

**ATOMISWAVE™**

<System Board>

# Instruction Manual

## **Caution**

Read through these instructions before using the product to ensure that you fully understand them so you can use the product safely. After reading, keep the manual in a predetermined position for ready reference.



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# Introduction

Thank you very much for purchasing the ATOMISWAVE system board.

This book is an instruction manual for the system board.

Written for the owner, manager and administrator of the product, it covers instructions on how to use the product safely, including administration, maintenance and inspections.

Have only those persons who have read through this manual carefully administer, maintain and inspect the product. Keep the manual in a safe place so you can refer back to it during its routine administration as needed.

Information in the manual is subject to change without notice for product improvement purposes.

## Read Before Using the Product

Read through these instructions thoroughly before using the product to ensure that you fully understand them so you can use the product safely.

- This system board is a JAMIMA-compliant (56-pin edge terminal) product.

## ● Specifications

Physical Dimensions	271 mm (H) x 229.4 mm (D) x 63.8 mm (H)
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If you lose this manual, notice inaccuracies in it or have comments or suggestions, please contact the following:

### **Sammy Corporation**

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The addresses and phone numbers described above are as of December 2002.

# 1. Safety Precautions

## ● Levels of Danger

These precautions show important safety information to you. Observe them by all means. In this manual, the hazardous situations that might arise if the product is handled improperly are classified into the following levels:

 <b>DANGER</b>	Improper handling in defiance of this marking could imminently <b>result in death or serious injury or in property damage.</b>
 <b>WARNING</b>	Improper handling in defiance of this marking could <b>result in death or serious injury or in property damage.</b>
 <b>CAUTION</b>	Improper handling in defiance of this marking could <b>result in injury or property damage.</b>
<b>IMPORTANT</b>	Improper handling in defiance of this marking could <b>result in degraded or disabled performance of the product.</b>

## ● Pictorials

The following pictorials are used in this manual to alert users to safety practices:

	Represents a prohibited action that must not be taken.
	Represents a required action that must always be taken.

### ● Users

Have shop servicepersons or technicians replace parts, and maintain, inspect and troubleshoot the product.

#### Shop Servicepersons

A shop serviceperson is an individual who has experience in maintaining and repairing AM equipment and who is routinely engaged in the work of maintaining and managing AM equipment at an AM facility or shop through assembly, installation, maintenance and inspection of the AM equipment, replacement of units and supplies and so forth under the AM equipment owner's supervision.

#### Technicians

A technician is a person who is engaged in the work of function design, manufacturing, inspection and maintenance services at an AM equipment manufacturer and who has knowledge equivalent or superior to that attained by a graduate of a technical high school or who is routinely engaged in the work of maintaining, managing and repairing AM equipment.

### ● Handling Precautions

#### WARNING



Be sure to switch off the power to the cabinet before attaching or detaching the system board or ROM or expansion cartridges. Electrical shock hazards or damage to the board could result.



Mount the system board with an enough clearance to keep the exhaust heat fan opening on the back of the board from being blocked. Failures could result in overheating. Be also careful to avoid dust deposition around the system board. Dust deposited on the forced-air-cooled system board could form a short circuit, leading to ignition under resultant heat.

#### IMPORTANT



Connect the board, connector and ROM and expansion cartridges completely. Incomplete connections could cause the board to fail.



Use maximum care not to drop the system board and ROM or expansion cartridges or give strong impact to them.

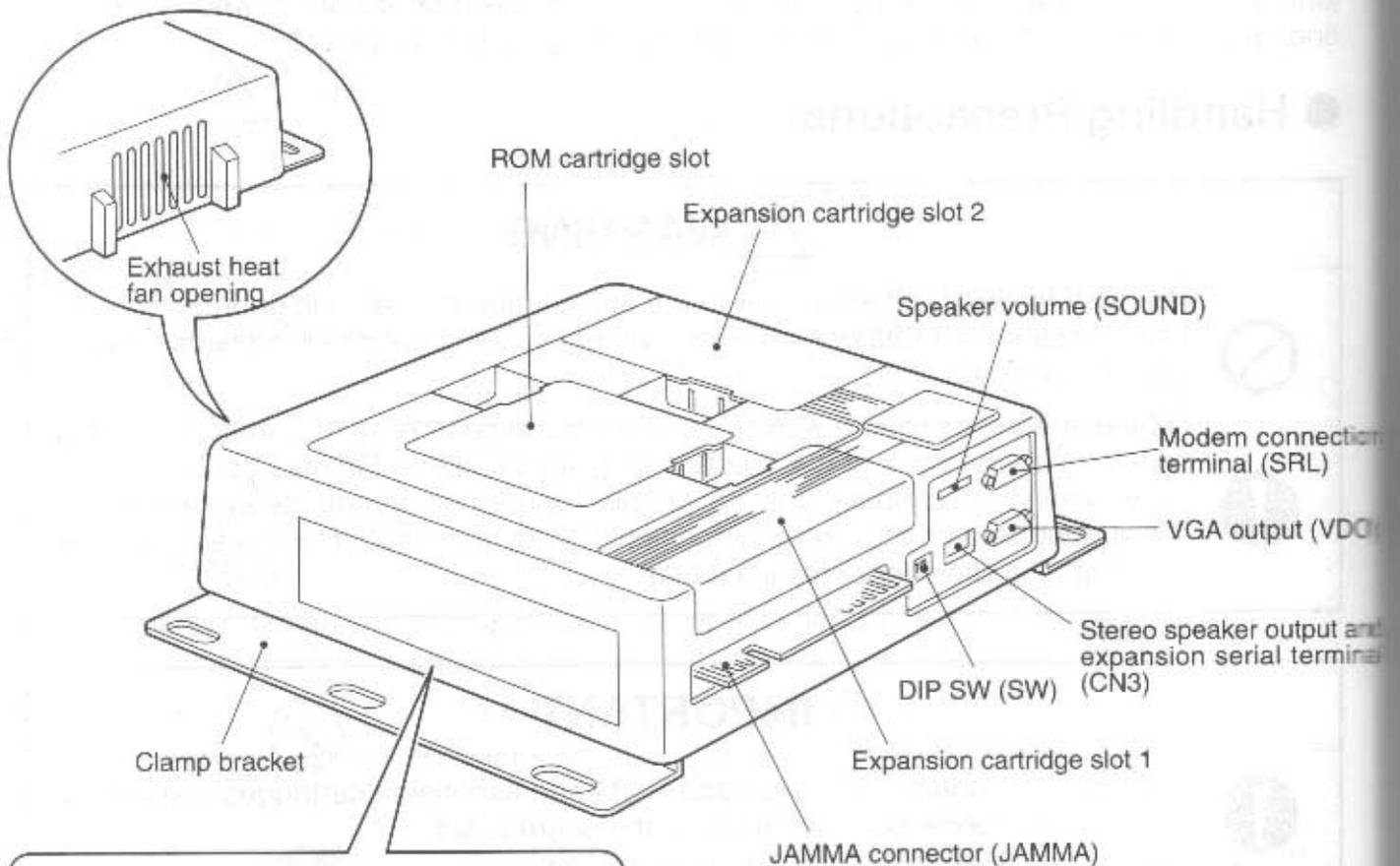


Never make unauthorized modifications to the product specifications, such as overhaul, tampering and alteration. Fires, electrical shock hazards or failures could result. We are not liable for accidents resulting from such unauthorized modifications to the product.

