Open the DATE & TIME SETUP from the SETUP menu to set the current date and time.



Increment/decrement the value by using the **UP/DOWN** button.

To proceed to the next value, use the **RIGHT/LEFT** button.

To enter the setting, press the **SW2**.

To exit from this setting mode, press the **SW1**.

3.3.2 MAIN GAME SETUP

Open the MAIN GAME SETUP from the SETUP menu to set the following major software machine options.

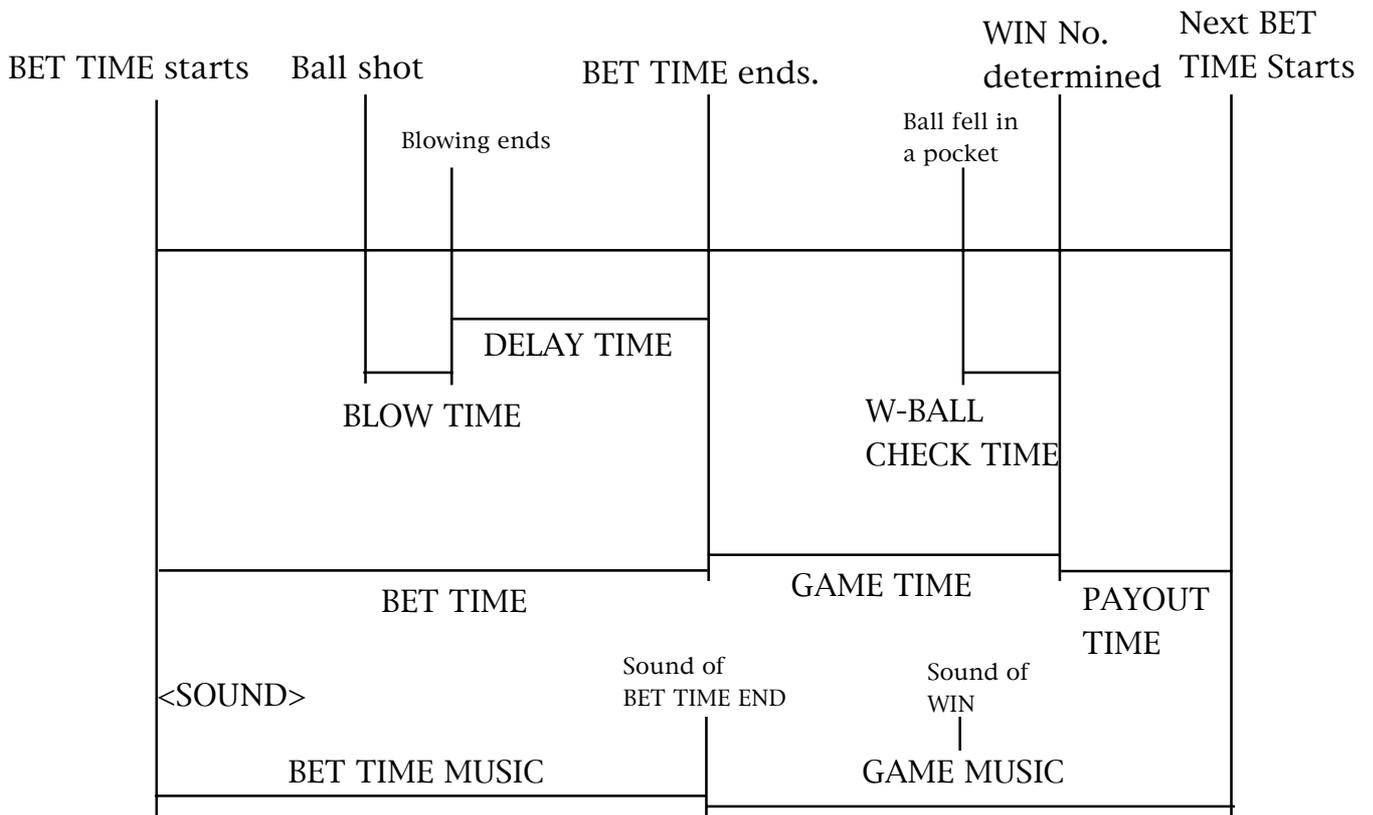
MAIN GAME SETUP		
BET TIME	: ←	30 Seconds →
BET CLOSE TYPE	: ←	BEFORE SHOOT →
DELAY TIME	: ←	0 Second →
BLOW TIME	: ←	3 Sec. Fixed →
POWER SAVE MODE	: ←	NO →
W-BALL CHECK TIME	: ←	6 Seconds →
PAY OUT TIME	: ←	5 Seconds →

Select the item by using the **UP/DOWN** button.

To increment/decrement the set value, use the **RIGHT/LEFT** button.

To enter the setting, press the **SW2**.

To exit from this setting mode, press the **SW1**.



BET TIME (Default - 30 seconds):

Set the betting time in 10 seconds within the range from 30 to 180 seconds.

BET CLOSE TYPE (Default - BEFORE SHOOT) :

Select when to end the betting time from "BEFORE SHOOT" and "AFTER SHOOT". The above chart shows the case of "AFTER SHOOT"

DELAY TIME (Default - 0 second) :

Set this item only when setting BET CLOSE TYPE to "AFTER SHOOT".

Set the time period after the blowing time ends and before the betting time ends within the range from 0 to 7 seconds.

BLOW TIME (Default - 3 seconds) :

Set the blowing time period out of the following.

2 sec. fixed 3 sec. fixed

4 sec. fixed 5 sec. fixed

6 sec. fixed

2 to 3 sec. (Variable in 0.1 seconds - Average: 2.5 sec.)

3 to 4 sec. (Variable in 0.1 seconds - Average: 3.5 sec.)

4 to 5 sec. (Variable in 0.1 seconds - Average: 4.5 sec.)

5 to 6 sec. (Variable in 0.1 seconds - Average: 5.5 sec.)

POWER SAVE MODE (Default - YES) : YES/ NO

Set if or not the power save mode is used. If used, a ball is not shot when there is no betting.

W-BALL CHECK TIME (Default - 6 seconds) :

Set the time period within the range from 0 to 6 seconds to check for multiple balls in pockets.

PAYOUT TIME (Default - 5 seconds) :

Set the time period necessary to pay the credits to the credit meter in 5 seconds within the range from 5 to 20 seconds.

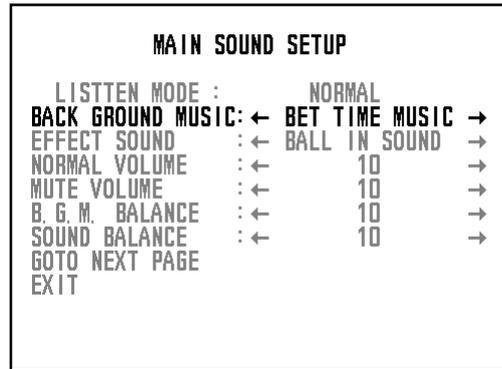
3.3.3 SOUND SETUP

Open the SOUND SETUP from the SETUP menu to set the BGM/EFFECT sound volume.

NOTE

In this setting mode, the SW1 is used to stop a sound. To exit from this mode, select "EXIT" by using the UP/DOWN button, then enter it by the SW2.

<Page 1>

**LISTEN MODE NORMAL/MUTE****NORMAL:**

Indicates that the normal sound setting is available.

MUTE:

Indicates that the mute sound setting is available.

BACK GROUND MUSIC:

The BET TIME MUSIC and GAME TIME MUSIC can be selected by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**.

EFFECT SOUND:

Your desired effect sound can be selected by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**.

NORMAL VOLUME:

The normal sound volume can be set by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**. For how to set, refer to Paragraphs 3.3.3.1 and 3.3.3.2.

MUTE VOLUME:

The mute volume can be set by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**. For how to set, refer to Paragraphs 3.3.3.1 and 3.3.3.2.

B.G.M. BALANCE:

The BGM sound can be balanced by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**. For how to set, refer to Paragraph 3.3.3.1.

SOUND BALANCE:

The effect sound can be balanced by the **RIGHT/LEFT** button, and heard by the **SW2**. To stop the sound, use the **SW1**. For how to set, refer to Paragraph 3.3.3.1.

<Page 2>

MAIN SOUND SETUP PAGE 2			
NORMAL/MUTE VOLUME CONFIGURATION			
00:00-00:59	NORMAL	12:00-12:59	NORMAL
01:00-01:59	NORMAL	13:00-13:59	NORMAL
02:00-02:59	NORMAL	14:00-14:59	NORMAL
03:00-03:59	NORMAL	15:00-15:59	NORMAL
04:00-04:59	NORMAL	16:00-16:59	NORMAL
05:00-05:59	NORMAL	17:00-17:59	NORMAL
06:00-06:59	NORMAL	18:00-18:59	NORMAL
07:00-07:59	NORMAL	19:00-19:59	NORMAL
08:00-08:59	NORMAL	20:00-20:59	NORMAL
09:00-09:59	NORMAL	21:00-21:59	NORMAL
10:00-10:59	NORMAL	22:00-22:59	NORMAL
11:00-11:59	NORMAL	23:00-23:59	NORMAL
RETRUN TO PAGE 1			

NORMAL/MUTE VOLUME CONFIGURATION:

Within the range of 24 hours, NORMAL/MUTE can be assigned as desired.

For how to set, refer to Paragraph 3.3.3.3.

