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12G-10-219
Rev. 3

CLIFF HANGER MANUAL INDEX

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SAFETY INSTRUCTIONS

READ INSTRUCTIONS!! Please read all the CARE AND MAINTENANCE AND DISC PLAYER INSTALLATION instructions before installing or operating the disc player or game.

PLEASE FOLLOW all warnings on the disc player, and operating instructions in the manual included with the machine.

- Moisture forms in the operating sections of the disc player, and the players performance will be impaired if the appliance is brought from cool surroundings into a warm room or if the room temperature suddenly rises, and the player is put into use.

- To prevent this, allow the game and player to warm up for about an hour before turning on. Also be sure to keep game away from any heat sources (i.e. radiator or heat register).

- Slots and openings in the cabinet are provided for ventilation. To ensure reliable operation of the game and protect it from overheating these openings must not be blocked or covered.

- There should be a 3-4 inch space between the back of the game and the wall to provide adequate ventilation for the fan.

- Stern recommends that you change the air filter by the front intake vents every two months to keep the disc player area as clean as possible.

- The game should not be placed in an area where the room temperature will exceed 90 degrees F.

- If all these steps are followed, the internal cabinet temperature will remain approximately 2-3 degrees F. above ambient.

PR-8210 VIDEO DISC PLAYER CARE AND MAINTENANCE

CLEANING: Unplug the game from the wall outlet before cleaning. DO NOT use liquid cleaners or aerosol cleaners on the disc player. If necessary, use a damp cloth for cleaning.

- Use a soft, clean cloth to wipe off dust and dirt accumulated on the player. If necessary, moisten a soft cloth with water to remove heavy dirt.

- Never use paint-thinner, benzene, or other solvents. They react with the players surface and cause color changes and melting.

OBJECTIVE LENS CARE:

The objective lens is a key part of the player. Note that the lens surface must be clean in order to maintain the best performance.

NEVER TRY TO TOUCH THE LENS SURFACE!!

If too much dust or dirt accumulates, it may degrade the picture quality. Dust can be removed from the lens with an air blower for a camera lens.

CARE AND STORAGE OF VIDEO DISCS:

- The disc may be dusted with a clean soft cloth and safely cleaned using a mild plastic cleaner.

- Dirt on the disc does not affect information stored on it, but may cut down on the amount of light reflected back from the disc.

- Discs should be stored in their jackets and in a vertical position.

CLIFF HANGER

PR-8210 VIDEO DISC PLAYER INSTALLATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING PLAYER TO PREVENT DAMAGE, AND MAINTAIN WARRANTY!!

INSTALL DISC PLAYER WHEN MACHINE IS ON LOCATION ONLY!!

Step 1: Open carton. Lift player out of carton with wrappers and end caps attached. After lifting out, remove and save wrappers and end caps.

The carton, wrappers and end caps MUST be saved to repack the disc player if the machine is to be moved.

Step 2: Mounting Disc Player:

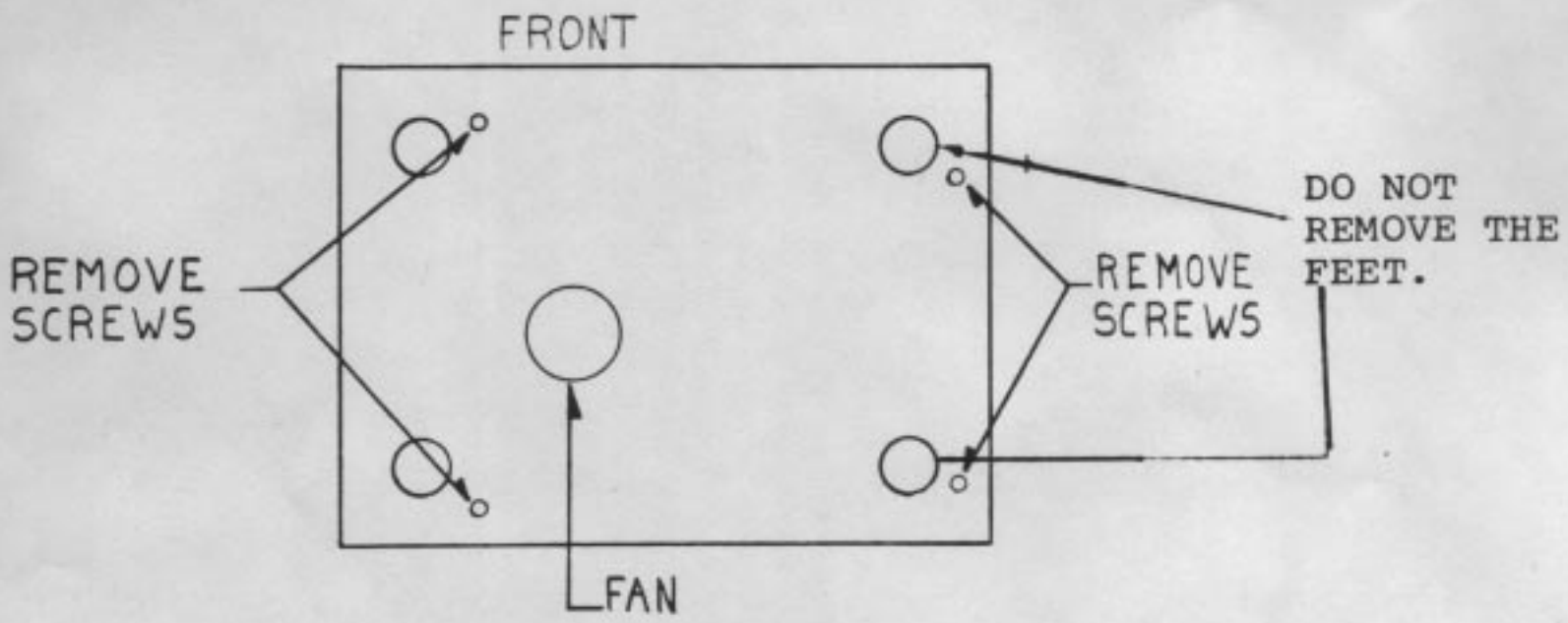
CAUTION: DO NOT CONNECT ANY WIRES TO PLAYER AT THIS TIME. TURN PLAYER UPSIDE DOWN SO FEET ARE FACING UP!! DO NOT PLACE ON ITS SIDE!!

The disc player must be mounted to the shock absorbers on the disc player drawer located behind the front bottom door of the game.

Remove the spacers and mounting screws from packing envelope.

1). Open front access panel and slide panel out from game.

2) Remove the four corner screws from the bottom of the disc player. THE SCREWS INDICATED IN THE ILLUSTRATION ARE THE CORRECT SCREWS TO REMOVE. REMOVING THESE SCREWS WILL NOT DAMAGE THE DISC PLAYERS FUNCTON. DO NOT REMOVE THE FEET. (See Illustration 1).



BOTTOM OF PLAYER

ILLUSTRATION 1

Step 2 (Cont'd):

3). Use spacers and mounting screws included with game. Mount the player to the drawer. The spacers go between the shock absorbers and the Player so that when assembled the PLAYERS FEET DO NOT TOUCH THE MOUNTING PANEL. (See illustration 2).