## 2. Accessory List

- Instruction Manual (this book) ..... 1

## 3. Component Names



**注意/CAUTION**

故障の原因となりますので、ROMカートリッジ及びハーネスを抜き差しする場合は必ず電源を切ってから作業してください。

• BE SURE TO TURN OFF THE POWER BEFORE YOU INSTALL OR REMOVE THE ROM CARTRIDGE OR WIRE HARNESS. OTHERWISE, THEY MAY BE DAMAGED.

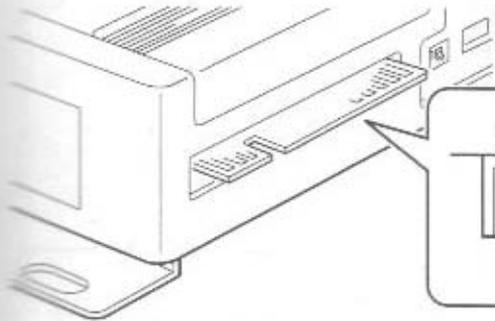
## 4. Component Description



### CAUTION

Never touch the connector and terminals to prevent possible failures.

### JAMMA connector (JAMMA)



\*On the back of 1 is A.

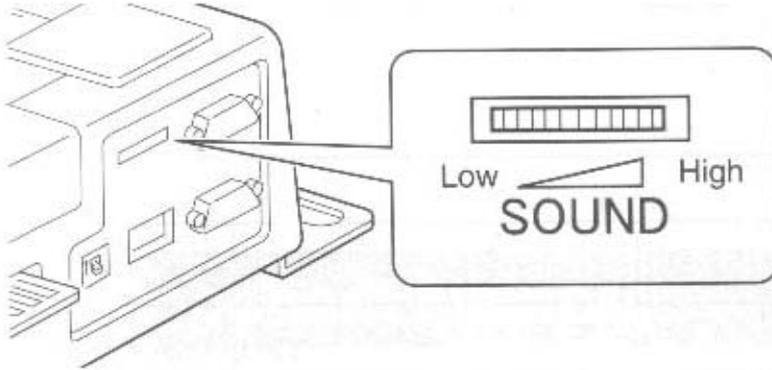
JAMMA edge terminal (56-pin JAMMA edge terminal)

No.	Signal name	I/O	No.	Signal name	I/O
1	GND	-	A	GND	-
2	GND	-	B	GND	-
3	+5V	IN	C	+5V	IN
4	+5V	IN	D	+5V	IN
5	N.C.	-	E	N.C.	-
6	+12V	IN	F	+12V	IN
7	N.C.	-	H	N.C.	-
8	1P COIN COUNTER	OUT	J	2P COIN COUNTER	OUT
9	1P COIN LOCKOUT	OUT	K	2P COIN LOCKOUT	OUT
10	MONO SPEAKER (+)	OUT	L	MONO SPEAKER (-)	OUT
11	AUDIO OUT	OUT	M	AUDIO GND	-
12	VIDEO RED	OUT	N	VIDEO GREEN	OUT
13	VIDEO BLUE	OUT	P	VIDEO SYNC	OUT
14	VIDEO GND	-	R	SERVICE SW	IN
15	TEST SW	IN	S	TILT SW	IN
16	1P COIN	IN	T	2P COIN	IN
17	1P START	IN	U	2P START	IN
18	1P UP	IN	V	2P UP	IN
19	1P DOWN	IN	W	2P DOWN	IN
20	1P LEFT	IN	X	2P LEFT	IN
21	1P RIGHT	IN	Y	2P RIGHT	IN
22	1P PUSH1	IN	Z	2P PUSH1	IN
23	1P PUSH2	IN	a	2P PUSH2	IN
24	1P PUSH3	IN	b	2P PUSH3	IN
25	1P PUSH4	IN	c	2P PUSH4	IN
26	1P PUSH5	IN	d	2P PUSH5	IN
27	GND	-	e	GND	-
28	GND	-	f	GND	-

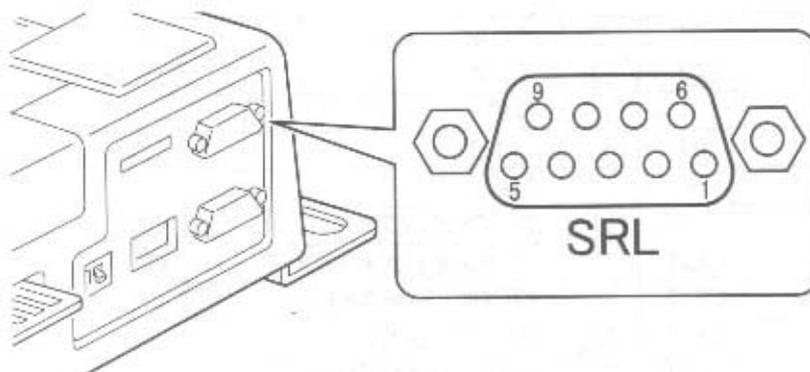
## 4. Component Description

### ■ Speaker volume (SOUND)

Adjusts the speaker sound volume.



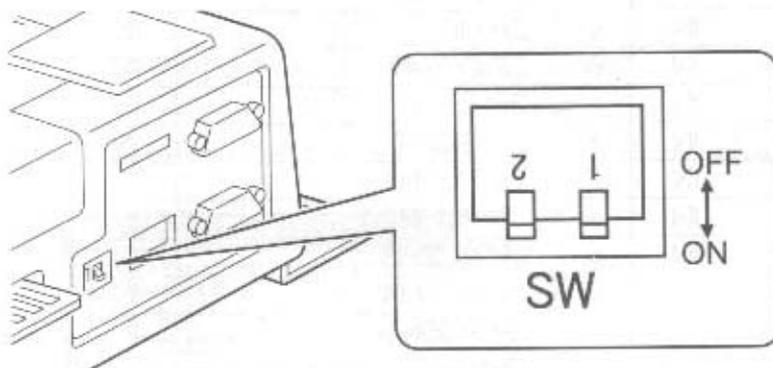
### ■ Modem connection terminal (SRL)



JST 9-pin D-sub connector, male

No.	Signal name	I/O
1	(N.C.)	-
2	RXD2	IN
3	TXD2	OUT
4	DTR	OUT
5	GND	-
6	(N.C.)	-
7	RTS	OUT
8	CTS	IN
9	(N.C.)	-

### ■ DIP SW(SW)

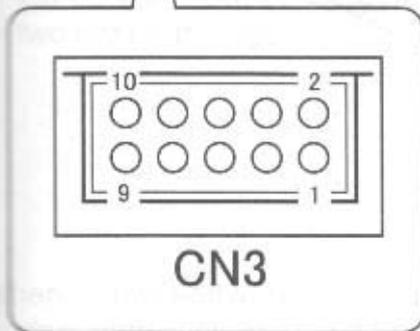
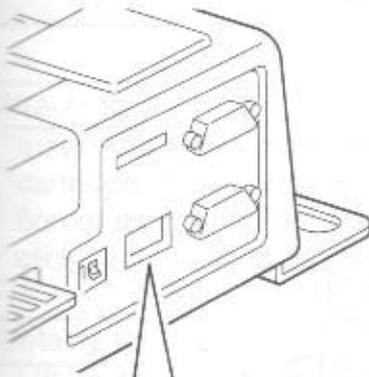


SW-1: V monitor frequency switch. Set it OFF to use a regular JAMMA cabinet.