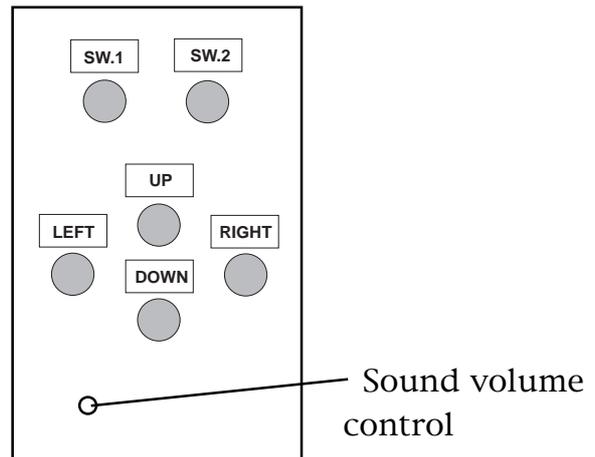
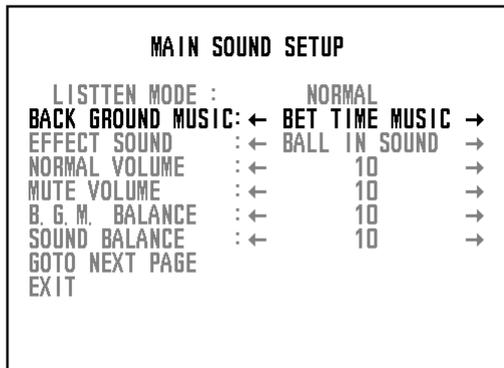
00:00 - 00:59	NORMAL	12:00 - 12:59	NORMAL
01:00 - 01:59	NORMAL	13:00 - 13:59	NORMAL
02:00 - 02:59	NORMAL	14:00 - 14:59	NORMAL
03:00 - 03:59	NORMAL	15:00 - 15:59	NORMAL
04:00 - 04:59	NORMAL	16:00 - 16:59	NORMAL
05:00 - 05:59	NORMAL	17:00 - 17:59	NORMAL
06:00 - 06:59	NORMAL	18:00 - 18:59	NORMAL
07:00 - 07:59	NORMAL	19:00 - 19:59	NORMAL
08:00 - 08:59	NORMAL	20:00 - 20:59	NORMAL
09:00 - 09:59	NORMAL	21:00 - 21:59	NORMAL
10:00 - 10:59	NORMAL	22:00 - 22:59	NORMAL
11:00 - 11:59	NORMAL	33:00 - 33:59	NORMAL

3.3.3.1 Setting BGM/EFFECT SOUND

Set the BGM/EFFECT SOUND in the following procedure.

NOTE

EFFECT sound includes the sounds for announcing a bet end, a hit ball, an error, and door open.



Procedure

1. Locate the sound volume control just below the setting buttons inside the main control unit.
2. Turn the sound volume control fully counterclockwise to minimize the sound volume.
3. Open the SOUND SETUP from the SETUP menu on the monitor screen.
4. Select BACK GROUND MUSIC by using the **UP/DOWN** button, then BET TIME MUSIC by using the **RIGHT/LEFT** button.
5. Select EFFECT SOUND by using the **UP/DOWN** button, then BALL IN SOUND by using the **RIGHT/LEFT** button.
6. Select NORMAL VOLUME by using the **UP/DOWN** button, and set it to 10 by using the **RIGHT/LEFT** button.
7. Press the **SW2** to hear the bet time music.
(The LISTEN MODE is NORMAL.)
8. Carefully turn the sound volume control to adjust the sound volume.
9. Select the B.G.M. BALANCE by using the **UP/DOWN** button.

10. Press the **SW2** to hear the sound.
11. Adjust the balance by using the **RIGHT/LEFT** button.
12. Select the SOUND BALANCE by using the **UP/DOWN** button.
13. Press the **SW2** to hear the sound.
14. Adjust the balance by using the **RIGHT/LEFT** button.
15. To go back to the game mode, select "EXIT" by using the **UP/DOWN** button, then enter it by the **SW2**.
16. Check the adjusted sound volume and balance in the game mode.

3.3.3.2 Adjusting NORMAL/MUTE VOLUME

Set the NORMAL/MUTE VOLUME in the following procedure.

Procedure

1. Open the SOUND SETUP from the SETUP menu.
2. Select NORMAL VOLUME by using the **UP/DOWN** button.
3. Press the **SW2** to hear the sound.
4. Adjust the volume by using the **RIGHT/LEFT** button.
5. Select MUTE VOLUME by using the **UP/DOWN** button.
6. Press the **SW2** to hear the sound.
7. Comparing with the NORMAL VOLUME, adjust the MUTE VOLUME by using the **RIGHT/LEFT** button.
8. To go back to the game mode, select "EXIT" by using the **UP/DOWN** button, then enter it by the **SW2**.
9. Check the adjusted sound volume in the game mode.

3.3.3.3 Assigning NORMAL/MUTE

Assign NORMAL/MUTE to each hour in the following porcedure.

Procedure

1. Open DATE & TIME SETUP from the SETUP menu to verify the internal clock is crrect.
2. Open Page 2 of SOUND SETUP.
3. Select the time period by using **UN/DOWN/RIGHT/LEFT** button.
4. Set NORMAL/MUTE by the **SW2**.
5. To exit from this mode, select "RETURN TO PAGE 1".

3.4 METER

Open the METER from the Main Menu to view the following various meter counts.

<Page 1>

MAIN(CORNER) ERROR COUNT		PAGE 1/3
Power Down Times		1
Corner Door Open Times		6
Wheel Unit PCBDoor Open Times		1
Error Reset Times		0
Total Game Times		1
Total Game Times with BET		0
Total Game Times without BET		1
Invalid Game Times		0
Game Times after Power ON		1
Game Times after Door Close		0
Game Times after Error Reset		1

MAIN ERROR COUNT

Power Down Times:

Indicates the number of times the power to the main control unit was turned OFF.

Corner Door Open Times:

Indicates the number of times the door of the main control unit was opened.

Wheel Unit PCBDoor Open Times:

Indicates the number of times the door of the wheel unit PCB box was opened.

Error Reset Times:

Indicates the number of errors cleared.

Total Game Times:

Indicates the total number of game plays.

Total Game Times with BET:

Indicates the total number of games actually bet on.

Total Game Times without BET:

Indicates the total number of games performed without betting.

Invalid Game Times:

Indicates the number of games aborted by an error (ex. wheel unit error).

Game Times after Power ON:

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

Game Times after Door Close:

Indicates the number of games since every door was most recently closed.

Game Times after Error Reset:

Indicates the number of games since an error was most recently cleared.

<Page 2>

WHEEL UNIT ERROR COUNTS	PAGE 2/3
Wheel Communication TimeOut	0
Ball Run Error	0
Multiple Balls in Pockets	0
Ball Recovery Open Switch Failed	0
Ball Recovery Close Switch Failed	0
Ball Recovery Moter Malfunction	0
Next Ball Setting Failed	0
Wheel Not Revolving	0
Wheel Off and On During Game	0
Ball Pocketed During Bet Time	0
No Ball Detected	0
Wheel Type Changed	0
Ball Wait Time Out	1
Solenoid 1 Failed or No Ball	1

WHEEL UNIT ERROR COUNTS

Wheel Communication TimeOut:

Indicates the number of the communication timeouts with the wheel unit.

Ball Run Error:

Indicates the number of ball run errors.

Multiple Balls in Wheel:

Indicates the number of times multiple balls were detected on the wheel.

Ball Recovery Open Sensor Failed:

Indicates the number of times the ball recovery OPEN microswitch malfunctioned.

Ball Recovery Close Sensor Failed:

Indicates the number of times the ball recovery CLOSE microswitch malfunctioned.

Recovery Motor Malfunction:

Indicates the number of times the ball recovery motor malfunctioned.

Next Ball Setting Failed:

Indicates the number of times the next ball could not be set because the solenoid 2 was faulty.

Wheel Not Revolving:

Indicates the number of times the wheel could not revolve.

Wheel Off and On During Game:

Indicates the number of times the wheel unit was turned OFF then ON during the operating time.

Ball Pocketed During Bet Time:

Indicates the number of times a ball fell in a pocket during betting time.

No Ball Detected:

Indicates the number of times no ball was detected on the wheel.

Wheel Type Changed:

Indicates the number of times the type of wheel was changed during the operating time.

Ball Wait Time Out

Indicates the number of the ball recovery timeouts.

Solenoid 1 Failed or No Ball:

Indicates the number of times the solenoid 1 was faulty or no ball was in stock.

Shoot mistake (Once again shoot)

Indicates the number of times a ball could not properly shot.

<Page 3>

GAME DATA

The WIN data of each number can be viewed as below.

GAME DATAS		PAGE 3/3	
Number	Decision	Frequency	
0	0	00	0
1	0	2	0
4	0	5	0
7	0	8	0
10	0	11	0
13	0	14	0
16	0	17	0
19	0	20	0
22	1	23	0
25	0	26	0
28	0	29	0
31	0	32	0
34	0	35	0
		000	0
		3	0
		6	0
		9	0
		12	0
		15	0
		18	0
		21	0
		24	0
		27	0
		30	0
		33	0
		36	0

3.6 MACHINE IDENTIFICATION

Open the MACHINE IDENTIFICATION from the Main Menu to display the following information.

MACHINE IDENTIFICATION	
Main Unit Identification	
Firmware Id	39111020
Target Payout Ratio	94.73%
Wheel Unit Identification	
Firmware Id	39010000
Wheel Type	1
Type No.	0=0, 1=0.00, 2=0.00,000

Main Unit Identification

Firmware ID: Indicates the version No. of the game ROM.

Target Payout Ratio:

Indicates the current payout percentage.

Wheel Unit Identification

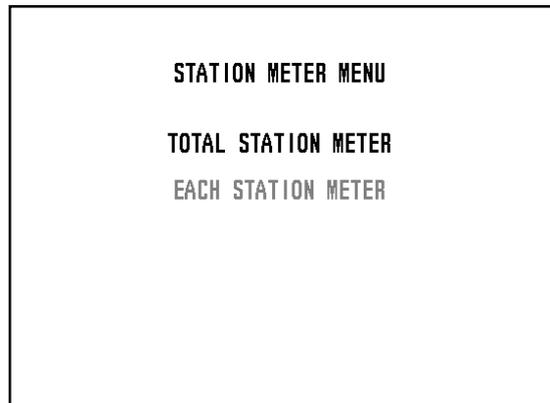
Firmware ID: Indicates the version No. of the wheel unit ROM.

Wheel Type: Indicates the type of the payable.

(0=0, 1=0,00, 2=0,00,000)

3.7 STATION METER

Open the STATION METER from the Main Menu to see the station unit meters.



3.7.1 TOTAL STATION METER

Open the TOTAL STATION METER to see the total PERIOD and PERMANENT money amount of all the station units.

TOTAL STATION METER		PAGE 1/1	
		04/12/'98 14:24	
Bet	0.00	0.00	
Won	0.00	0.00	
Drop Coin-In	0.00	0.00	
Attendant Pay	0.00	0.00	
Cash-In	0.00	0.00	
Cash-Out	0.00	0.00	

Indicates the date and time when this screen has been displayed.

Bet: Indicates the total money amount bet on all the station units.

Won: Indicates the total money amount won on all the station units.

Drop Coin-In: Indicates the total money amount diverted to the cash boxes of all the station units.

Attendant Pay: Indicates the total money amount hand-paid by an attendant including credit clears.

Cash-In: Indicates the total money amount that the machine accepted by COIN-IN, BILL-IN and CREDIT-UP.