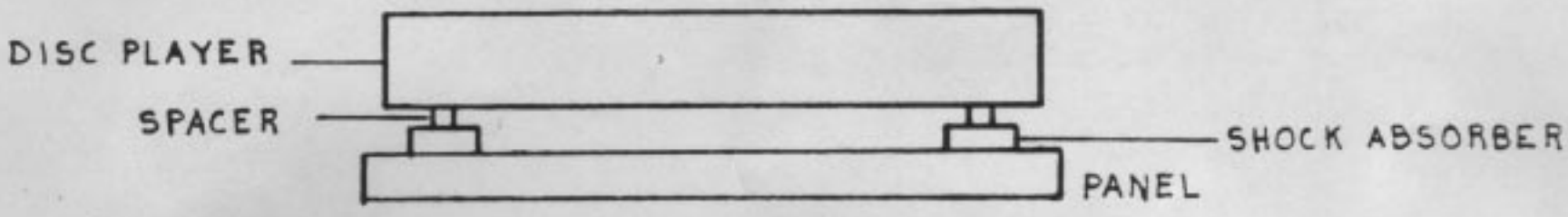


ILLUSTRATION 2

The front of the disc player when mounted, faces the front of the machine.

CAUTION: DISC PLAYER MUST BE REMOVED FROM GAME IF IT IS MOVED TO NEW LOCATION.

Step 3. Disc Player Set-Up: Opening the Hood

The Disc Player hood can only be opened when the power is turned on.

To open the hood: (See illustration 3)

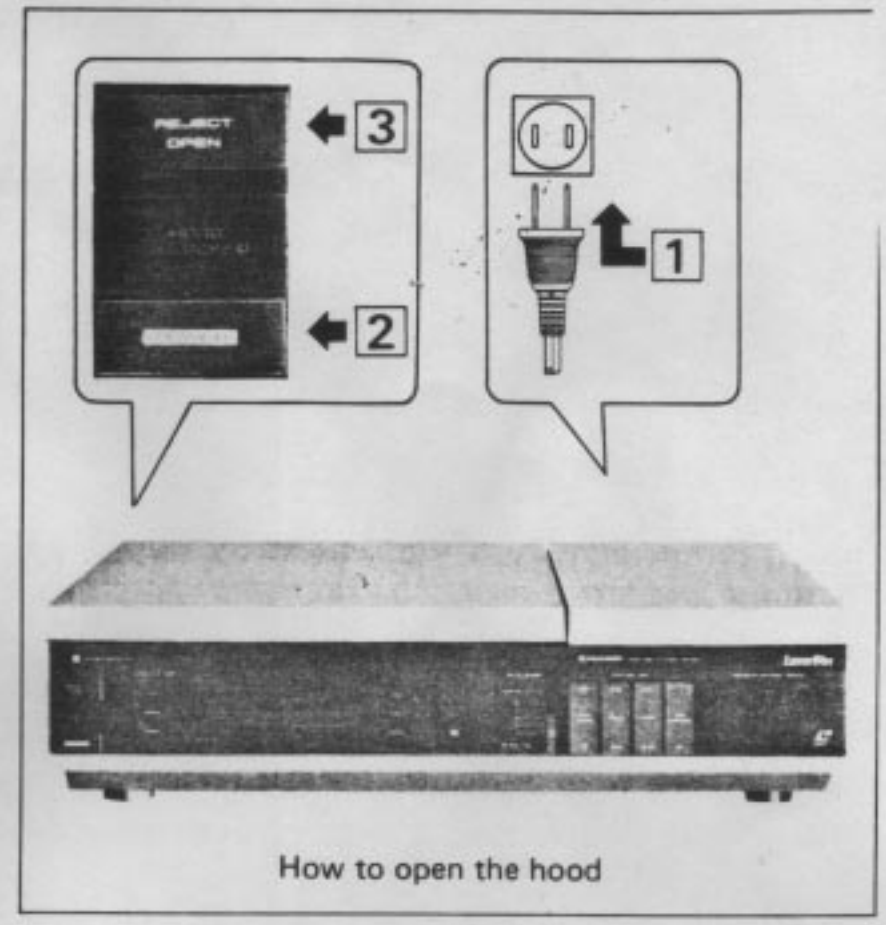
1). Plug the unit into the Disc Player Service Outlet.