SW-2: System menu start switch. Set it ON to open the system menu.

	ON	OFF
SW-1	31KHZ	15KHZ
SW-2	System menu mode	Game mode

### ■ Stereo speaker output



Not used with a regular JAMMA cabinet.  
Expansion connector

**Note**

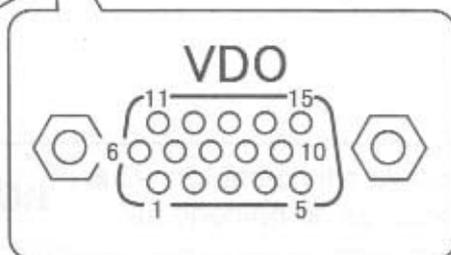
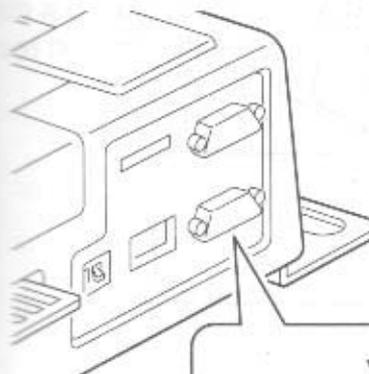
STEREO SPEAKER cannot be used at the same time as JAMMA connector MONO SPEAKER.

Stereo speaker output and expansion serial terminal  
(JST 10-pin PHD connector)

No.	Signal name	I/O	No.	I/O
1	STEREO SPEAKER L (+)	OUT	2	TXD OUT
3	STEREO SPEAKER L (-)	OUT	4	RXD IN
5	STEREO SPEAKER R (+)	OUT	6	GND -
7	STEREO SPEAKER R (-)	OUT	8	+5V OUT
9	N.C.	-	10	N.C. -

### ■ VGA output (VDO)

Not used with a regular JAMMA cabinet. When using a VGA monitor (31 kHz) as a TV monitor, plug it into this connector. Set DIP SW-1 ON at this time.



VGA output terminal (JST 15-pin D-sub connector, three-row, female)

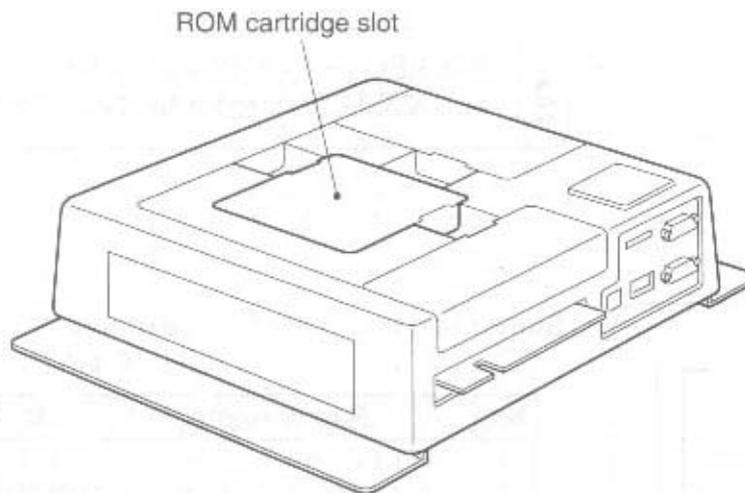
No.	Signal name	I/O
1	R	OUT
2	G	OUT
3	B	OUT
4	N.C.	-
5	GND	-
6	R-GND	-
7	G-GND	-
8	B-GND	-
9	+5V	OUT
10	GND	-
11	N.C.	-
12	N.C.	-
13	COMP SYNC	OUT
14	N.C.	-
15	N.C.	-

## 4. Component Description

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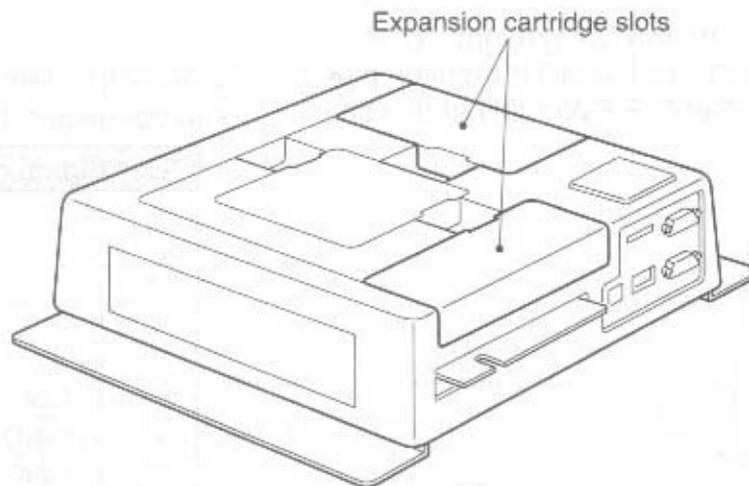
### ■ ROM cartridge slot

Software title-specific ROM cartridge slot



### ■ Expansion cartridge slots 1 and 2

Slots in which optional expansion cartridges are attached.



## 5. Attaching and Detaching ROM Cartridges

### Note

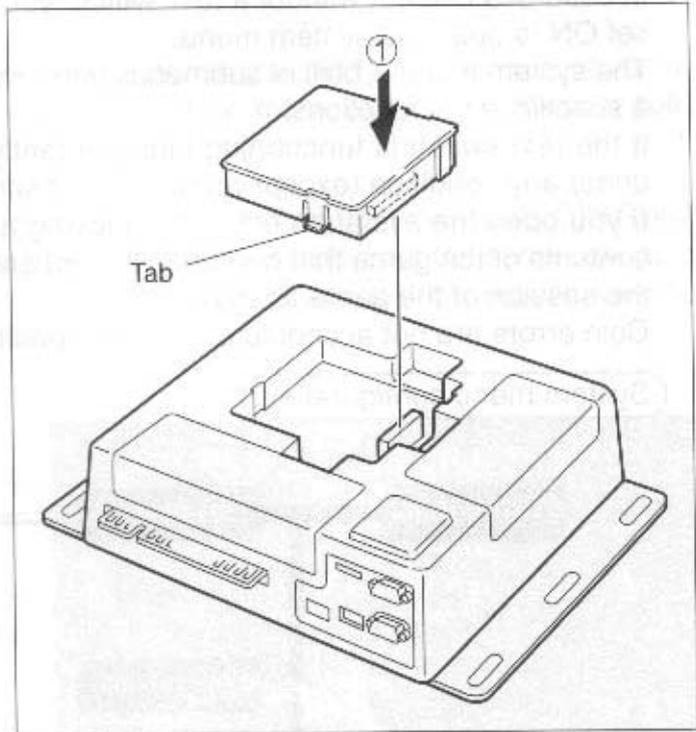
- Be sure that you switch off the power before mounting or demounting the ROM cartridge.

