

COSMIC MONSTERS

**Operation, Maintenance
and Service Manual**

UNIVERSAL



Thank you very much for your purchase of the COSMIC MONSTERS. Carrying a CPU, the COSMIC MONSTERS is a game machine of the newest type with many features and functions.

This manual describes how to make the most of such features and functions, so please read it carefully in order to make the best use of the machine.

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I. FEATURES OF THIS MACHINE

1. The game packs in excellent features capturing the hearts of players.
2. The knob control system is simple to handle.
3. At the flick of a dip switch, you can select among extended play, the number of laser guns and time of appearance of an additional laser gun, etc.
4. High score for the day is always displayed on the screen.
5. Finely designed cabinet and fascinating acoustic effects.

II. HOW TO HANDLE AND MAINTAIN THIS MACHINE

1. Since the UNIVERSAL's COSMIC MONSTERS employs a color TV receiving set, be careful not to shake it during transit and when carrying it about.
2. Install it at a location which is not exposed to direct sunlight. In order to prevent the inside temperature rising, avoid as much as possible a location near a heater, etc.
3. Since the grounding terminal is visible, be sure to connect it to a grounding conductor.
4. Insert the power cord into the outlet (AC 100V) and turn on the switch.
5. Even if the solid-state module seems to be out of order, do not check the circuit by means of a circuit tester, etc., since the internal voltage of the tester, etc. may sometimes break down the IC.
6. Make sure the machine is well ventilated. If the temperature of the IC and transistor is lower than 60°C, they function normally and may be considered reliable. If it exceeds 60°C, their performance cannot be guaranteed.
7. Make sure that the connector, etc. is not disconnected.
8. Whenever connecting the power cord of the solid-state module to, or disconnecting it from the outlet, be sure to turn the power off.
9. Although the products of UNIVERSAL are manufactured with the utmost care, they may develop malfunctions when used for long periods. So, be sure to check this machine daily.

III. HOW TO PLAY

1. Drop in a coin when playing by yourself. Drop in two coins when playing with a friend.
 2. When pressing either one- or two-player button after inserting a coin or two, the game starts. Play it by handling a knob for moving the laser guns from side to side and a FIRE button.
 3. UFO
UFO appears flying behind the monsters as they race towards the front of the screen. Here's your chance to shoot the UFO down and add up points. But if you get too absorbed in it, you expose your laser guns to danger. When you hit the UFO, your score – either of 50, 100, 150 or 200 points – is displayed at random.
 4. Monsters
With radial rays shooting out of their mouths and destructive missiles flying from their bodies, the monsters try to destroy your laser guns, rushing at you moving sideways. They are your targets. Wipe one off and your score piles up. Depending on the type of monster, you get 10, 20 or 30. When you destroy all the monsters on the screen, a new bunch of monsters appears closer to your laser guns, making the game more and more difficult.
 5. Station
There are four stations for protecting your laser guns from the monsters' direct assault. The point is to wipe off as many monsters as possible. Your stations will be gradually destroyed by missiles launched by the monsters. Be careful! As each new group of monsters reappears, your destroyed stations come back on the screen.
 6. Laser guns
You can dodge the monsters by moving your laser guns sideways with the volume controller knob. Press the FIRE button to launch the laser missiles. Hit a monster and it vanishes with a horrifying shriek. The key to mastering the game is skillful operation of the laser gun and well-timed missile launchings. When each laser gun is destroyed, a reserve gun at the left bottom of the screen appears and the game continues. (Play by turns when playing with a friend).
 7. Reserve guns
The remaining number of laser guns is displayed at all times. The game continues until all the laser guns are destroyed. If your score reaches a certain level, you are awarded another stock of laser gun as a bonus.
- ☆ The number of laser guns and the setting of bonus points, etc. can be selected with dip switches.