Note: The Disc Player Service Outlet is NOT the service outlet on the electronics drawer. A Special Switched Outlet is provided for the Disc Player. It is located near the right rear of the cabinet (looking from back of machine) above the Player area. The Disc Player line cord goes up through the front cable feed hole.

2). Press the Power Switch to turn the unit on.

3). Press the Reject/Open Switch to unlock the hood, and lift the hood gently with your hand.

LEAVE UNIT ON!!

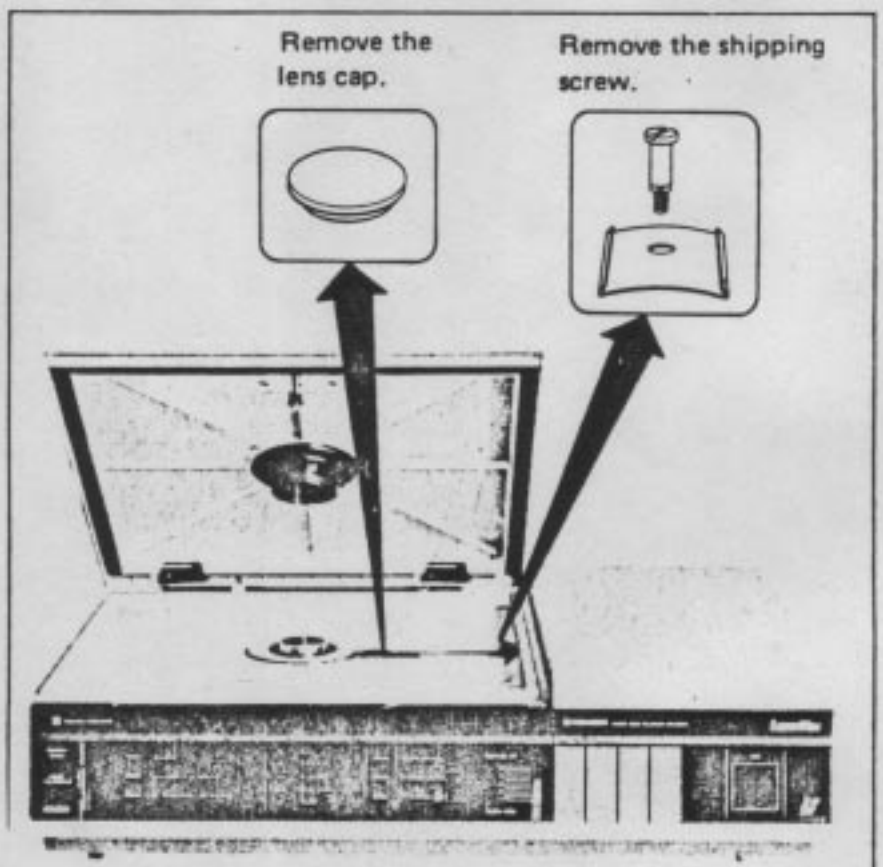


How to open the hood

ILLUSTRATION 3

Step 4: Disc Player Set-Up: Removing Shipping Screw and Lens Cap

To prevent damage to the internal mechanism during shipment, a shipping screw and plate is placed beside the center shaft at the factory. (See illustration 4). Use a screwdriver or coin to unscrew and remove the SCREW and SCREW PLATE. Next remove the LENS CAP which is placed over the lens to protect it from dust and dirt. (See illustration 4). LEAVE UNIT ON!!



Shipping screw and lens cap removal

ILLUSTRATION 4

NOTE: Store shipping screw, plate and lens cap, with the carton and wrappers. The screw, plate and lens cap MUST be replaced if the unit is to be moved to a new location.