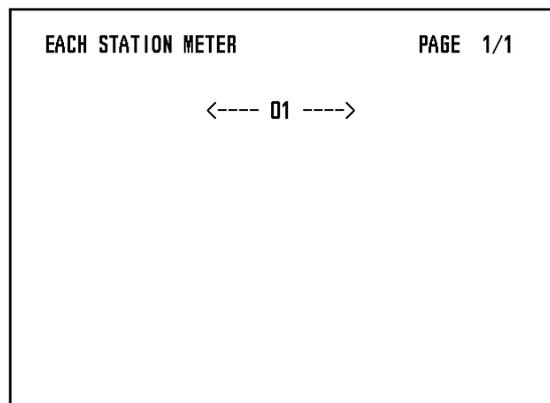
Cash-Out: Indicates the total money amount paid out from the hoppers of all the station units.

3.7.2 EACH STATION METER

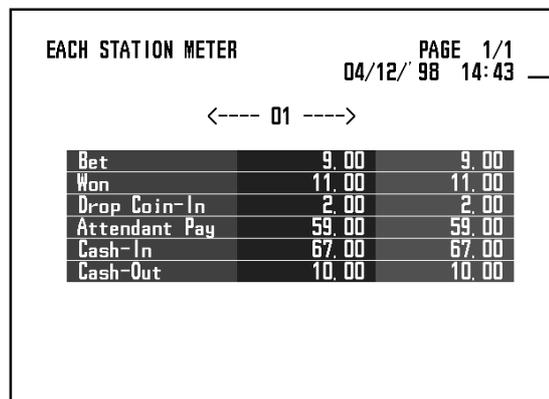
Open the EACH STATION METER to see the PERIOD and PERMANENT money amount of your desired station unit.

Procedure

1. Open the EACH STATION METER to display the following screen.



2. Select the station unit NO. by using the **RIGHT/LEFT** button, then press the **SW.2** to see the meter counts.



Indicates the date and time when the data has been read from the station unit

Bet: Indicates the money amount bet on the station unit.

Won: Indicates the money amount won on the station unit.

Drop Coin-In:

Indicates the money amount diverted to the cash box of the station unit.

Attendant Pay:

Indicates the money amount hand-paid by an attendant including credit clears.

Cash-In: Indicates the money amount that the station unit accepted by COIN-IN, BILL-IN and CREDIT-UP.

Cash-Out: Indicates the money amount paid out from the hopper of the station unit.

4. ERRORS ON MAIN CONTROL/WHEEL UNIT

If an error occurs on the main control/wheel unit, the error message is displayed on the monitor screen inside the main control unit. At the same time, the signal towers on the top display unit flash to call an attendant. The machine is locked before the error is cleared.



WARNING!

To clear a wheel unit error, it may be necessary to remove a few station units. In such case, call qualified service personnel.

4.1 Power-Up Error Messages

At the power-up, the main control unit performs several self tests. If an error occurred, the error message is displayed on the monitor screen inside the main control unit.

Message: DATA IN STOCK IS WRONG

Cause: The data stored in the RAM is not correct.

Action: Turn ON and OFF the RESET keyswitch.

Message: ROM TYPE IS DIFFERENT

Cause: The ROM version has been changed after the most recent power OFF.

Action: Turn ON and OFF the RESET keyswitch.

Message: WHEEL TYPE IS DIFFERENT

Cause: The wheel type has been changed after the most recent power OFF.

Action: Turn ON and OFF the RESET keyswitch.

Message: WHEEL CANNOT REVOLVE NORMALLY

Cause: The wheel revolution is not normal.

Action: Turn ON and OFF the RESET keyswitch.

Message: NUMBER OF WHEEL POCKETS IS NOT CORRECT
Cause: The pocket count is out of the range from 37 to 39.
Action: Call qualified service personnel to check the wiring of the POCKET sensor and the pocket magnets.
Turn ON and OFF the RESET keyswitch.

4.1.1 Default setting

When clearing a power-up error by turning the RESET keyswitch, the following options are initialized to their default values.

BET TIME: 30 seconds
BET CLOSE TYPE: BEFORE SHOOT
DELAY TIME: 0 second
(Valid only when BET CLOSE TYPE is “AFTER SHOOT”.)
BLOW TIME: 3 seconds
POWER SAVE MODE: YES
W-BALL CHECK TIME: 6 seconds
PAY OUT TIME: 5 seconds
SOUND VOLUME settings: 10

4.2 Error Messages During Betting Time

The following messages are displayed on the monitor screen if an error occurred during betting time.

Message: WHEEL UNIT COMMUNICATION TIMEOUT
Cause: The communication with the wheel unit could not established within the specified time.
Action: Check the wheel unit is activated.
Call qualified service personnel to check the communication cable.
Turn ON and OFF the RESET keyswitch.

Message: WHEEL OFF AND ON DURING GAME
Cause: The wheel unit was turned OFF then ON during the operating time.
Action: Turn ON and OFF the RESET keyswitch.

Message: BALL RECOVERY HOLE OPEN SWITCH FAILED
Cause: The ball recovery door OPEN microswitch malfunctioned.
Action: Call qualified service personnel to check the microswitch.
Turn ON and OFF the RESET keyswitch.

Message: BALL RECOVERY HOLE CLOSE SWITCH FAILED
Cause: The ball recovery door CLOSE microswitch malfunctioned.
Action: Call qualified service personnel to check the microswitch.
Turn ON and OFF the RESET keyswitch.

Message: BALL RECOVERY HOLE OPEN/CLOSE MOTOR MALFUNCTIONED
Cause: The motor to open/close the ball recovery door malfunctioned.
Action: Call qualified service personnel to check the motor and wiring.
Turn ON and OFF the RESET keyswitch.

Message: SOLENOID 2 FAILED AND NEXT BALL SETTING FAILED
Cause: The next ball could not be shot because the ball setting solenoid 2 (lower solenoid) malfunctioned.
Action: Call qualified service personnel to check the solenoid 2 and/or the NEXT BALL sensor.
Turn ON and OFF the RESET keyswitch.

Message: BALL WAIT TIME OUT
Cause: The ball recovery was timed out.
Action: Call the qualified service personnel to check for a caught ball on the wheel. Check the POCKET sensor.

Message: WHEEL NOT REVOLVING
Cause: The wheel could not revolve and remains stationary.
Action: Call qualified service personnel to check the motor and wiring.
Turn ON and OFF the RESET keyswitch.

Message: BALL POCKETED DURING BET TIME
Cause: A ball fell in a pocket during the betting time.
Action: Turn ON and OFF the RESET keyswitch.

Message: BALL RUN ERROR

Cause: The ball could not run properly on the wheel.

Action: Call qualified service personnel to check the BALL RUN sensor.
Turn ON and OFF the RESET keyswitch.

Message: WHEEL TYPE CHANGED

Cause: The wheel type was changed during the operating time.
Call qualified service personnel to check the wiring of the POCKET sensor and the pocket magnets.

Action: Turn ON and OFF the RESET keyswitch.

Message: Shoot mistake (Once again shoot)

Cause: A ball could not be properly shot. (The ball could not run on the wheel after shot.)

Action: Wait until the failed ball is automatically recovered.

4.3 Error Messages During Game

The following error messages are displayed when an error occurred during game time.

Message: WHEEL OFF AND ON DURING GAME

Cause: The wheel unit was turned OFF then ON during the operating time

Action: Turn ON and OFF the RESET keyswitch.

Message: BALL RUN ERROR

Cause: The ball could not run properly on the wheel.

Action: Call qualified service personnel to check the BALL RUN sensor.
Turn ON and OFF the RESET keyswitch.

Message: MULTIPLE BALLS IN POCKET

Cause: Two or more balls are pocketed in the game play cycle.

Action: Call qualified service personnel to check the ball setting solenoids 1 and 2.
Turn ON and OFF the RESET keyswitch.

Message: NO BALL DETECTED

Cause: No ball fell in a pocket within the specified time after the shoot.

Action: Call qualified service personnel to check the blower, the ball shooting route, and/or WIN BALL sensor.
Turn ON and OFF the RESET keyswitch.

Message: SOLENOID 1 FAILED OR NO BALL

Cause: The next ball could not be set even after activating the ball setting solenoid 1 (upper solenoid).

Action: Call qualified service personnel to check the ball setting solenoid 1 and/or the NEXT BALL sensor.
Stock balls.
Turn ON and OFF the RESET keyswitch.

Message: WHEEL TYPE CHANGED

Cause: The wheel type was changed during the operating time.

Action: Call qualified service personnel to check the wiring of the POCKET sensor and the pocket magnets.
Turn ON and OFF the RESET keyswitch.

Message: Shoot mistake (Once again shoot)

Cause: A ball could not be properly shot. (The ball could not run on the wheel after shot.)

Action: Wait until the failed ball is automatically recovered.

4.4 DOOR OPEN Messages

If a door is opened during the operating time, the following messages appear on the monitor screen.

Message: M-DOOR OPEN

Cause: The door of the main control unit is open.

Action: Close the door.
Check the door lock.

Message: PCB-DOOR OPEN

Cause: The PCB box door is open.

Action: Close the door.
Check the door lock.

Message: M and PCB DOOR OPEN

Cause: Both doors of the main control unit and PCB box are open.

Action: Close the both doors.
Check the door locks.

5. SETTING ON STATION UNITS

5.1 Software Setting (SETTING)

The following software machine options can be configured on each station unit.



CAUTION!

The software setting must be performed by authorized personnel because it affects the machine operation.

NOTE

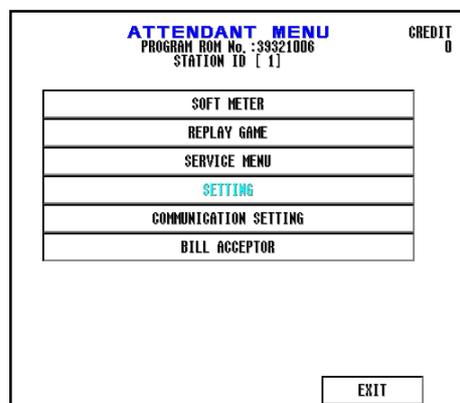
Before updating the machine options, turn OFF the POWER to set the PCB DIP switch post 8 (SETTING PROTECT) to OFF. Refer to Paragraph 5.3.1 for the DIP switch setting.

*If you try to change the options with the DIP switch post 8 ON, the message of “**NOW SETTING PROTECT MODE, SO DISABLE SETTING MENU**” is displayed on the monitor screen.*

After updating, be sure to return the DIP switch post 8 to OFF.