IV. NOMENCLATURE OF EACH PART

A. NOMENCLATURE OF CABINET PARTS

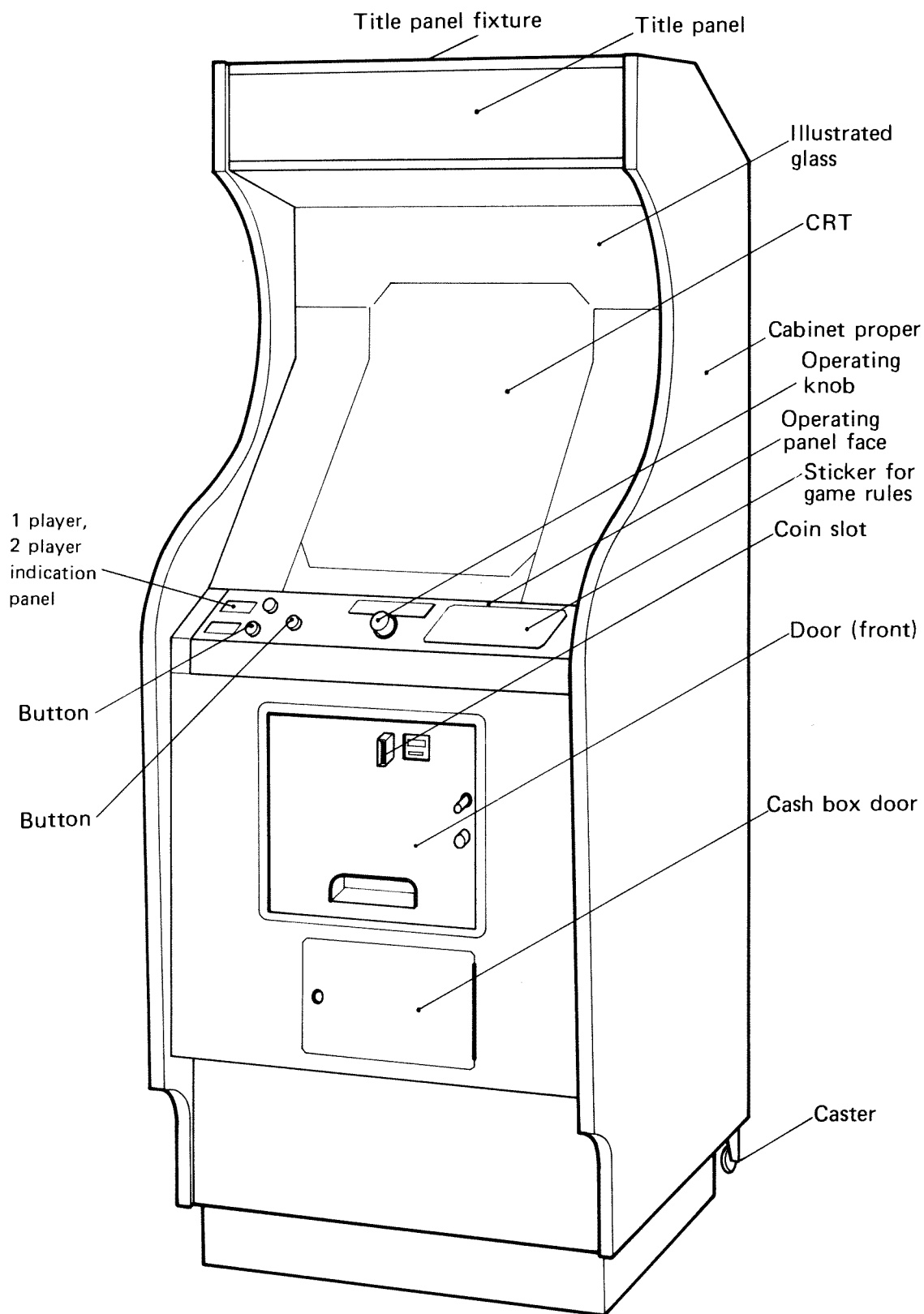


Fig. 1-1 Nomenclature of Cabinet Parts

B. DRAWING OF CIRCUIT BOARD MOUNTING POSITIONS

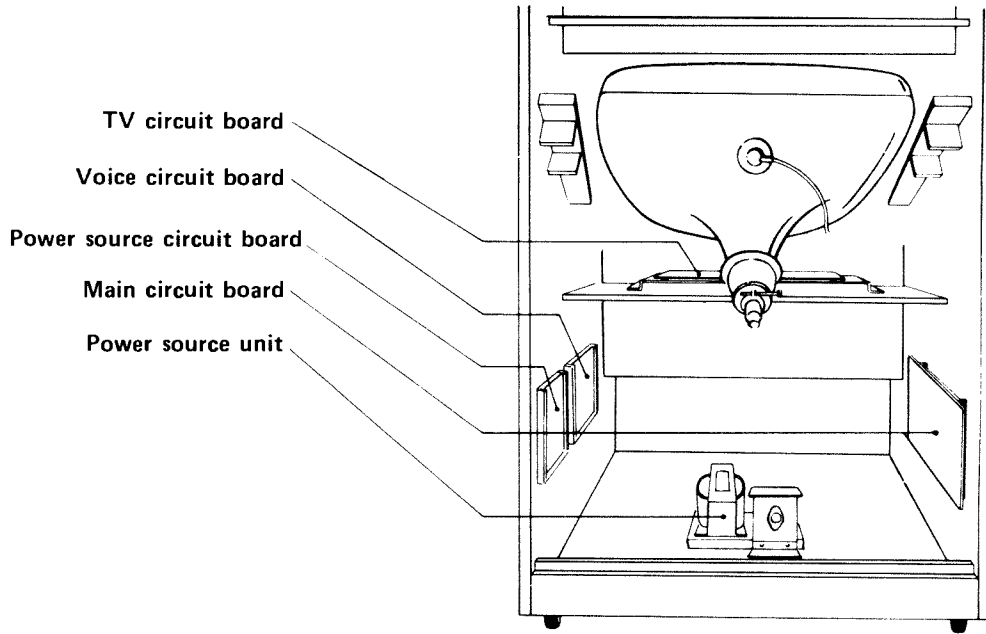


Fig. 2-1 Circuit Board Mounting Positions

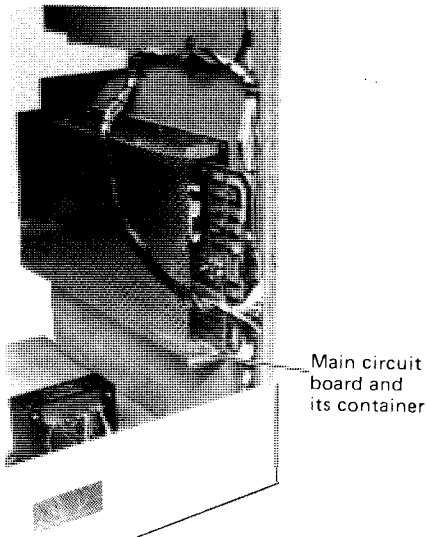


Fig. 2-2 Side View of Circuit Board Mounting Positions (1)

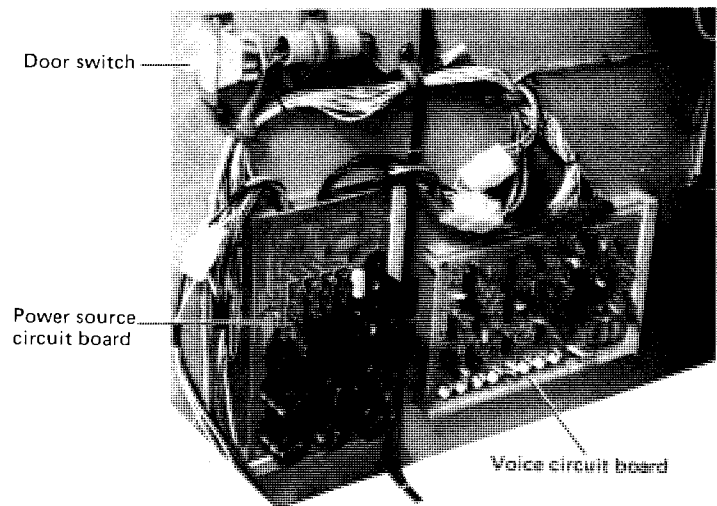


Fig. 2-3 Side View of Circuit Board Mounting Positions (2)

C. POSITIONS OF DIP SWITCHES AND VOLUME CONTROLLER KNOBS

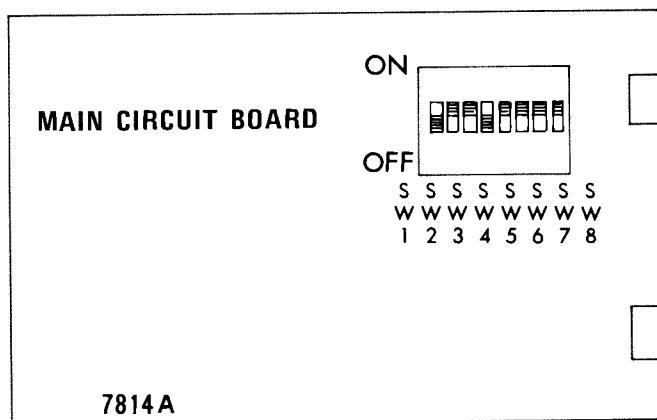


Fig. 3-1 Positions of Dip Switches

a) Setting the option (dip switches)

COSMIC MONSTERS is designed to have various operations and options set by the ON-OFF combinations of the dip switches. When starting a game, choose any desired game option and set the dip switches accordingly.

1. Change-over setting of the number of laser guns:

The number of laser guns may be changed.
(Dip switches SW1, 2)

Number of laser gun/s	SW1	SW2
2	ON	ON
3	OFF	ON
4	ON	OFF
5	OFF	OFF

2. Changeover setting of the mode of game (SW3)

The game may be enjoyed either as an upright or table type. (When used as a table type for 2-player action, the table turns over.)