### Attaching

Insert the ROM cartridge into the ROM cartridge slot, observing the correct direction of its connector. Push part 1 until it clicks into position.

### Detaching

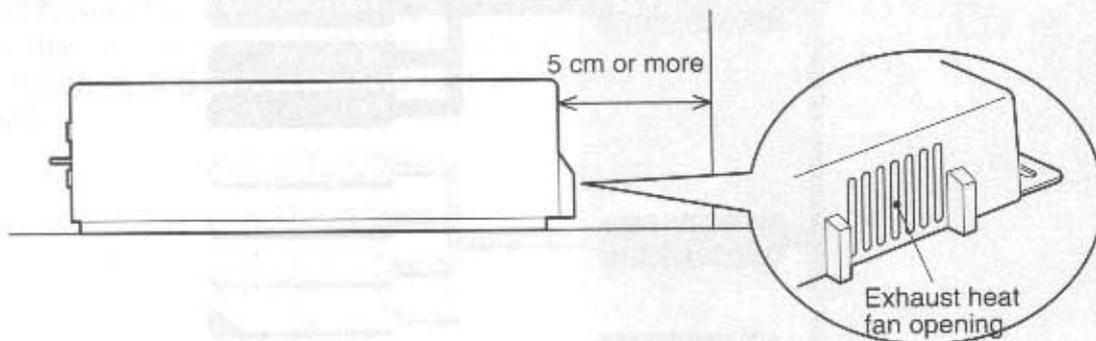
Lift off the ROM cartridge by picking its two tabs with fingers.



When a new software title is attached, the backup data is cleared and the settings are reset to their factory defaults.

## 6. Note on the Exhaust Heat Fan Opening

A fan is installed to facilitate heat exhaust from inside the main unit. Mount the system board with a clearance of at least 5 cm from the rear to keep the fan opening on the back of the board from being blocked.



### CAUTION

- Do not attach the system board in such direction that the exhaust heat fan opening on its back will face down.

# 7. System Menu Configuration

## 1. System Menu Configuration

Press the test switch, or switch on the power with DIP SW-2 set ON, to open a screen in which you have integrated control over a variety of operational tests, configuration changes, operating status and so forth. This screen is called the "system menu."

In case of a cabinet without a test switch, you may also switch on the power with DIP SW-2 set ON to open the system menu.

The system menu is built of submenus (see "System Menu Display" on page 11), each having a specific set of functions.

If the test switch is functioning independently (ON to OFF), it will open the system menu under any condition (except when an error screen is open).

If you open the system menu while playing a game, then return to the regular screen, the contents of the game that had been played are abandoned (no credits would be returned for the session of the game abandoned).

Coin errors are not accepted under any condition while the system menu is open.

### System menu configuration



\*1 This menu item is displayed even with a communication settings non-ready game, but it can neither be accessed nor configured.

\*2 This menu item is displayed even with a network settings non-ready game, but it can neither be accessed nor configured.

### 2. System Menu Operations

In system menu operations, the test switch moves the cursor from one field to the next and the service switch accepts a choice or moves down the cursor to the menu one level lower. If you press the test switch with the cursor at the bottom field, the cursor will return to the top field.

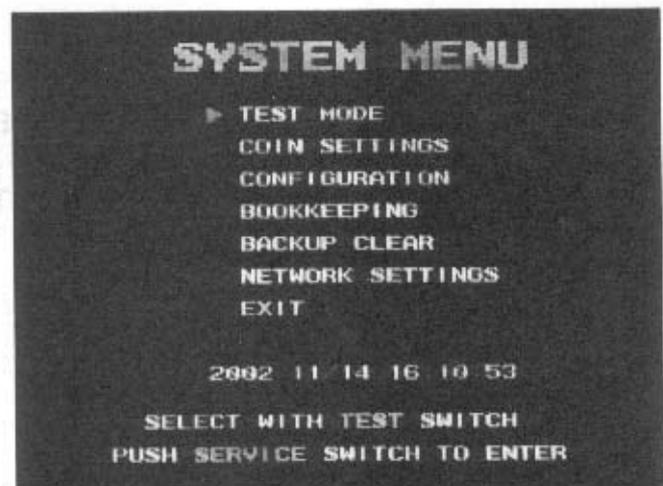
- \* Different software packages may support different game-specific I/O devices, such as levers and buttons, for user convenience's sake. To find out more, refer to the relevant software user documentation.

In case of a cabinet without a test switch, you may also switch on the power with DIP SW-2 set ON to open the system menu. In this case, the 1P start button works the same way as a regular test switch when pressed briefly from OFF to ON and works like a regular service switch when pressed ON for longer than 1 second.

### 3. System Menu Display

The opening screen of the system menu is shown at right.

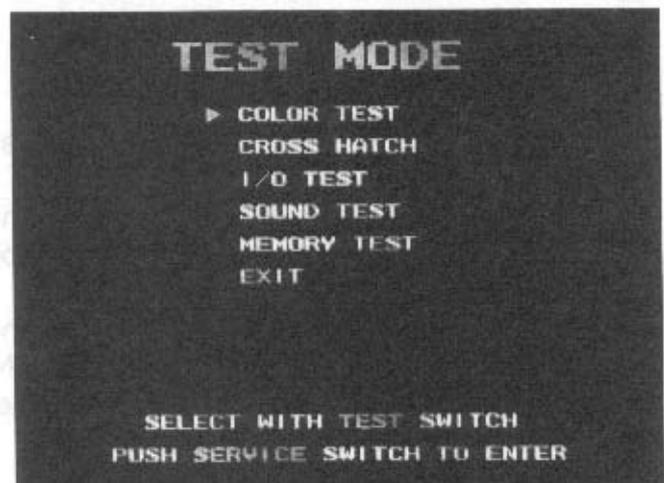
Press the service switch with the cursor at EXIT to close the system menu. Credits counts are recalled from memory on recovery.



### 4. Test Mode Display

Select TEST MODE from the SYSTEM MENU screen to see the screen shown at right.

Press the service switch with the cursor at EXIT to return to SYSTEM MENU (one level higher).



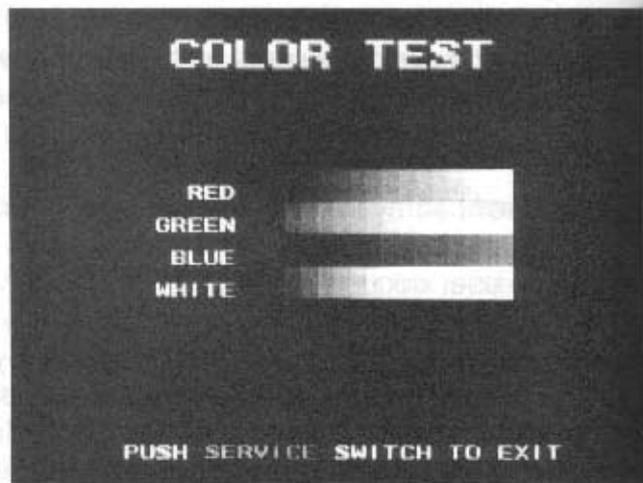
## 7. System Menu Configuration

### 5. Color Test Display

Select COLOR TEST from the TEST MODE screen to see the screen shown at right.