Procedure

1. Turn the METER keyswitch on the deck to call the ATTENDANT MENU.



2. Touch the SETTING to call the setting menu.

SETTING 1/3 CREDIT
4527

DENOMINATION	: \$1
MULTI BET	: 10, 50, 100
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
MECHA. METER TYPE	:
<small>BET HON ATTEN. DROP COIN COIN PLAY ERROR</small>	
RESULT WINDOW	: OFF
DIP SW. SETTING	:

SETTING 2/3 CREDIT
4527

MINIMUM BET

STRAIGHT UP (ONE SPOT)	: 1
SPLIT (TWO SPOTS)	: 1
THREE NUMBER (THREE SPOTS)	: 1
CORNER NUMBER (FOUR SPOTS)	: 1
SIX NUMBER (SIX SPOTS)	: 1
COLUMN (VERTICAL LINE)	: 1
DOZEN (1ST 12/2ND 12/3RD 12)	: 1
HIGH, LOW	: 1
RED, BLACK	: 1
EVEN, ODD	: 1

SETTING 3/3 CREDIT
4527

MAX BET

STRAIGHT UP (ONE SPOT)	: 20
SPLIT (TWO SPOTS)	: 20
THREE NUMBER (THREE SPOTS)	: 20
CORNER NUMBER (FOUR SPOTS)	: 20
SIX NUMBER (SIX SPOTS)	: 20
COLUMN (VERTICAL LINE)	: 20
DOZEN (1ST 12/2ND 12/3RD 12)	: 20
HIGH, LOW	: 20
RED, BLACK	: 20
EVEN, ODD	: 20

3. Touch your desired item <Example> to open its setting screen.
4. Select your desire value by touch.
5. Go back to the SETTING menu by "EXIT".
6. Now, your updated values are displayed in green on the SETTING menu.

DENOMINATION CREDIT
0

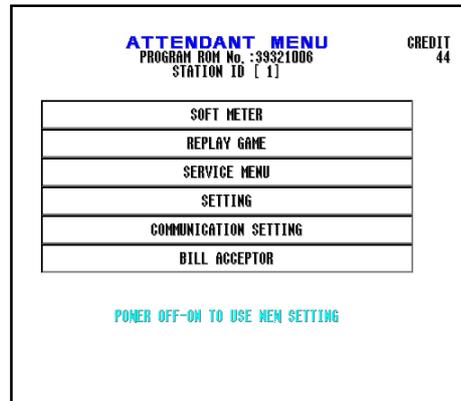
5¢	\$50	20H	1F	Rs10
10¢	\$100	20H	2F	Rs25
20¢	10C	50H	5F	FL5
25¢	20C	100H	10F	NONE \$
50¢	50C	50KK	50F	COIN
\$1	R1	100KK	100F	100t
\$2	R2	Rs5	NONE C	L1000
\$5	R5	S5	MEDAL	L2000
\$10	R10	S10	SIGMA	L5000
\$25	10H	S20	TOKEN	INSERT COIN

To cancel this new setting, touch "RETURN TO OLD DATA".
 To initialize all the items to the default values, touch "RETURN TO INIT. DATA".
 Refer to our Operation Manual, Paragraph 5.1.1 for the default values.

SETTING 1/2 CREDIT
241

DENOMINATION	: \$1
MINIMUM BET	: 1
MULTI BET	: 10 MODE: BET GAME: 9
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
MECHA. METER TYPE	:
<small>BET HON ATTEN. DROP COIN COIN PLAY ERROR</small>	
RESULT WINDOW	: ON
DIP SW. SETTING	:

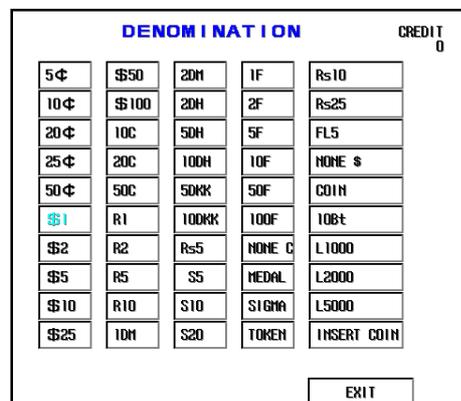
7. Go back to the ATTENDANT MENU by "EXIT".
8. When you updated the setting in Step 4, the message of **“POWER OFF-ON TO USE NEW SETTING”** is displayed on the ATTENDANT MENU.



9. Turn OFF-ON the station unit POWER switch to restart.
10. At initializing, the message of **“WARNING, ON-OFF RESET SW. TO START WITH NEW SETTINGS. OR, ON-OFF METER SW. TO CNACEL NEW SETTINGS.”** is displayed on the monitor screen.
11. Turn the RESET or METER keyswitch to go to the game mode.

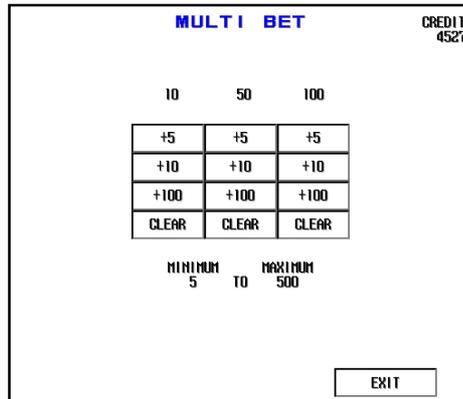
5.1.1 DENOMINATION

Set the denomination for the machine.



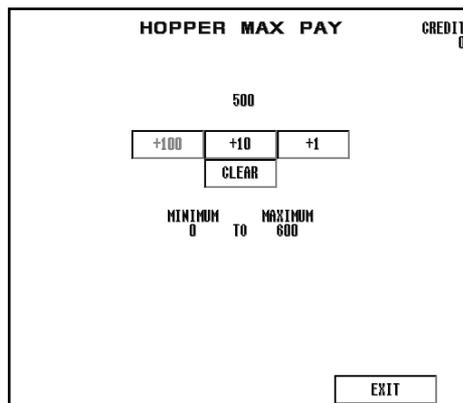
5.1.2 MULTI BET

Set the number of bets placed every time pressing the BET MULTIPLIER button on the deck.



5.1.3 HOPPER MAX PAY

Set the maximum number of coins dispensed from the hopper by pressing the PAYOUT button. To pay over this limit, attendant pay is necessary.

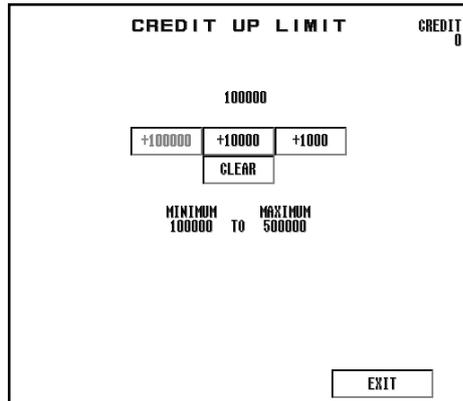


NOTE

When setting the HOPPER MAX PAY to 0, the errors of HOPPER RUNAWAY, HOPPER OVERPAID, HOPPER JAM, and HOPPER EMPTY cannot be detected. All the coins inserted are sent to the cash box.

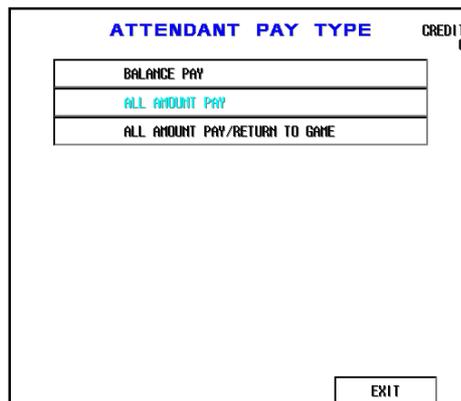
5.1.7 CREDIT UP LIMIT

Set the maximum number of credits the station unit can accept.



5.1.8 ATTENDANT PAY TYPE

Set the hand-pay option in case the PAYOUT button is pressed in the state where the reading of the CREDITmeter exceeds the preset HOPPER MAX PAY.



BALANCE PAY:

Because the hopper pays the same number of coins as the HOPPER MAX PAY, an attendant pays the balance after "HOPPER MAX PAY".

ALL AMOUNT PAY

Because the hopper pays no coin, an attendant pays for the entire credits.

ALL AMOUNT PAY/RETURN TO GAME

This is same as ALL AMOUNT PAY.

However, calling an attendant can be cancelled by pressing the PAYOUT button again to continue the game (the WIN lamp turns OFF).

5.1.9 CREDIT CLEAR

Set if the CREDIT CLEAR function is used or not. When used, the credit meter can be cleared by keeping the RESET keyswitch ON for 10 seconds.

CREDIT CLEAR	CREDIT 0
OFF	
ON	
EXIT	

5.1.10 MECHA. METER TYPE

Set the arrangement of your mechanical meters from the following.

MECHA. METER TYPE	CREDIT 0
NOT USED	
WON BET ATTEN. PAY DROP COIN IN COIN OUT PLAY ERROR TIMES	
WON BET ATTEN. PAY DROP COIN IN COIN OUT PLAY BILL IN	
WON BET ATTEN. PAY DROP CREDIT UP COIN OUT PLAY ERROR TIMES	
EXIT	

NOT USE

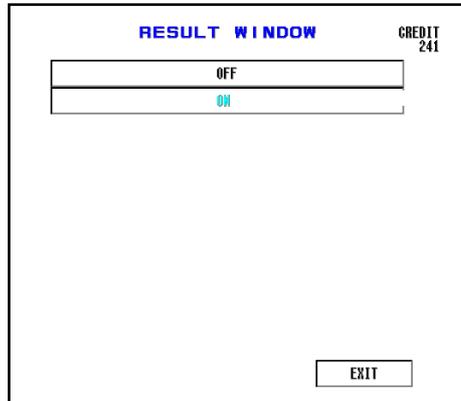
WON/BET/ATTEN.PAY/DROP/COIN IN/COIN OUT/PLAY/ERROR TIMES

WON/BET/ATTEN.PAY/DROP/COIN IN/COIN OUT/PLAY/BILL IN

WON/BET/ATTEN.PAY/DROP/CREDIT UP/COIN OUT/PLAY/ERROR TIMES

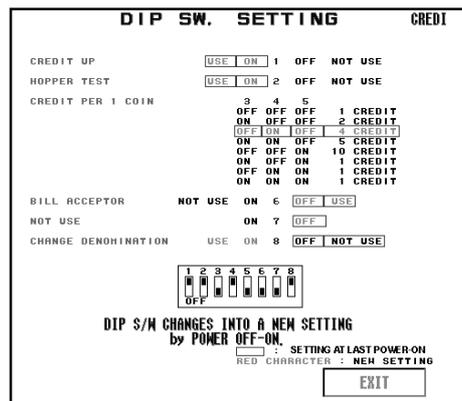
5.1.11 RESULT WINDOW

Set if the WIN history pop-up window is used or not. When used, the window appears by touching the WIN history bar to show the detailed information about each number.