For upright use OFF
For table use ON

3. Setting the number of points needed for extended play:

The dip switch sets the number of points needed to obtain one laser gun.

	SW4
2500 points	OFF
1500 points	ON

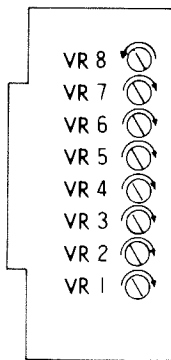
4. Setting the number of coins inserted (SW8)

The number of coins needed for play may be changed.

- 1 coin 1-play ON
- 1 coin 2-play OFF

(☆ Don't touch dip switches 5–7 since they are not related to the game; Be sure to place them in the ON position at all times.)

b) Volume controller knobs



☆ The sound volume increases when turned in the direction of the arrow mark.

Fig. 3-2 Positions of Volume Controller Knobs

There are eight volume controller knobs on the sound circuit board. They are for adjusting the volume of various sounds.

- VR-1 : to adjust the volume of the sound made when the UFO comes flying.
- VR-2 : to adjust the volume of the sound made when a laser gun launches a missile.
- VR-3 : to adjust the volume of the sound made when a laser gun is blasted.
- VR-4 : to adjust the volume of the sound made when a monster is blasted.
- VR-5 : to adjust the volume of the sound "bi-bi-bi" made when the play is extended.
- VR-6 : to adjust the volume of the sound "bi-bi-bi" made when the monsters rush down on the screen.
- VR-7 : to adjust the volume of the sound "bi-bi-bi" made when the UFO is exploded.
- VR-8 : to adjust the volume of the over-all sound "bi-bi-bi" made by the above actions.

