

MAGICAL CRYSTALS

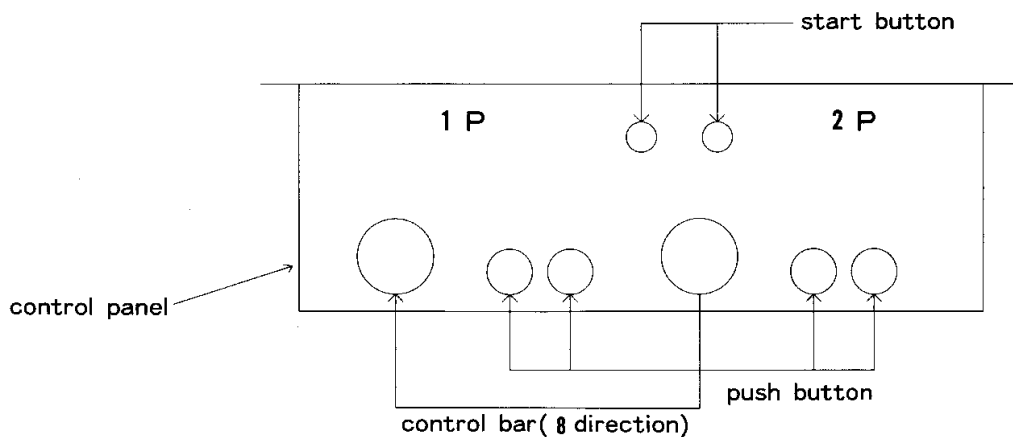
OPERATION MANUAL

● Specifications

◇Name of Game	MAGICAL CRYSTALS
◇Control Panel	One-sided 2 P
Joystick	2 (8 directions : one each 1P and 2P)
Button	4 (push button : two each 1P and 2P)
◇Edge Connector	JAMMA Standards
◇Monitor	Horizontal Monitor

● Operation Precautions

- ◇Each player has an 8-directional joystick and 2 buttons.
- ◇Unlike Conventional games, the sound is one of the important factors for attracting customers.
Set the sound volume a little higher (so that players hear the game clearly)
- ◇Be sure to **disconnect the power from the enclosure** before installing or removing the PC Board.
- ◇Use extreme care not to drop any metal objects such as a nail or clip onto the PC Board. This can result in damage to the Board.
- ◇When transporting the PC Board, wrap it in aircap or sponge and **secure it in a corrugated carton box**.



Caution

Commercial use of this machine is restricted outside Japan.
Export, sale or operation of this machine without our approval is strictly prohibited by law.

●Table of PC Board Connectors

(1) Required Power Supply

+ 5 V $\begin{matrix} +0.5V \\ -0.1V \end{matrix}$	(MIN 4.0 A)
+12V±0.5V	(MIN 1.0 A)

(2) Standard of Edge Connector

JAMMA Standards

(3) Edge Connector Terminal Layout

Soldered Side	Terminals		Parts Side
G N D	A	1	G N D
G N D	B	2	G N D
+ 5 V	C	3	+ 5 V
+ 5 V	D	4	+ 5 V
	E	5	
+ 12 V	F	6	+ 12 V
Wrong Insertion Protection Key	H	7	Wrong Insertion Protection Key
Coin Counter 2	J	8	Coin Counter 1
Coin Lockout 2	K	9	Coin Lockout 1
Speaker (-)	L	10	Speaker (+)
Audio (GND)	M	11	Audio (+)
Video GREEN	N	12	Video RED
Video SYNC	P	13	Video BLUE
Service Switch	R	14	Video GND
Tilt Switch	S	15	Tilt Switch
Coin Switch 2	T	16	Coin Switch 1
Start Switch 2	U	17	Start Switch 1
2P Control1 UP	V	18	1P Control1 UP
2P Control2 DOWN	W	19	1P Control2 DOWN
2P Control3 LEFT	X	20	1P Control3 LEFT
2P Control4 RIGHT	Y	21	1P Control4 RIGHT
2P Control5 PUSH A	Z	22	1P Control5 PUSH A
2P Control6 PUSH B	a	23	1P Control6 PUSH B
	b	24	
	c	25	
	d	26	
G N D	e	27	G N D
G N D	f	28	G N D

※For optimum use of this machins, supply desjgnated voltage where applicable.

● OPERATION SETUP

With DIP SW2 in the ON position, turn on the power. You are now in the ADJUST mode. In this ADJUST mode, you can set the number of coins and level of play.