5.1.12 DIP SW. SETTING

The DIP switch setting of this station unit can be viewed. Refer to Paragraph 5.3.1 for the DIP switch setting.

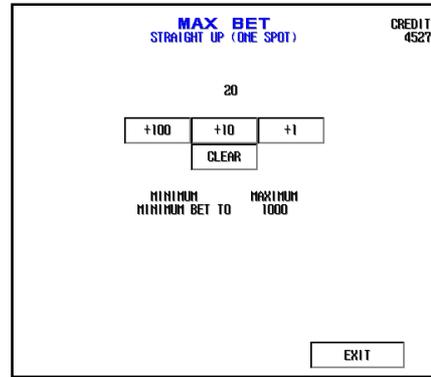
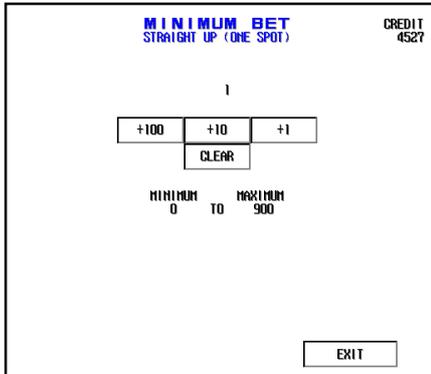


The setting at the most recent power-up is indicated in a green box.

The current setting is in red. Therefore, when you did not change any setting, the red values are always in green boxes.

5.1.13 STRAIGHT UP (ONE SPOT)

Go to Page 2/3 and Page 3/3 to set the minimum number of bets (MINIMUM BET) and the maximum number of bets (MAX BET) that you can place on each STRAIGHT UP.



NOTE

If setting the MINIMUM BET to be higher than the MAX BET, as soon as exiting the MINIMUM BET setting mode, it is automatically corrected to a same value as MAX BET.

5.1.14 SPLIT (TWO SPOTS)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each SPLIT.

5.1.15 THREE NUMBER (THREE SPOTS)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each THREE NUMBER.

5.1.16 CORNER NUMBER (FOUR SPOTS)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each CORNER NUMBER.

5.1.17 SIX NUMBER (SIX SPOTS)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each SIX NUMBER.

5.1.18 COLUMN (VERTICAL LINE)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each COLUMN.

5.1.19 DOZEN (1ST 12/2ND 12/3RD 12)

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of each DOZEN.

5.1.20 HIGH, LOW

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of 1 TO 18/19 TO 36.

5.1.21 RED, BLACK

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of RED/BLACK.

5.1.22 EVEN, ODD

Same as for STRAIGHT UP (ONE SPOT), set the MINIMUM BET and the MAX BET of EVEN / ODD.

5.2 COMMUNICATION SETTING

To communicate with an external equipment, set the following options.



CAUTION!

This setting must be performed by authorized personnel because it affects the machine operation.

NOTE

Before this setting, turn OFF the POWER to set the PCB DIP switch post 8 (SETTING PROTECT) to OFF.

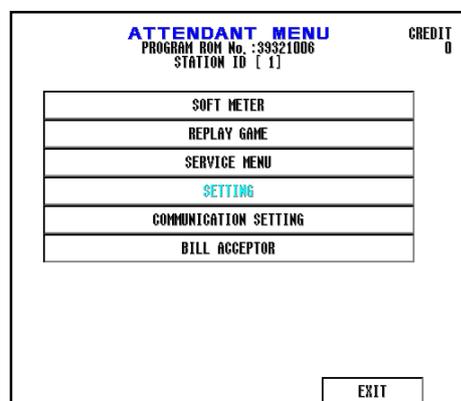
Refer to Paragraph 5.3.1 for the DIP switch setting.

*If you try to change the options with the DIP switch post 8 ON, the message of **“NOW SETTING PROTECT MODE, SO DISABLE SETTING MENU”** is displayed on the monitor screen.*

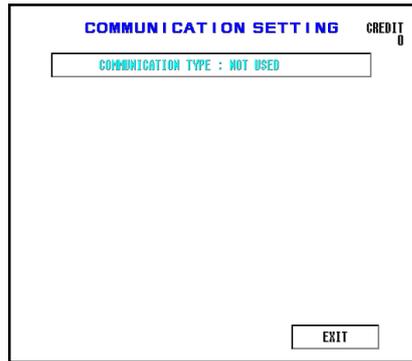
After updating, be sure to return the DIP switch post 8 to OFF.

Procedure

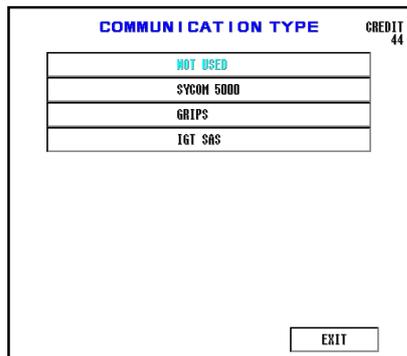
1. Turn the METER keyswitch on the deck to call the ATTENDANT MENU.



2. Touch the COMMUNICATION SETTING to open it.



3. Touch the COMMUNICATION TYPE to open the setting screen.

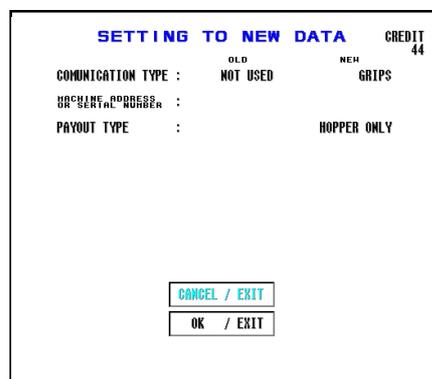


4. Select your desire communication method in the following manner.

5.2.1 NOT USED

Procedure

1. Select NOT USED by touch.
2. Touch “EXIT” to display the following confirmation screen.

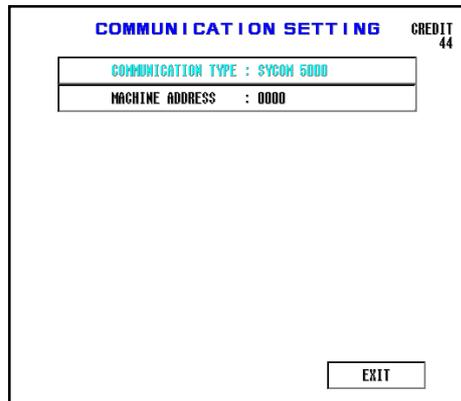


3. Touch “OK/EXIT” to use the new setting.
Touch “CANCEL/EXIT” to cancel.

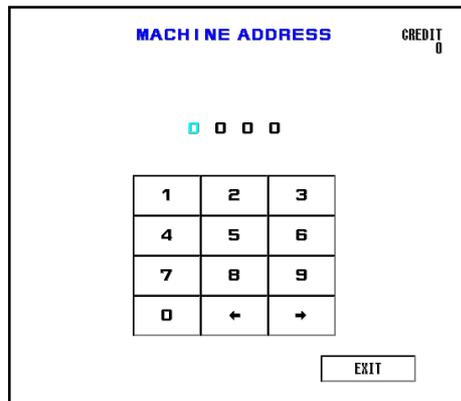
5.2.2 SYCOM 5000

Procedure

1. Touch SYCOM 5000 to display the following screen.



2. Touch MACHINE ADDRESS to display the setting screen.

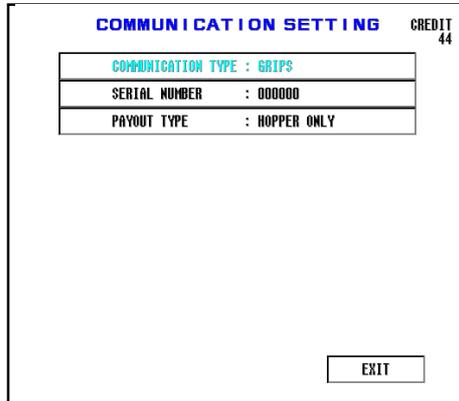


3. Set the machine address by touch.
4. Using “EXIT”, go to the confirmation screen.
5. Touch “OK/EXIT” to use the new setting.
Touch “CANCEL/EXIT” to cancel.

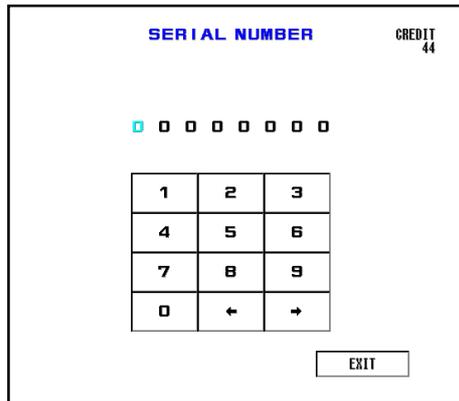
5.2.3 GRIPS

Procedure

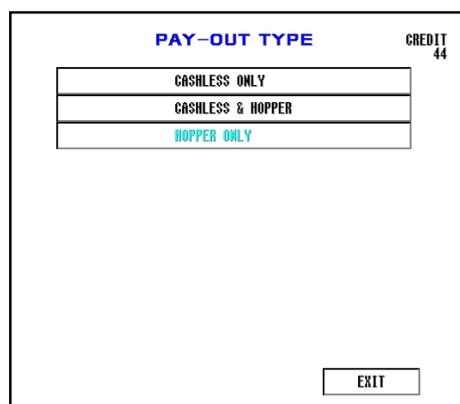
1. Touch GRIPS to display the following screen.