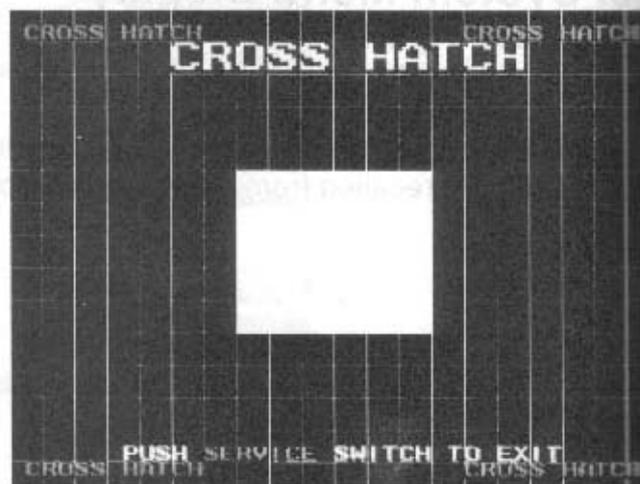
Red, green, blue, and white color bars appear in the middle of the screen, each having 16 varying shades of brightness.

Press the service switch with the cursor at EXIT to return to TEST MODE (one level higher).



### 6. Cross Hatch Display

Select CROSS HATCH from the TEST MODE screen to see the screen shown at right. Press the service switch to return to TEST MODE (one level higher).



### 7. I/O Test Display

Select I/O TEST from the TEST MODE screen to see the screen shown at right.

The I/O test may vary depending on the kind of application being run. An example of a typical I/O test is shown at right.

While a button or switch is turned ON, the corresponding field changes from OFF to ON. Press and release the service switch to return to TEST MODE (one level higher).



### 8. Sound Test Display

Select SOUND TEST from the TEST MODE screen to see the screen shown at right. The individual fields have the following functions:

■ Monaural

- START: Sounds a beep.
- STOP: Stops a beep.
- EXIT: Returns to TEST MODE.

■ Stereo

- RIGHT: Sounds from the right speaker.
- LEFT: Sounds from the left speaker.
- CENTER: Sounds from both the left and right speakers.
- STOP: Stops sound.
- EXIT: Returns to TEST MODE.



### 9. Memory Test Display

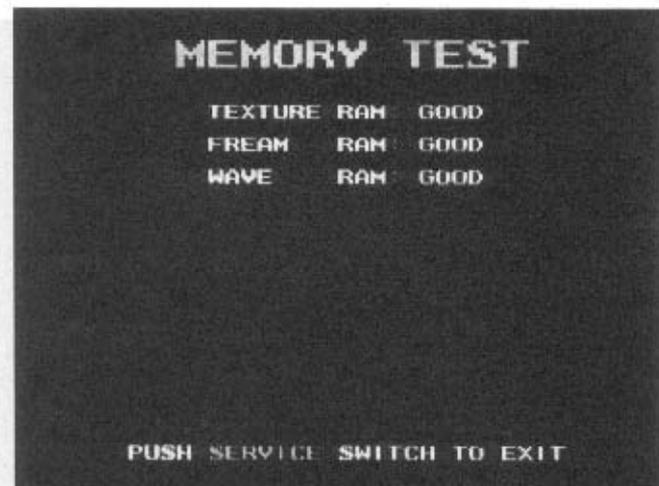
Select MEMORY TEST from the TEST MODE screen to see the screen shown at right.

The memory test runs a read/write test on the RAM modules on the motherboard. Each RAM module is tested sequentially and the result of the test is signaled either as "GOOD" or "BAD."

Press the test switch to start the memory test. You cannot exit the screen until the memory test is completed.

When the memory test is completed, the message "PUSH TEST SWITCH TO START" clears.

Press the service switch to return to TEST MODE (one level higher).



**Note**

- Software would not launch if the ROM under test is faulty. This means that if the software launches, you can be sure that the ROM test has been successfully completed.

## 7. System Menu Configuration

### 10. Coin Settings Display

Credit counts are cleared when you choose SAVE & EXIT after you made changes to the coin settings.

#### ■ Game Mode

In game mode, choose between a coin operation and a free play. Pointing to the left of GAME MODE, press the service switch to toggle between NORMAL and FREE PLAY (see Figures 2 and 3).

In COIN CHUTE TYPE, choose between COMMON and INDIVIDUAL. Pointing to the left of COIN CHUTE TYPE, press the service switch to toggle between COMMON and INDIVIDUAL (see Figures 1 and 2).



(Figure 1)



(Figure 2)



(Figure 3)

## 7. System Menu Configuration

### ■ Coin chute type COMMON

Press the service switch to change the setting number in sequence from #1 to #2, to #3 and so forth. When you press the service switch at #15, the setting number wraps around to #00 to loop. Coin Chutes A and B can be set. Press the service switch with the cursor at SAVE & EXIT to save the current settings and return to TEST MODE (one level higher).



### ■ Coin chute type INDIVIDUAL

Because the chute rate cannot be set individually, no choice exists but COIN CHUTE ALL.

The chute in which credits are spent varies with the player mode setting. The correspondence between the player number and the credit-spent chute is displayed as COIN CHUTE.



Player Mode	Chute #1	Chute #2
1P	1	2
2P	2	1
3P	3	4
4P	4	3
5P	5	6
6P	6	5
7P	7	8
8P	8	7
9P	9	10
10P	10	9
11P	11	12
12P	12	11
13P	13	14
14P	14	13
15P	15	16
16P	16	15
17P	17	18
18P	18	17
19P	19	20
20P	20	19

## 7. System Menu Configuration

You can change rates (COIN CHUTE) essentially by changing setting numbers. A total of 15 different setting numbers are available, including probably most commonly used ones, such as "1 CON 1 CREDIT 1 COIN CONTINUE" and "2 COIN 1 CREDIT 1 COIN CONTINUE."

The operator can change rates by simply changing the setting numbers without bothering about details of the rates. With coin chute type COMMON, however, the combinations of coin chutes A and B are limited. The tables below list the preset patterns and combinations.