c) Power source circuit board

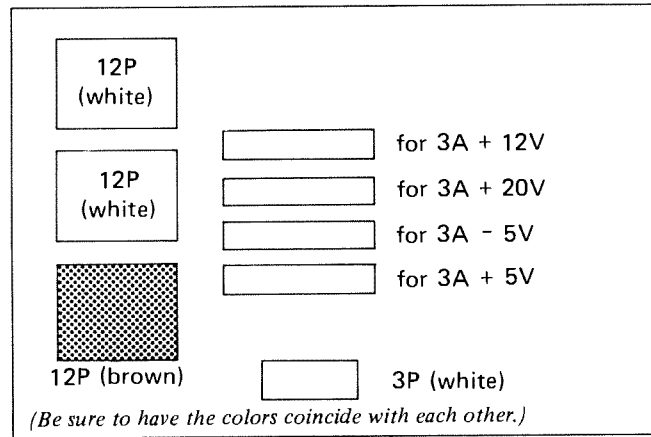


Fig. 3-3 Power Source Circuit Board

d) Fuses in the power unit

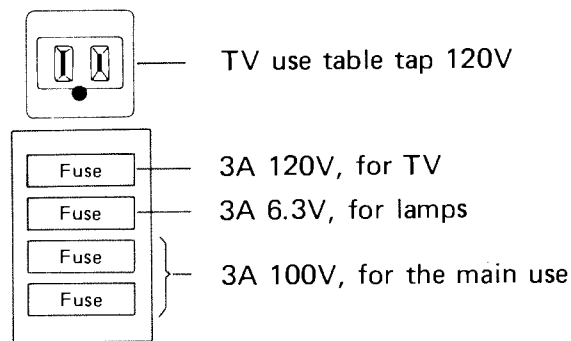


Fig. 3-4 Fuses in the Power Unit

V. TV MONITOR

A. ADJUSTMENT OF TV PICTURE SCREEN

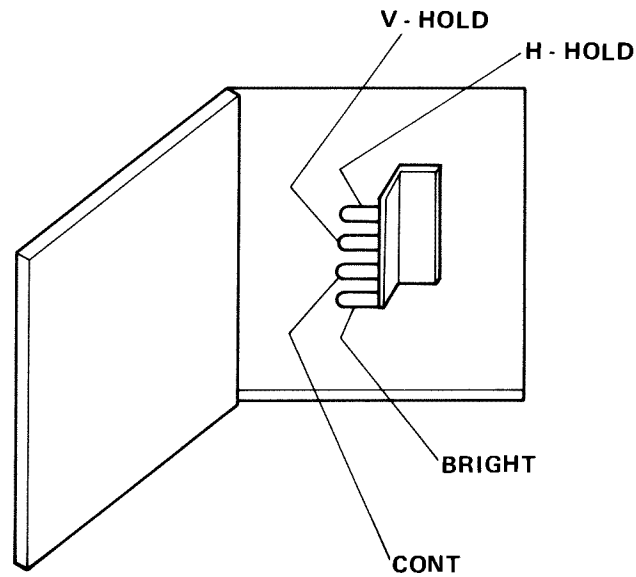
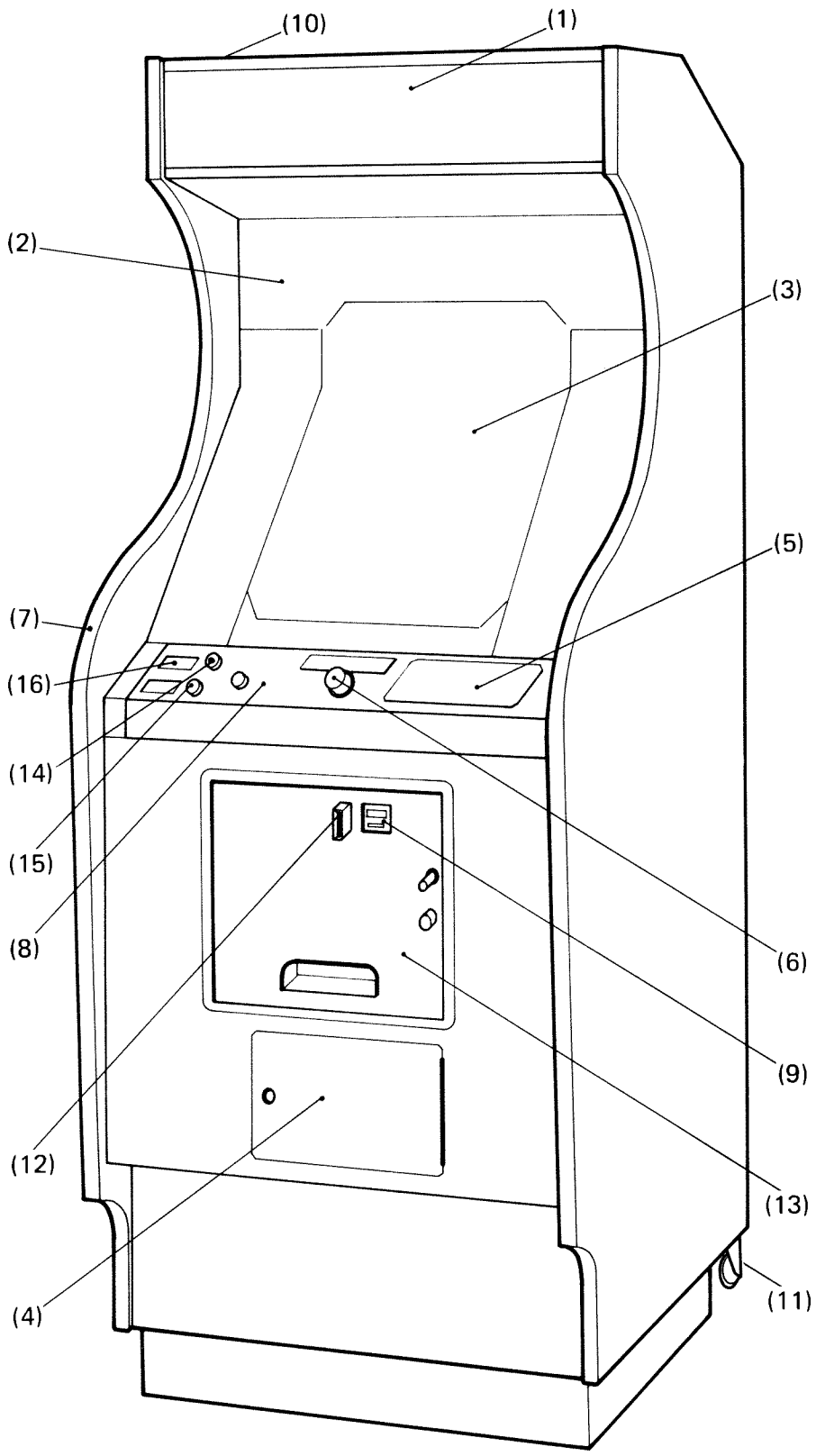


Fig. 4-1 The Inside Drawing of Front Door

- Since the TV picture screen has been factory-adjusted to optimum conditions at the time of shipment, it needs no adjustment as a rule. If it should by chance need adjustment, refer to the drawing above.