2. Touch SERIAL NUMBER to open the setting screen.



3. Go back to the previous screen by “EXIT” to open the PAYOUT TYPE.

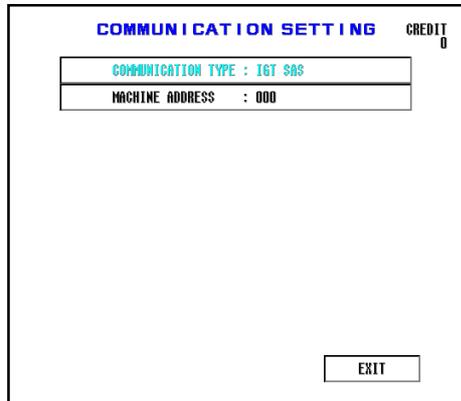


4. After setting the PAYOUT TYPE, go to the confirmation screen by “EXIT”.
5. Touch “OK/EXIT” to use the new setting.
Touch “CANCEL/EXIT” to cancel.

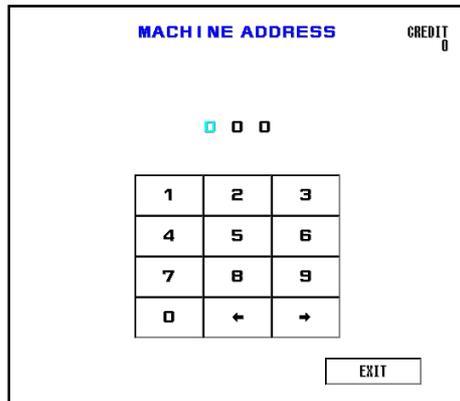
5.2.4 IGT SAS

Procedure

1. Touch IGT SAS to display the following screen.



2. Touch MACHINE ADDRESS to display the setting screen.



3. Set the machine address by touch.
4. Using “EXIT”, go to the confirmation screen.
5. Touch “OK/EXIT” to use the new setting.
Touch “CANCEL/EXIT” to cancel.

5.3 Hardware Setting

5.3.1 Setting the DIP switch on the station PCB

The machine options can be set by the DIP switch on the station PCB.

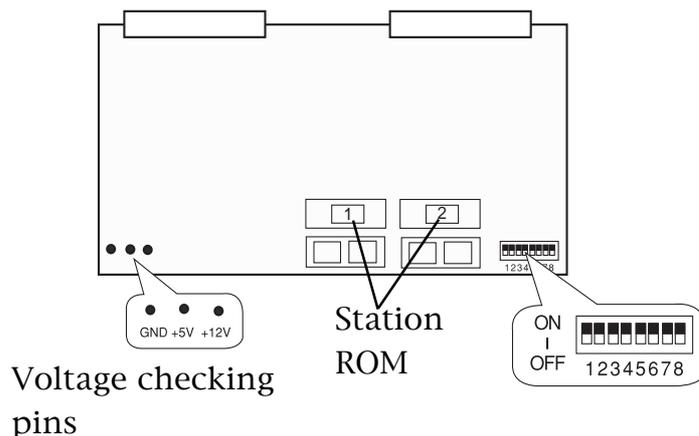


CAUTION !

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

Procedure

1. Open the front door of the station unit to find the PCB box.
2. Unlock the PCB box to withdraw the station PCB.



3. Set the DIP switch by using the following list.

Switch Post #1

- ON: **Manual posting of credits (credit-up) is available.**
 OFF: **Manual posting of credits (credit-up) is not available.**

Switch Post #2

- ON: **Testing the hopper is available.**
 OFF: **Testing the hopper is not available.**

Switch Posts #3 to #5

Used to set the number of credits to one coin.

#3	#4	#5	
OFF	OFF	OFF	1 credit
ON	OFF	OFF	2 credits
OFF	ON	OFF	4 credits
ON	ON	OFF	5 credits
OFF	OFF	ON	10 credits
ON	OFF	ON	1 credit
OFF	ON	ON	1 credit
ON	ON	ON	1 credit

Switch Post #6

ON: **A bill acceptor is not used.**

OFF: **A bill acceptor is used.**

Switch Post #7: Not used

Switch Post #8 (SETTING PROTECT)

ON: **The software setting cannot be changed.**

OFF: **The software setting can be changed.**

NOTE

Just after updating the software, be sure to turn ON the post #8.

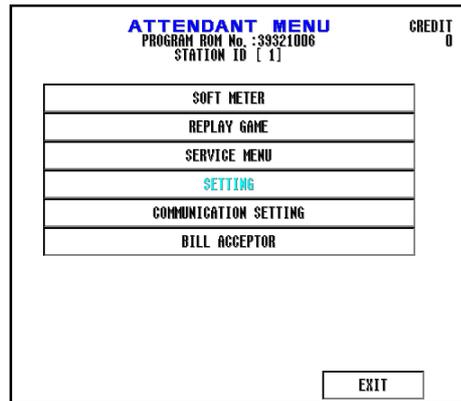
4. After changing the DIP switch setting, turn OFF-ON the power to restart the station unit.
5. At initializing, the message of **“WARNING, DIP SW. OR JUMPER SETTING STATUS IS CHANGED. TURN ON-OFF RESET SW. FOR USING NEW SETTING. GAME DATA EXCEPT METERS ARE CLEARED”** is displayed on the monitor screen.
6. Turn the RESET keyswitch to go back to the game mode.

6. TEST ON STATION UNITS

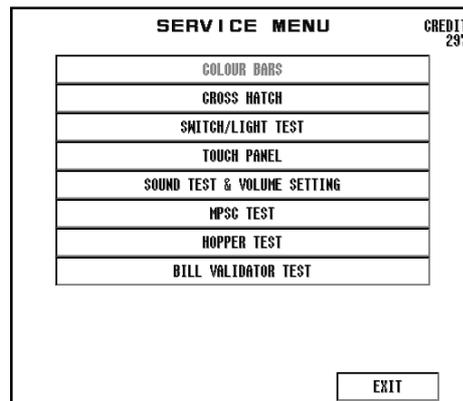
The diagnostic tests that can be performed on a station unit are outlined below.

Procedure

1. Call the ATTENDANT MENU by turning the METER keyswitch.

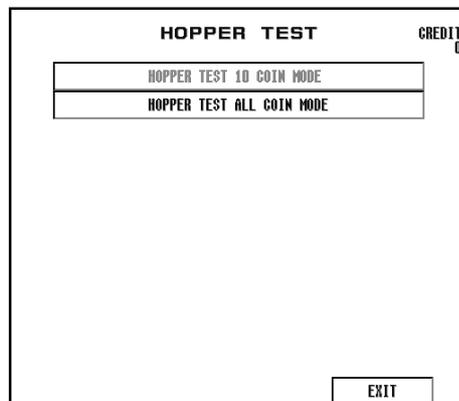


2. Touch the SERVICE MENU to open the test menu.



3. Open your desired test to perform the test.

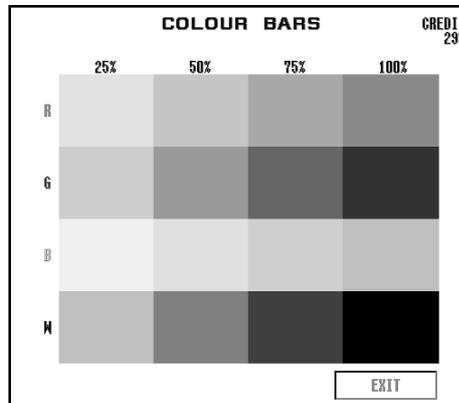
<Example>



4. To exit the test mode, touch "EXIT".

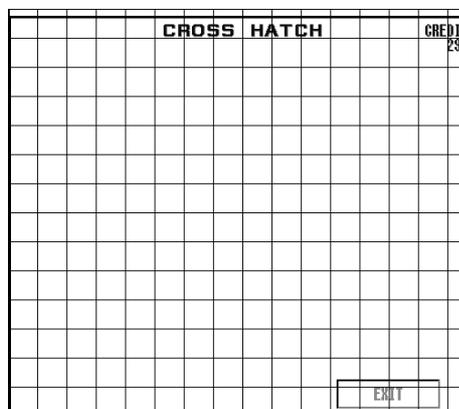
6.1 COLOUR BARS

Open the COLOUR BARS from the SERVICE menu to test the monitor screen. If any adjustment is necessary, call qualified service personnel.



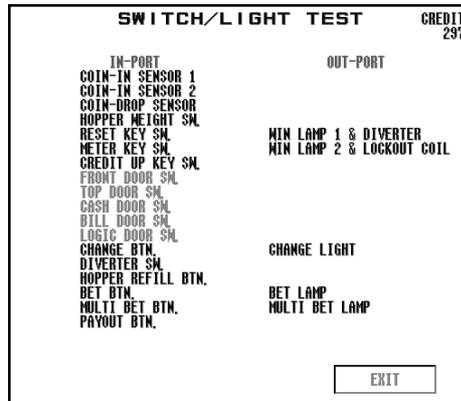
6.2 CROSS HATCH

Open the CROSS HATCH from the SERVICE menu to test the monitor screen. If any adjustment is necessary, call qualified service personnel.



6.3 SWITCH/LIGHT TEST

Open the SWITCH/LIGHT TEST from the SERVICE menu to test the switches and lights in the following procedure.

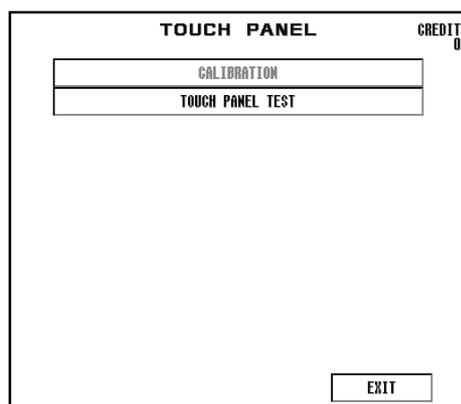


Procedure

1. Activate the object to be tested.
2. When it is normal, the name on the screen turns from white to red, or from red to white.
3. To exit from this mode, touch "EXIT".

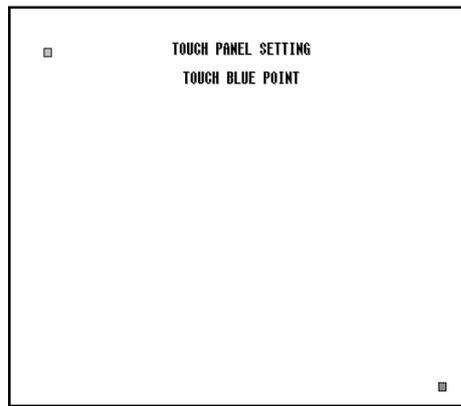
6.4 TOUCH PANEL

Open the TOUCH PANEL from the SERVICE MENU to test and adjust the touch panel over the monitor screen.



6.4.1 CALIBRATION

Open the CALIBRATION from the TOUCH PANEL menu to make the positional adjustment of the touch panel in the following procedure.