### <Preset pattern list> NORMAL

Preset pattern list	
1coin 1credit 1coin continue	Bonus continue available
2coin 1credit 1coin continue	
2coin 1credit 2coin continue	
3coin 1credit 1coin continue	
3coin 1credit 2coin continue	
3coin 1credit 3coin continue	
4coin 1credit 1coin continue	
4coin 1credit 2coin continue	
4coin 1credit 3coin continue	
4coin 1credit 4coin continue	
1coin 2credit	No bonus continue
1coin 3credit	
1coin 4credit	
1coin 5credit	
1coin 6credit	

### <Combination list> NORMAL

Preset pattern		Normal: fraction notation		Continue: fraction notation	
CHUTE A	CHUTE B	CHUTE A	CHUTE B	CHUTE A	CHUTE B
1coin 1credit 1coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 3coin 1credit 3coin continue 4coin 1credit 4coin continue		1coin 2'6credit		
2coin 1credit 2coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue	1/2	1coin 2'6credit	1/2	
3coin 1credit 3coin continue	1coin 1credit 1coin continue 3coin 1credit 3coin continue	1 2/3	1coin 2'6credit	1 2/3	1/2
4coin 1credit 4coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 4coin 1credit 4coin continue	1 3/4	1coin 2'6credit	1 3/4	1 2/3
2coin 1credit 1coin continue	2coin 1credit 1coin continue	1/2	1coin 2'6credit		
3coin 1credit 1coin continue	3coin 1credit 1coin continue	1 2/3	1coin 2'6credit		
3coin 1credit 2coin continue	3coin 1credit 2coin continue	1 2/3	1coin 2'6credit		1/2
4coin 1credit 1coin continue	4coin 1credit 1coin continue	1 3/4	1coin 2'6credit		
4coin 1credit 2coin continue	2coin 1credit 1coin continue 4coin 1credit 2coin continue	1 3/4	1coin 2'6credit	1/2	
4coin 1credit 3coin continue	4coin 1credit 3coin continue	1 3/4	1coin 2'6credit	1/2	1 2/3

## 7. System Menu Configuration

←Preset pattern list> ADVANCE

Preset pattern list	
1coin 1credit 1coin continue	
2coin 1credit 2coin continue	
3coin 1credit 3coin continue	
4coin 1credit 4coin continue	
5coin 1credit 5coin continue	
6coin 1credit 6coin continue	
7coin 1credit 7coin continue	
8coin 1credit 8coin continue	
9coin 1credit 9coin continue	
2coin 1credit 1coin continue	
3coin 1credit 1coin continue	
3coin 1credit 2coin continue	
4coin 1credit 1coin continue	
4coin 1credit 2coin continue	
4coin 1credit 3coin continue	
5coin 1credit 1coin continue	
5coin 1credit 2coin continue	
5coin 1credit 3coin continue	
5coin 1credit 4coin continue	
6coin 1credit 1coin continue	
6coin 1credit 2coin continue	
6coin 1credit 3coin continue	
6coin 1credit 4coin continue	
6coin 1credit 5coin continue	
7coin 1credit 1coin continue	
7coin 1credit 2coin continue	
7coin 1credit 3coin continue	
7coin 1credit 4coin continue	
7coin 1credit 5coin continue	
7coin 1credit 6coin continue	
8coin 1credit 1coin continue	
8coin 1credit 2coin continue	
8coin 1credit 3coin continue	
8coin 1credit 4coin continue	
8coin 1credit 5coin continue	
8coin 1credit 6coin continue	
8coin 1credit 7coin continue	
9coin 1credit 1coin continue	
9coin 1credit 2coin continue	
9coin 1credit 3coin continue	
9coin 1credit 4coin continue	
9coin 1credit 5coin continue	
9coin 1credit 6coin continue	
9coin 1credit 7coin continue	
9coin 1credit 8coin continue	
1coin 2credit	
1coin 3credit	
1coin 4credit	
1coin 5credit	
1coin 6credit	
1coin 7credit	
1coin 8credit	
1coin 9credit	

# 7. System Menu Configuration

## <Combination list> ADVANCE

Preset pattern		Normal: fraction notation		Continue: fraction notation	
CHUTE A	CHUTE B	CHUTE A	CHUTE B	CHUTE A	CHUTE B
1coin 1credit 1coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 3coin 1credit 3coin continue 4coin 1credit 4coin continue 5coin 1credit 5coin continue 6coin 1credit 6coin continue 7coin 1credit 7coin continue 8coin 1credit 8coin continue 9coin 1credit 9coin continue	1coin 2 9credit			1/2
2coin 1credit 1coin continue	2coin 1credit 1coin continue 4coin 1credit 2coin continue 6coin 1credit 3coin continue 8coin 1credit 4coin continue	1coin 2 9credit	1/2		1/2
2coin 1credit 2coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 4coin 1credit 4coin continue 8coin 1credit 8coin continue	1coin 2 9credit	2/4	1/2	1/2
3coin 1credit 1coin continue	3coin 1credit 1coin continue 6coin 1credit 2coin continue 9coin 1credit 3coin continue	1coin 2 9credit	3/6		1/2
3coin 1credit 2coin continue	3coin 1credit 2coin continue	1coin 2 9credit	4/8		1/2
3coin 1credit 3coin continue	1coin 1credit 1coin continue 3coin 1credit 3coin continue 6coin 1credit 6coin continue 9coin 1credit 9coin continue	1coin 2 9credit	1/2		1/2
4coin 1credit 1coin continue	4coin 1credit 1coin continue 2coin 1credit 1coin continue 4coin 1credit 2coin continue 8coin 1credit 4coin continue	1coin 2 9credit	2/4	1/2	1/2
4coin 1credit 2coin continue	4coin 1credit 1coin continue 2coin 1credit 1coin continue 4coin 1credit 2coin continue 8coin 1credit 4coin continue	1coin 2 9credit	4/8		1/2
4coin 1credit 3coin continue	4coin 1credit 3coin continue	1coin 2 9credit	1/2		1/2
4coin 1credit 4coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 4coin 1credit 4coin continue 8coin 1credit 8coin continue	1coin 2 9credit	2/4	1/2	1/2
5coin 1credit 1coin continue	5coin 1credit 1coin continue 5coin 1credit 2coin continue 5coin 1credit 3coin continue 5coin 1credit 4coin continue	1coin 2 9credit	1/2		1/2
5coin 1credit 5coin continue	1coin 1credit 1coin continue 5coin 1credit 5coin continue	1coin 2 9credit	2/8, 4/8, 6/8		1/2
6coin 1credit 1coin continue	6coin 1credit 1coin continue 3coin 1credit 1coin continue 6coin 1credit 2coin continue	1coin 2 9credit	1/3, 4		1/2
6coin 1credit 2coin continue	2coin 1credit 1coin continue 6coin 1credit 3coin continue	1coin 2 9credit	1/3, 4		1/2
6coin 1credit 3coin continue	2coin 1credit 1coin continue 6coin 1credit 3coin continue	1coin 2 9credit	1/3, 4		1/2
6coin 1credit 4coin continue	6coin 1credit 4coin continue	1coin 2 9credit	1/3, 4		1/2
6coin 1credit 5coin continue	6coin 1credit 5coin continue	1coin 2 9credit	1/3, 4		1/2
6coin 1credit 6coin continue	1coin 1credit 1coin continue 3coin 1credit 3coin continue 6coin 1credit 6coin continue	1coin 2 9credit	1/3, 4		1/2
7coin 1credit 1coin continue	7coin 1credit 1coin continue 7coin 1credit 2coin continue 7coin 1credit 3coin continue 7coin 1credit 4coin continue 7coin 1credit 5coin continue 7coin 1credit 6coin continue	1coin 2 9credit	1/3, 4		1/2
7coin 1credit 7coin continue	1coin 1credit 1coin continue 7coin 1credit 7coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 1coin continue	8coin 1credit 1coin continue 8coin 1credit 2coin continue 8coin 1credit 3coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 4coin continue	2coin 1credit 1coin continue 4coin 1credit 2coin continue 8coin 1credit 4coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 5coin continue	8coin 1credit 5coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 6coin continue	8coin 1credit 6coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 7coin continue	8coin 1credit 7coin continue	1coin 2 9credit	1/3, 4		1/2
8coin 1credit 8coin continue	1coin 1credit 1coin continue 2coin 1credit 2coin continue 4coin 1credit 4coin continue 8coin 1credit 8coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 1coin continue	9coin 1credit 1coin continue 9coin 1credit 2coin continue 9coin 1credit 3coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 2coin continue	9coin 1credit 2coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 3coin continue	3coin 1credit 1coin continue 9coin 1credit 3coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 4coin continue	9coin 1credit 4coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 5coin continue	9coin 1credit 5coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 6coin continue	9coin 1credit 6coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 7coin continue	9coin 1credit 7coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 8coin continue	9coin 1credit 8coin continue	1coin 2 9credit	1/3, 4		1/2
9coin 1credit 9coin continue	1coin 1credit 1coin continue 3coin 1credit 3coin continue 9coin 1credit 9coin continue	1coin 2 9credit	1/3, 4		1/2