Operation

Use the joystick and both buttons at the same time on the 1p side. Use the joystick to select the item you want to change, The buttons allow you to change the values. You can change the following items:

- The number of coins and plays(credits)for coin slot A(from1-9)
- The number of coins and plays(credits)for coin slot B(from1-9)
- The number of characters for each game(from1-9)
- Level of difficulty throughout the game[EASY,STANDARD or HARD]
- Attract sounds (ON or OFF)

if you select "ALL RESET" and press the buttons, the data will be reset to factory settings.

When you have completed all changes, use the joystick to select "EXIT" and press the buttons to store the changed data into memory and to exit from the ADJUST mode.

When you exit the ADJUST mode, you then return to the SYSTEM MENU.

● SYSTEM MENU

In the SYSTEM MENU, you can select one of the following:

- INPUT TEST (Switch Input Test)
- MONITOR CHECK (Screen check)
- SOUND TEST
- OPERATION SETUP(Adjust Mode)

Move the cursor with the joystick and select one of the above. When you are finished with your adjustments and tests, turn the machine off and set the Adjust/Test switch to off.

●DIP Switch Setting

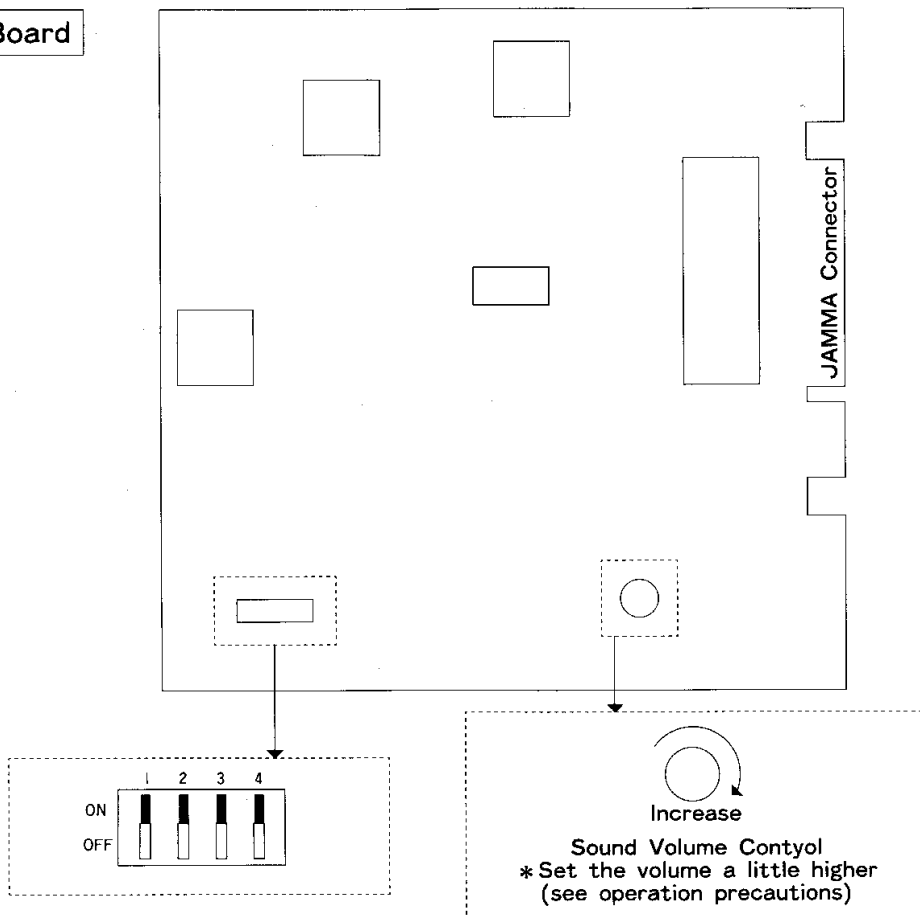
DIP switches are enabled when at ON position.

- 1 : ■□ : Revrse display
- 2 : ■□ : Adjust/Test Mode
- 3 : ■□ : Always OFF
- 4 : ■□ : Always OFF

Be sure to turn off the power when changing the position of DIP switches.
If the DIP switches are 8-bank type, turn the switches 5 through 8 to the off position.

●Instruction of the PC Board

(2) PC Board



Should the unit be modified without prior approval,
we are not liable for any damage incurred.

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KANEKO

KANEKO CO.,LTD.

8-23-21, Shakujiidai,
Nerima-ku Tokyo 177,
Japan.

Tel.(03)3921-9661