Procedure

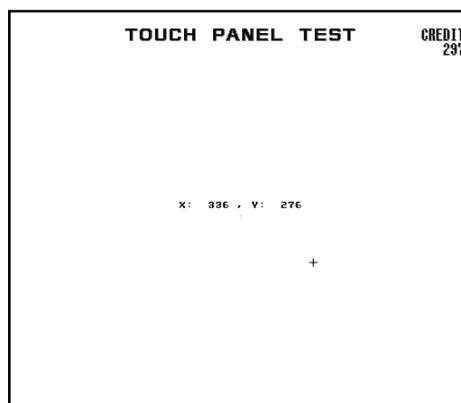
1. Touch the blue point at the upper left of the screen.
2. Touch the red point at the lower right of the screen.
3. The touch panel is calibrated, then the TOUCH PANEL menu will be back.

6.4.2 TOUCH PANEL TEST

Test the touch panel in the following procedure.

Procedure

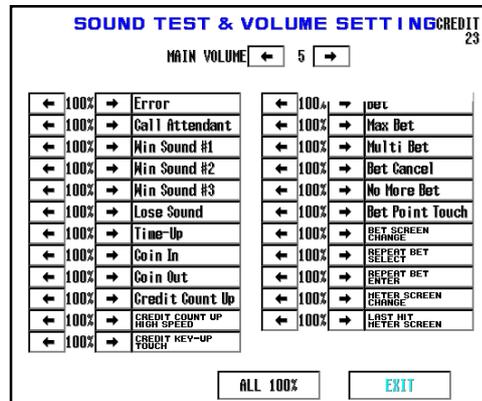
1. Open the TOUCH PANEL TEST from the TOUCH PANEL menu.
2. Touch your desired point on the screen.
3. The crosshair is displayed with its coordinates.



4. If the crosshair deviates from the exact point you touched, make the positional adjustment referring to Paragraph 6.4.1, "CALIBRATION".
5. To exit from this test mode, press the BET MULTIPLIER button on the deck.

6.5 SOUND TEST & VOLUME SETTING

Open the SOUND TEST & VOLUME SETTING from the SERVICE menu to test and adjust the event sound volume on the station unit.



Procedure

1. Set the MAIN VOLUME by touching the arrows.

NOTE

This setting will be applied to all the sounds on the station unit.

2. Adjust the balance of each event sound by touching the arrows. To set all the event sounds to 100%, touch **"ALL 100%"**.
3. To exit from this mode, touch "EXIT".

6.6 MPSC TEST

Open the MPSC TEST from the SERVICE menu to see the communication report with the control unit.

MPSC TEST		CREDIT
SEND ABORT	: 0	297
DELECT ABORT	: 0	
OVER RUN	: 0	
CRC ERROR	: 0	
SHORT ERROR	: 0	
		EXIT

If no sound is heard, or if the error counts are extremely high, contact to Sigma Inc. or your nearest distributor

6.7 HOPPER TEST

Open the HOPPER TEST from the SERVICE menu to test the hopper in the following procedure.

NOTE

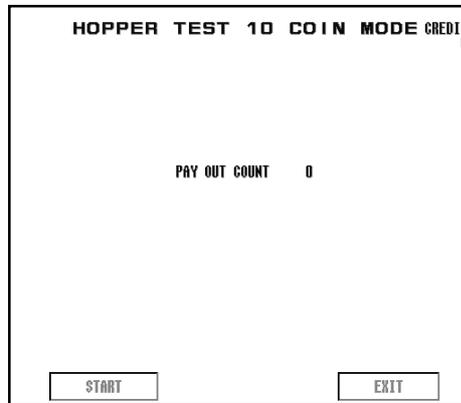
This function can be used only when the station unit DIP switch post 2 is ON. For the DIP switch setting, refer to Paragraph 5.3.1.

HOPPER TEST		CREDIT
HOPPER TEST 10 COIN MODE		0
HOPPER TEST ALL COIN MODE		
		EXIT

6.7.1 HOPPER TEST 10 COIN MODE

Procedure

1. Open the HOPPER TEST 10 COIN MODE from the HOPPER TEST menu by touch.

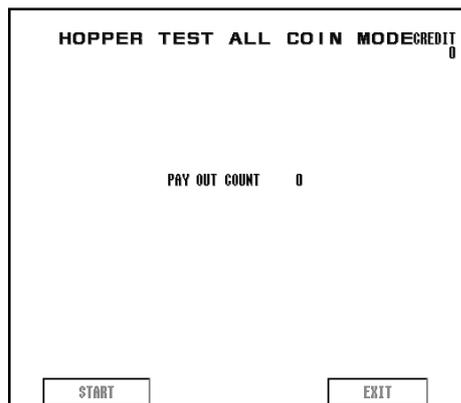


2. Touch "START" to check the hopper paying out 10 coins.
3. To exit from this mode, touch "EXIT".

6.7.2 HOPPER TEST ALL COIN MODE

Procedure

1. Open the HOPPER TEST ALL COIN MODE from the HOPPER TEST menu by touch.



2. Touch "START" to check the hopper paying out all the coins.
3. To abort this payout, touch "STOP" or press the BET MULTIPLIER button on the deck.
4. To exit from this mode, touch "EXIT".

6.8 BILL VALIDATOR TEST

Open the BILL VALIDATOR TEST from the SERVICE menu to test the bill validator in the following procedure.

NOTE

The BILL VALIDATOR TEST is not displayed on the SERVICE menu when the station unit DIP switch post 6 is OFF.

For the DIP switch setting, refer to Paragraph 5.3.1.

```
BILL VALIDATOR TEST CREDIT 0
CONNECT TO BILLVALIDATOR
JUN 10 10:03:03 1996 3720
VEND : VEND NO. 1
VEND : VEND NO. 2
VEND : VEND NO. 3
VEND : VEND NO. 4
BUSY
STACK FULL
ALARM
LAST INSERTED BILL
INSERTED BILL : $10
ERROR STATUS
STACKER RESET EXIT
```

Procedure

1. Insert a bill into the bill entry.
2. Check the correct money value is displayed at LAST INSERTED BILL.
3. To initialize this bill validator, touch "STACKER RESET" or press the BET MULTIPLIER button on the deck.
3. To exit from this mode, touch "EXIT".

7. CLEARING COIN/BILL JAM

If a coin or bill jam occurred, use the following procedures.



WARNING !

Risk of Hurt

When opening the upper door, be sure to lock the stay by hand.

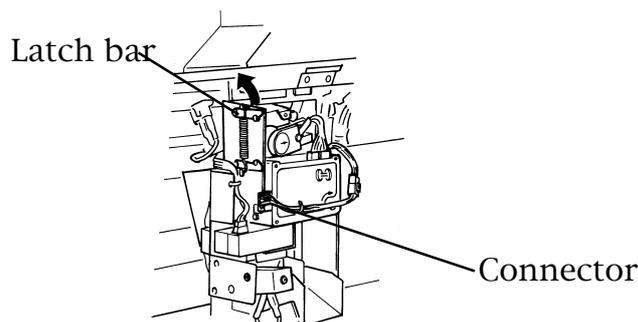
7.1 Clearing COIN-IN Jam

Clear a COIN-IN jam in the following procedure.

7.1.1 When CC-16 coin acceptor is used

Procedure

1. Open the front door of the station unit to turn OFF the power.
2. Open the upper door to find the coin acceptor just below the coin entry.
3. Disconnect the connector and unlatch the coin acceptor.

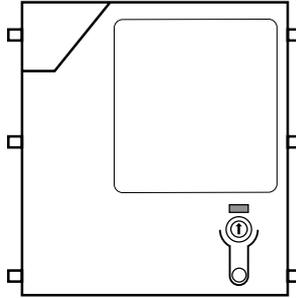


4. Take out the coin acceptor to clear the jamming coin.
5. After clearing the jam, return the coin acceptor to the previous position in the reverse order of the above.
6. Close the upper door carefully.
7. Turn ON the power before closing the front door.

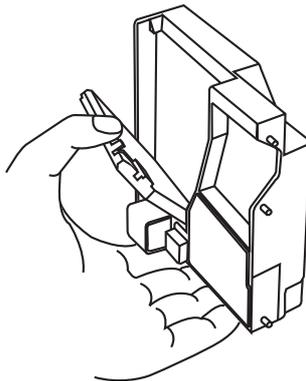
7.1.2 When CONDOR coin acceptor is used

Procedure

1. Open the front door of the station unit to turn OFF the power.
2. Open the upper door to find the coin acceptor just below the coin entry.



3. Unlatch the coin acceptor to disconnect the connector.
5. Take out the coin acceptor to clear the jamming coin.



6. After clearing the jam, connect the connector to return the coin acceptor to the previous position.
7. Close the upper door.
8. Turn ON the power before closing the front door.

7.2 Clearing Bill Jam in Bill Acceptor

Clear a bill jam in the following procedure.



WARNING !

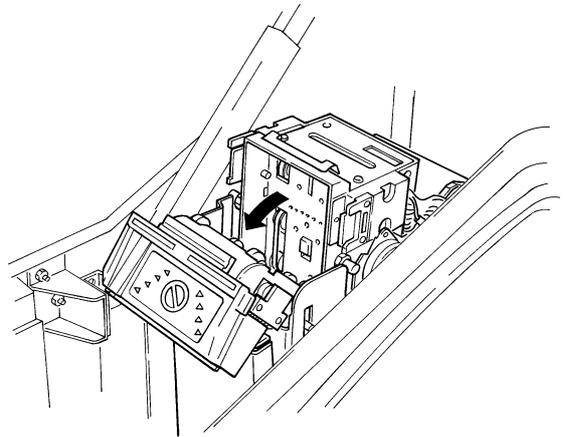
Risk of Hurt

When opening the upper door, be sure to lock the stay by hand.

7.2.1 When GPT/SBB bill acceptor is used

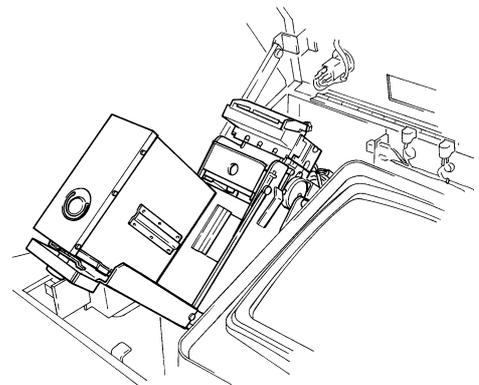
Procedure

1. Open the front door of the station unit to turn OFF the power.
2. Open the upper door to find the bill acceptor.
3. Open the acceptor head to clear the jamming bill.
4. Close the head.