VI. PARTS CATALOG

A-1 COMPONENT PARTS RELATED TO CABINET (OUTSIDE)



- (1) Title panel
- (2) Illustrated glass
- (3) CRT
- (4) Cash box door
- (5) Sticker for game rules
- (6) Operating knob
- (7) Cabinet proper
- (8) Operating panel face
- (9) Coin indication panel
- (10) Title panel fixture
- (11) Caster
- (12) Coin slot
- (13) Door
- (14) One-player button
- (15) Two-player button
- (16) 1 player, 2 player indication panel

Fig. 5-1 Component Parts Related to Cabinet (Outside)

A-2 COMPONENT PARTS RELATED TO CABINET (INSIDE)

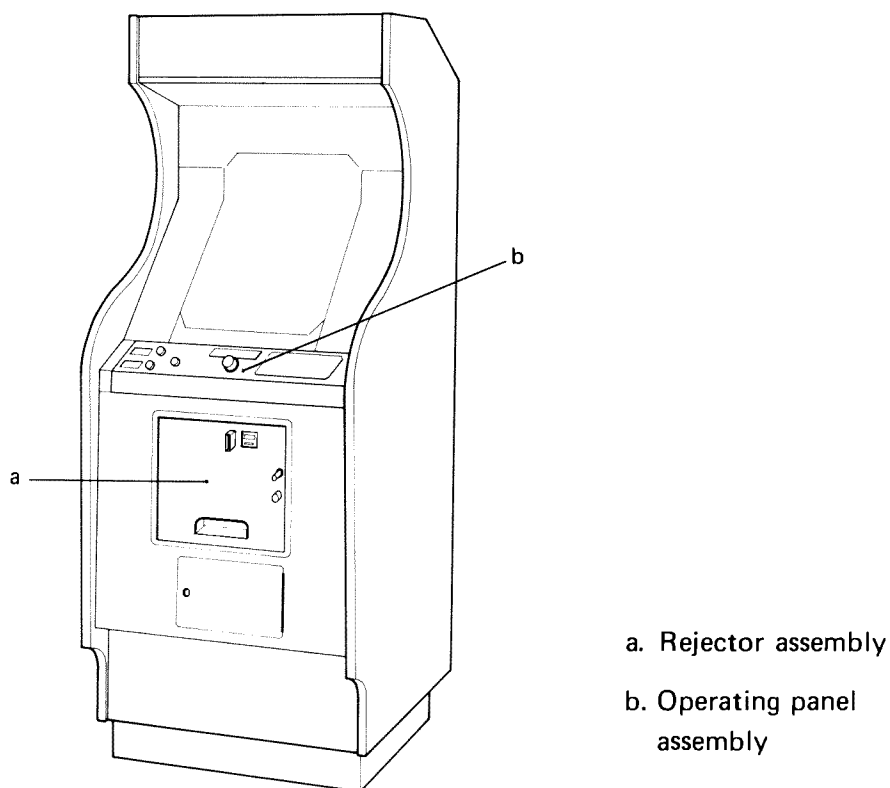


Fig. 5-2 Component Parts Related to Cabinet (Inside)

a) Rejector assembly

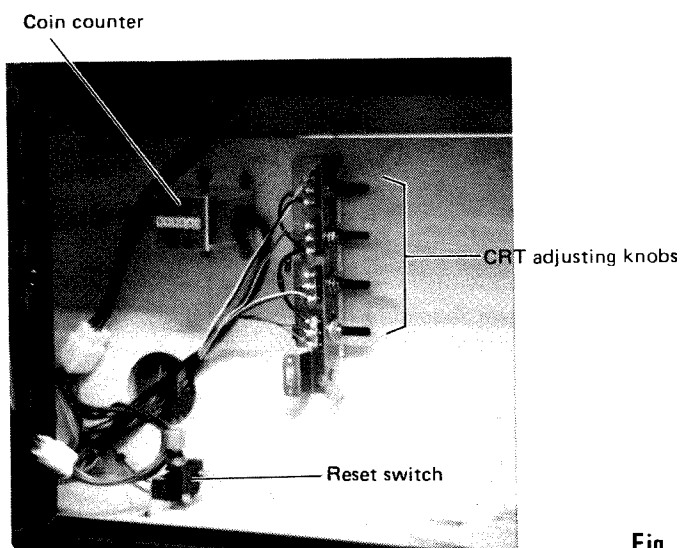


Fig. 5-3 Inside View of Rejector Assembly (1)