## 7. System Menu Configuration

### ■ Player mode

In the player mode, you can select the number of players who can play simultaneously with one board. The number of simultaneous players is selectable between two and four. With two simultaneous players, the 1P is allocated to Coin Chute A, and the 2P is allocated to Coin Chute B.

With four simultaneous players, the 1P and 2P are allocated to Coin Chute A, and the 3P and 4P are allocated to Coin Chute B.

Credit operations broadly fall into two modes: common and individual.

In the common mode, only one credit count is displayed on the screen even though multiple players are in play. Common mode is useful for playing one-man games or for those cabinets having multiple coin chutes connected to handle different kinds of coins. The credit calculation routine works out one credit count by totaling the number of coins entered from all coin chutes according to a credit rate. Note that two kinds of credit rates exist for the coin chutes.

In the individual mode, one coin chute is associated with each player. Credits entered through each coin chute are displayed for each player in play. Individual mode is useful for those cabinets that permit multiple players to play simultaneously and to which one coin chute can be connected for each player. The credit calculation routine works out credit counts for up to four players according to a credit rate. Only chute rate A is used as a credit rate at this time. Select COIN SETTINGS from the SYSTEM MENU screen to see the screen shown below (coin settings (credit rate change) menu screen).

## 11. Advanced Settings Display

If any setting other than the rates (COIN CHUTE) supported by the normal coin settings is desired, use the advanced settings.

PRESET SITUATION in the COIN SETTINGS screen is selectable between NORMAL and ADVANCE. Select ADVANCE to invoke advanced setting mode, in which more preferences are available with COIN CHUTE.



## 7. System Menu Configuration

### 12. Configuration Display

Select CONFIGURATION from the SYSTEM MENU screen to see the screen shown at right.

- Communication settings display  
With COMMUNICATION SETTINGS, complete board-to-board communication settings.  
Selecting this option with a network-non-ready game has no effect.



### 13. System Settings Display

Select SYSTEM SETTINGS from the CONFIGURATION screen to see the screen shown at right.

Press the service switch to switch the option to the right of the menu item at the cursor position.

Press the service switch with the cursor at SAVE & EXIT to save the current settings and return to CONFIGURATION (one level higher).

- Menu items

**AREA:**

Set the country (region) in which the application is used. A region-specific setting, if any, is reflected.

Japan, North America, Europe, others

**LANGUAGE:**

Set a language.

Japanese, English, Spanish, Portuguese, Italian at maximum (The languages to be selected differ depending on the software.)

**ADVERTISE SOUND:**

Set whether to turn on or off sound during advertisement (demo screen). Coin sound is generated even while ADVERTISE SOUND is set off.

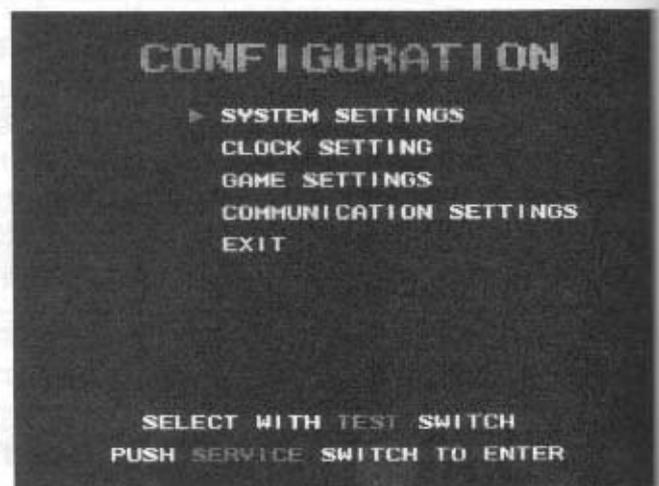
**AUDIO MODE:**

Set how sound is generated.

Stereo, monaural

**SOUND VOLUME:**

Adjust the output sound volume. The default sound volume is 15. SOUND VOLUME is adjustable at 16 levels, from 0 to 15. Once SOUND VOLUME reaches 15, it wraps around to 0 to loop.



### 14. Clock Settings Display

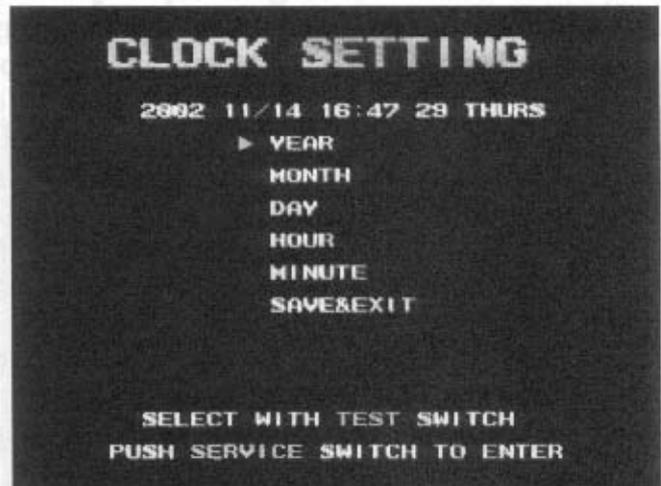
Put the clock mounted on the board right. Select CLOCK SETTINGS from the SYSTEM MENU screen to see the screen shown at right.

The CLOCK SETTINGS screen cannot be opened if NETWORK PLAY is set ON with a network-ready game (see "Network Settings Display" on page 24).

Pointing to the left of a menu item, press the service switch to sequentially increment the option value by one. Press the service switch for longer than 1 second to auto-repeat it for a fast-forward.