If the jam occurred near the inlet of the bill stacker;

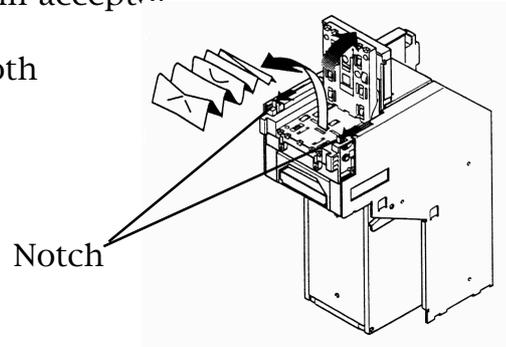
5. Hold the bottom of the bill stacker container, and raise it until it is locked.
6. Unlock the door of the bill stacker container to take out the bill stacker.
7. Clear the jamming bill.
8. After clearing the jam, return the bill stacker into the container, then the container into the machine in the reverse order of the above.
9. Close the upper door carefully.
10. Turn ON the power before closing the front door.



7.2.2 When WBA bill acceptor is used

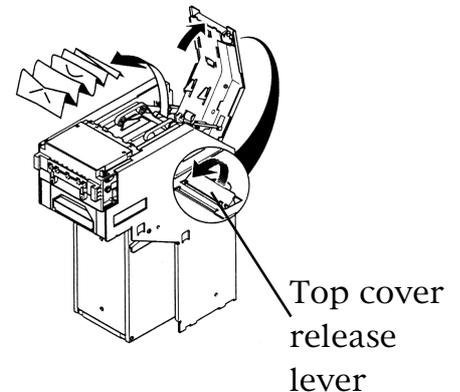
Procedure

1. Open the front door of the station unit to turn OFF the power.
2. Open the upper door to find the bill acceptor
3. Pull forward the notches on the both sides of the bill acceptor to open the acceptor head.
4. Clear the jamming bill.
5. Close the head.



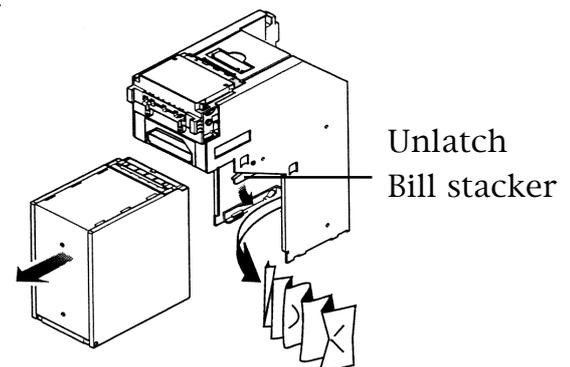
If the jamming bill occurred in the transfer section;

6. Pull up the top cover release lever to open the top cover.
7. Clear the jamming bill.
8. Close the top cover.



If the jam occurred near the inlet of the bill stacker;

9. Hold the handle of the bill stacker container and raise it until locked.
10. Unlock the door of the bill stacker container.
11. Unlatch the bill stacker to take out the stacker.
12. Clear the jamming bill.
13. After clearing the jam, return the bill stacker into the container, then the container into the machine in the reverse order of the above.
14. Close the upper door carefully.
15. Turn ON the power before closing the front door.



7.3 Clearing Hopper Jam

Clear a hopper jam in the following procedure.



WARNING !

RISK OF BURN

The shield of the hopper motor may be hot.

Wait until the shield cools down before touching the hopper.

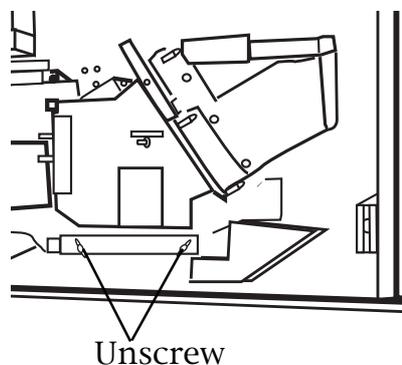
RISK OF HURT

Do not turn the shelf wheel forcibly for clearing a jamming coin.

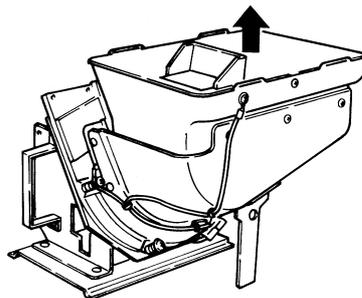
When the hopper is heavy with coins, remove the coins from the hopper.

Procedure

1. Open the front door of the station unit to turn OFF the power.
2. Loosen the thumb screws of the hopper to withdraw the hopper.



3. Remove the cover from the hopper.



4. Clear the jamming coin.
 - (1) Manually rotate the shelf wheel first counterclockwise, then clockwise to free the coins.
 - (2) Push the jamming coin back in by using the edge of similar coin.
5. After clearing the jam, return the hopper to the previous position in the reverse order of the above.
6. Turn On the power before closing the front door.

8. ADJUSTMENT



WARNING !

Risk of Hurt

When opening the upper door, be sure to lock the stay by hand.

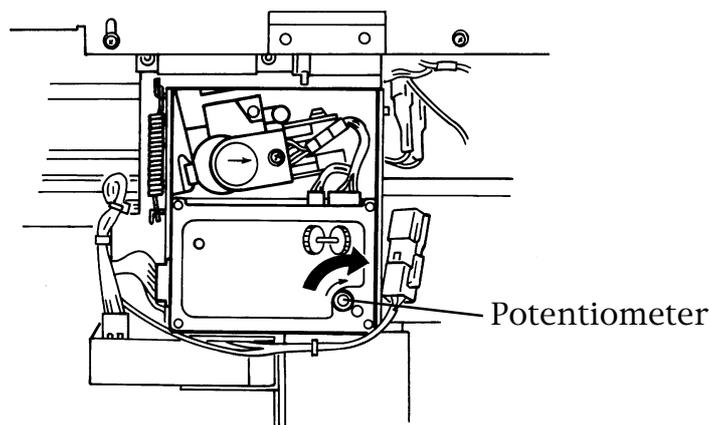
8.1 Adjusting Coin Acceptor

Use the following procedure to adjust the coin acceptor.

8.1.1 When CC-16 coin acceptor is used

Procedure

1. Open the front and upper doors of the station unit to find the coin acceptor just below the coin entry.
2. Locate the potentiometer on the lower right position of the acceptor.
3. Slightly turn the potentiometer clockwise.

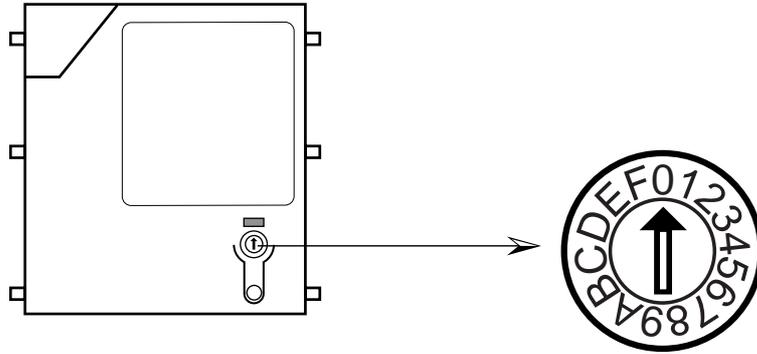


4. Close the front and upper doors to insert a high quality slug.
5. Adjust the potentiometer again until the slug is rejected.
6. Insert the proper coin to verify the acceptance.
7. Repeat the above steps as necessary.

8.1.2 When CONDOR coin acceptor is used

Procedure

1. Open the front and upper doors of the station unit to find the coin acceptor just below the coin entry.



2. Locate the arrow indicator on the lower right of the coin acceptor.
 - (1) Set the arrow indicator to zero for the standard setting.
 - (2) Turn the arrow indicator clockwise to increase the selectivity for your coinage.
 - (3) Turn the arrow indicator counterclockwise to increase the rejectivity against slugs.
3. Close the front and upper doors to check the selectivity/rejectivity by inserting proper coins and/or high quality slugs.
4. Repeat the above steps as necessary.

9. CLEANING MACHINE

Clean this machine daily as shown below.



CAUTION !

Be sure to turn OFF the machine before cleaning.

Never use a water jet for cleaning.

Procedure

1. Clean the machine surface.



CAUTION!

Never use chemical duster, thinner, benzine or alcohol.

It will damage the machine surface.

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

2. Clean the touch panel over the monitor screen with soft cloth.
The static electricity gathers dust.
When removing the touch panel, perform the calibration referring to Paragraph 6.4.1.



CAUTION!

Never use wet cloth.

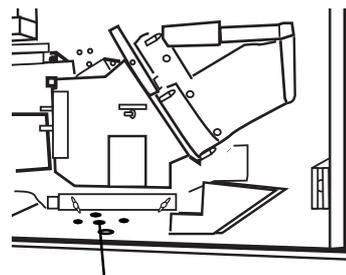
Do not rub the screen.

3. Vacuum inside a station unit to remove all dust and debris from the coin chute and hopper.
4. Remove loose coins inside a station unit.



WARNING!

A loose coin could cause an unexpected hazard including an electric shock.



Loose
coins

10. TECHNICAL DATA

10.1 Overall Dimension and Weight

When 10 station units installed;

Dimension: 3445.4(W) x 2725.4 (D) x 2150/2500 (H)

Weight: 1,727 Kg

When 8 station units installed;

Dimension: 2725.4 (W) x 2725.4 (D) x 2150/2500 (H)

Weight: 1,423 Kg

10.2 Utility

Rated voltage

- a) Europe 230VAC, 50Hz
- b) Korea 220VAC, 60Hz
- b) Other areas 220/230/240VAC, 50/60Hz
110/120VAC, 50/60Hz

Maximum power consumption:

2.68Kw(50Hz/60Hz)

Maximum current draw:

31.9A (60Hz) at 110VAC

29.2A (60Hz) at 120VAC

16.2A (60Hz) at 220VAC

13.4A (50Hz) at 230VAC

12.7A (50Hz) at 240VAC

Temperature:

5 to 35 degrees C

Humidity: 30 to 60%, Free from dew condensation

10.3 Environment

Temperature: 5 to 35 degrees C

Humidity: 30 to 80%, Free from dew condensation

10.4 Coin Capacity

Hopper: 1000 coins (US 25 cents)

Coin tray: 6000 coins (US 25 cents)

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