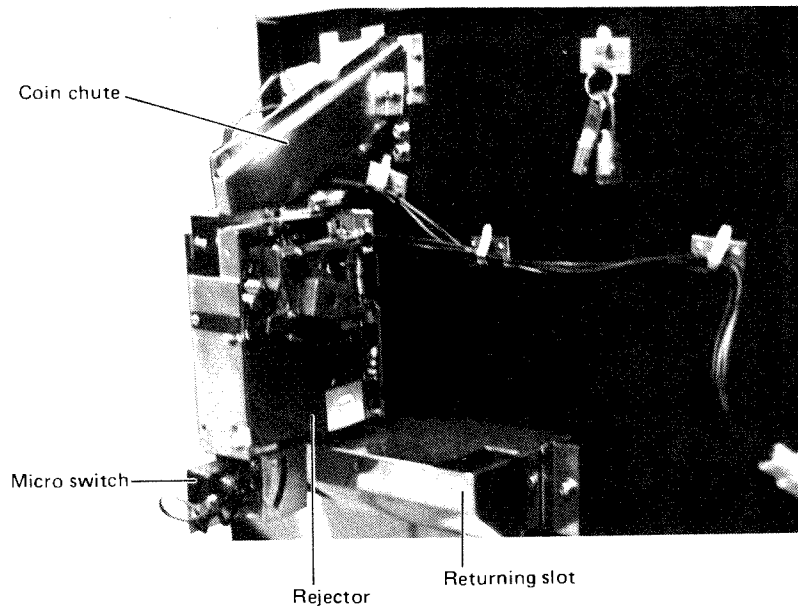


Fig. 5-4 Inside View of Rejctor Assembly (2)

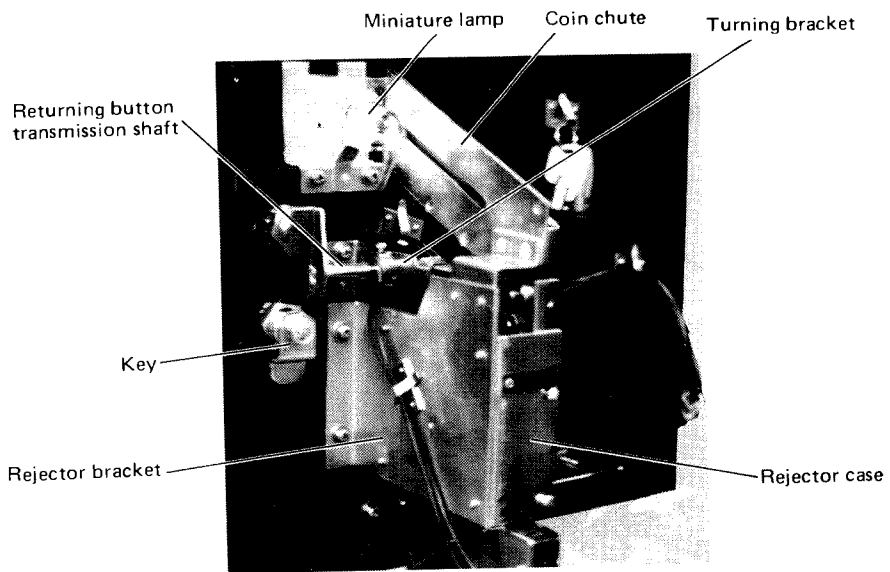


Fig. 5-5 Inside View of Rejctor Assembly (3)