If you press the service switch with the cursor at MINUTE, however, the second indication is reset to 00 without being raised to one minute.

Press the service switch with the cursor at SAVE & EXIT to save the current settings and return to SYSTEM MENU (one level higher).



The CLOCK SETTINGS screen cannot be opened when NETWORK PLAY is set ON in the NETWORK SETTINGS screen.

In case that NETWORK PLAY is set ON, a message is displayed when the CLOCK SETTINGS screen opens.

### 15. Game Settings Display

Complete game-specific settings. To find out more, refer to the software documentation.

Select GAME SETTINGS from the CONFIGURATION screen to open the game settings screen.

Press the service switch to switch the option to the right of the menu item at the cursor position.

Press the service switch with the cursor at SAVE & EXIT to save the current settings and return to CONFIGURATION (one level higher).

Select RETURN TO FACTORY SETTINGS to reset to factory defaults.

## 7. System Menu Configuration

### 16. Bookkeeping Display

The SRAM module mounted on the motherboard allows credit information to be stored and preserved when the power is switched off.

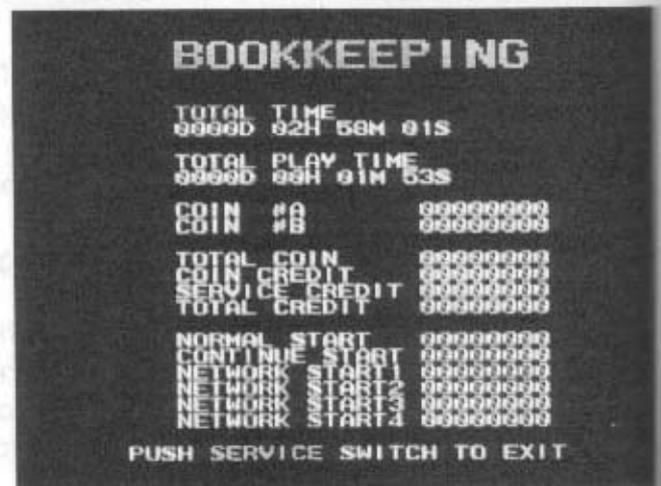
The bookkeeping screen displays a total credit count and other information.

Select BOOKKEEPING from the SYSTEM MENU screen to see the screen shown at right.

Press the service switch to return to SYSTEM MENU (one level higher).

Values, such as coin counts, are displayed in up to eight digits.

If an item reaches its maximum count, it wraps around to 0 to loop. A looping item is identified by + to its right (99999999 to 00000000+).



#### TOTAL TIME:

Indicates the duration of the software running, or the period of time for which the power is switched on.

#### TOTAL PLAY TIME:

Indicates the period of time for which the game has been actually played during the total time.

#### COIN #A:

Indicates the total number of coins counted in coin chute 1.

#### COIN #B:

Indicates the total number of coins counted in coin chute 2.

#### TOTAL COIN:

Indicates the total number of coins counted in coin chutes 1 and 2 (COIN1 + COIN2).

#### COIN CREDIT:

Indicates the credit converted from a coin count.

#### SERVICE CREDIT:

Indicates the number of credits counted with the service button.

#### TOTAL CREDIT:

Indicates the total number of credits counted (COIN CREDIT + SERVICE CREDIT).

#### NORMAL START:

Indicates the number of times the game was started from the beginning.

#### CONTINUE START:

Indicates the number of times the game was played by CONTINUE.

#### NETWORK START:

Indicates the number of times the game was played in tournament mode.

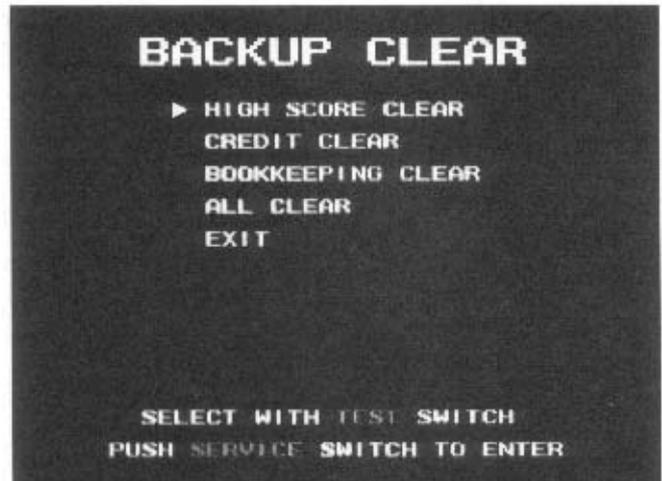
A NETWORK START number designates a tournament registered with that number. Up to four tournaments are registered.

### 17. Backup Clear Display

Clear the high score, credits and bookkeeping, and reset all settings to their factory defaults (ALL CLEAR).

Select BACKUP CLEAR from the SYSTEM MENU screen to see the screen shown at right.

Pointing to the left of HIGH SCORE CLEAR, press the service switch to open the clear confirmation screen.



The clear confirmation screen comes up with the cursor positioned to the left of NO in "NO YES." Press the test switch to toggle between NO and YES.

Pointing to NO, press the service switch to return to the backup clear screen without clearing the high score, with the cursor moving to the left of HIGH SCORE CLEAR.

Pointing to YES, press the service switch to clear the high score before returning to the backup clear screen, with the cursor moving to the left of HIGH SCORE CLEAR.

Press the service switch with the cursor at EXIT to return to SYSTEM MENU (one level higher). (The same action occurs for the credit, bookkeeping, and all clear functions as well.)

### 18. Network Settings Display (option)

Select NETWORK SETTINGS from the SYSTEM MENU screen to open the network settings screen.

Press the service switch to switch the option to the right of the menu item at the cursor position.

Press the service switch with the cursor at CANCEL & EXIT to return to SYSTEM MENU (one level higher) without saving the current settings.

Press the service switch with the cursor at SAVE & EXIT to save the current settings and return to SYSTEM MENU (one level higher). If a network connection is yet to be established right after the menu item NETWORK is set ON from OFF or if the network settings screen is opened for the first time after a connection error occurred, the advertise loop recurs to attempt a network connection.

Selecting this option with a network-non-ready game has no effect.

### The Backup Clear Display

When you press the [F5] key, the backup clear display is shown.



The backup clear display is used to clear the backup data from the hard disk. It is a menu-driven interface that allows you to select the drive and the amount of data to be cleared. The display shows the current drive and the amount of data to be cleared. You can use the arrow keys to move the cursor and the [Enter] key to confirm the selection. The display also shows the progress of the backup clear operation.

The backup clear operation is performed by the backup utility. It is a time-consuming process and should be performed when the system is not in use. The backup clear operation will erase all data on the selected drive, including the operating system and any applications. Therefore, it is important to backup your data before performing this operation.

### 6. Network Settings Display (option)

The network settings display is used to configure the network settings for the system. It is a menu-driven interface that allows you to select the network card, the IP address, and the subnet mask. The display shows the current network settings and allows you to change them. You can use the arrow keys to move the cursor and the [Enter] key to confirm the selection. The display also shows the progress of the network settings operation.

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ATOMISWAVE 说明书

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