b) Operating panel assembly

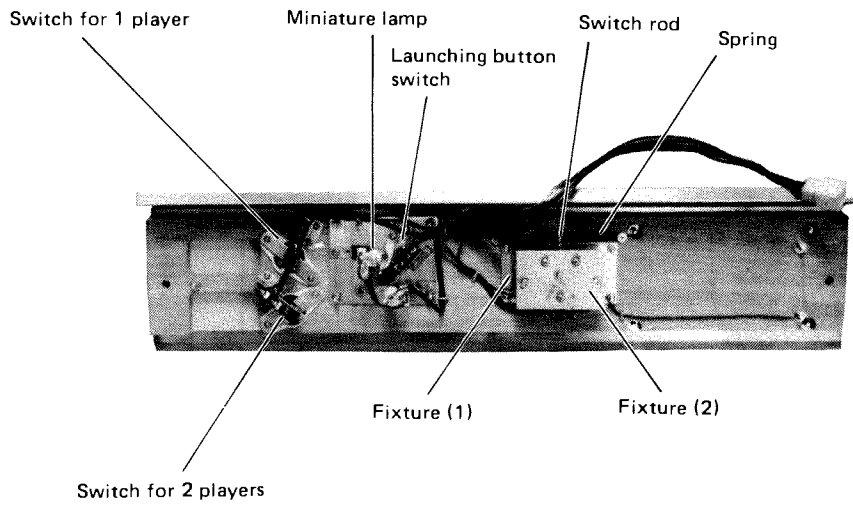
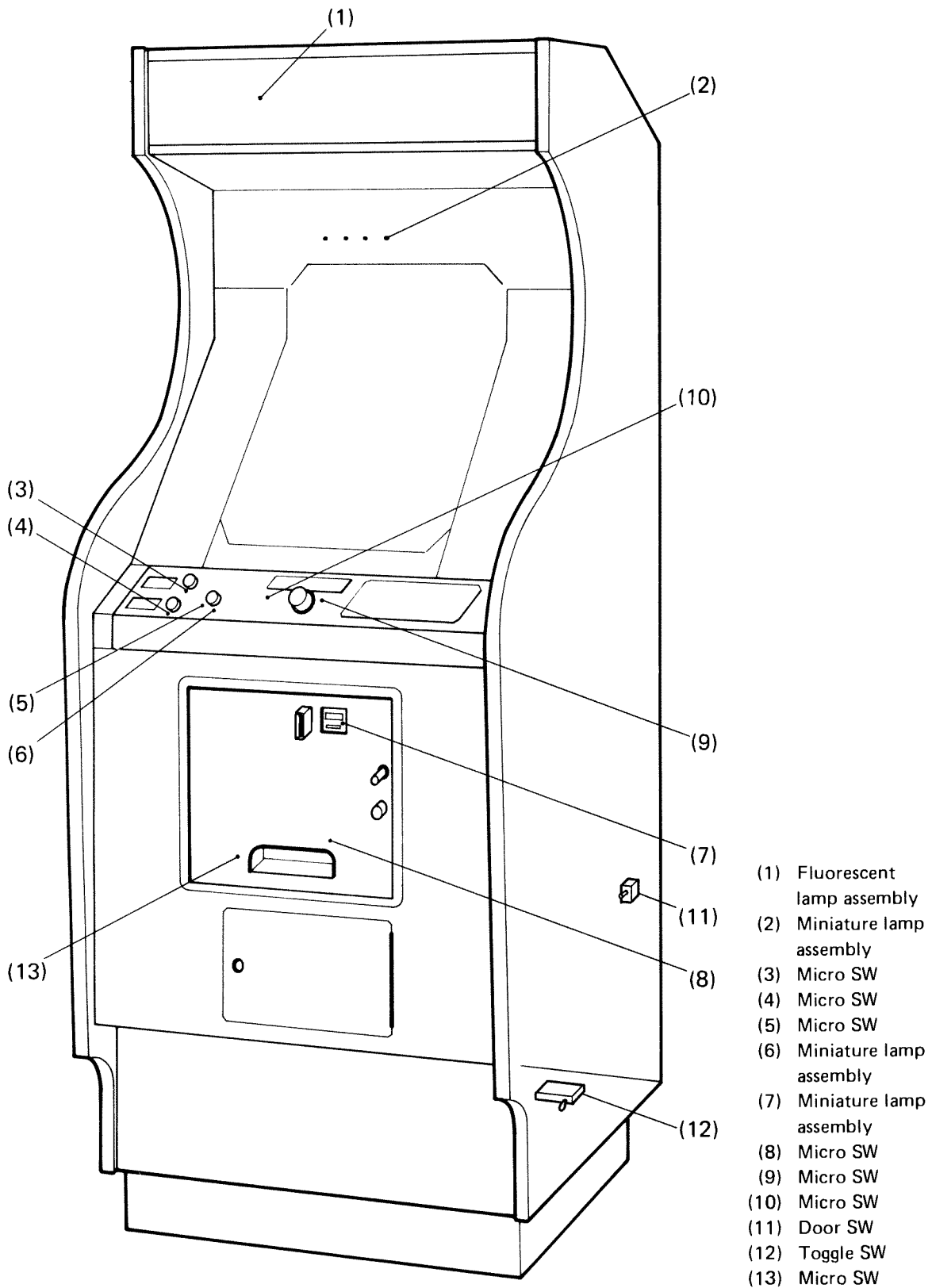


Fig. 5-6 Operating Panel Assembly

B. COMPONENT PARTS RELATED TO SWITCHES IN THE CABINET



- (1) Fluorescent lamp assembly
- (2) Miniature lamp assembly
- (3) Micro SW
- (4) Micro SW
- (5) Micro SW
- (6) Miniature lamp assembly
- (7) Miniature lamp assembly
- (8) Micro SW
- (9) Micro SW
- (10) Micro SW
- (11) Door SW
- (12) Toggle SW
- (13) Micro SW

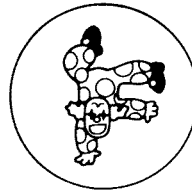
Fig. 5-7 Component Parts Related to Switches in the Cabinet

POSTFACE

Although the products of UNIVERSAL have been manufactured with the utmost care, if you are at all dissatisfied, please contact either the head office or any of the sales offices of UNIVERSAL.

Please note that the specifications may be subject to change along with quality improvement.

MEMO



COSMIC MONSTERS

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