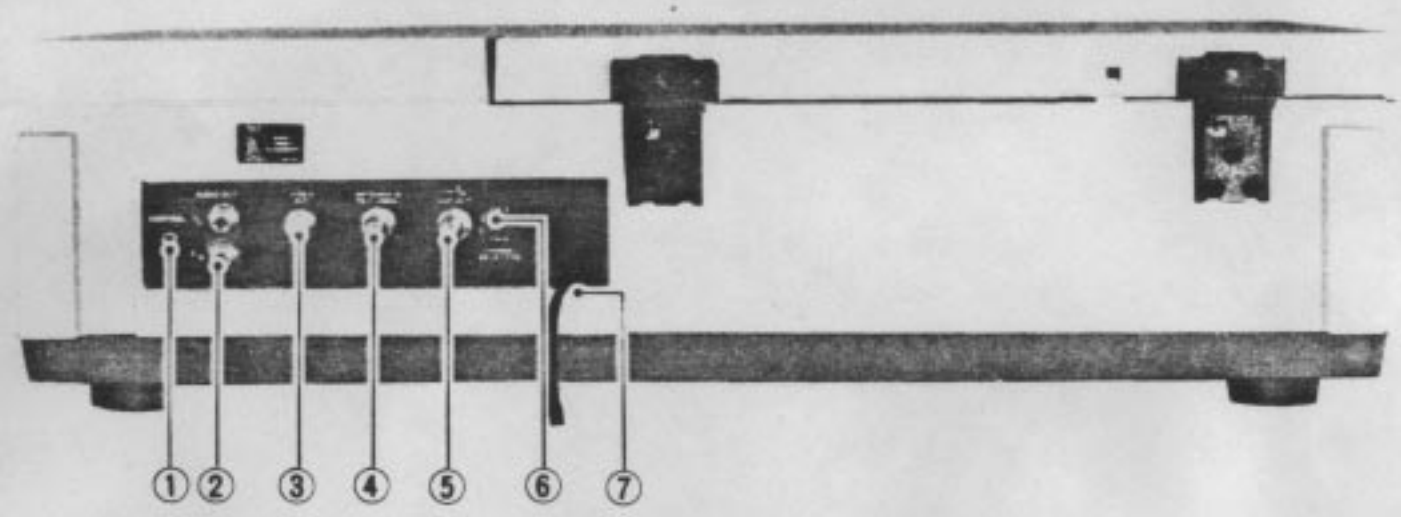
WHEN REPLACING SHIPPING SCREW AND PLATE, THE POWER TO THE PLAYER MUST BE ON!!

Step 5: Disc Player Set-Up: Installing the Disc

With hood open, insert the disc with the Cliff Hanger side of the disc facing down. Close the hood so that it clicks shut.
TURN PLAYER OFF!!

Step 6: Disc Player Set-Up: Connecting Disc Player

Connect the video out, audio out and control wires to the back of the player at this time. (See illustration 5).



1) Control Wire
2) Audio Out
3) Video Out
4) N/U
5) N/U
6) N/U
7) Line Cord

ILLUSTRATION 5

NOTE: The disc player is completely controlled by the logic boards. Once player is turned on, no control switches have to be pushed to operate the player.

TURN PLAYER ON.

PUSH UNIT INTO MACHINE.

Step 7: Power-Up Entire Game:

When the logic boards have reset, they will go through their self test. When the boards have reset, they will begin to control the disc player. The disc will begin to rotate, you will see, "Please Stand By" on the screen, and the stand-by light on the disc player will begin to flash on and off.

If, for some reason, the disc player does not come up to speed, you will see "disc not up to speed" displayed on the screen. If this happens, turn the game off then on and see if the disc comes up to speed.

NOTE (1): USE THE ON/OFF SWITCH OR BACK INTERLOCK SWITCH FOR THIS, AS THE FRONT INTERLOCK SWITCH DOES NOT TURN THE DISC PLAYER OFF.

NOTE (2): IF THE CONTROL LINE IS NOT PLUGGED INTO THE DISC PLAYER, THIS SYMPTOM WILL OCCUR.

NOTE (3): IF THE VIDEO DISC IS INSTALLED WITH THE WRONG SIDE DOWN, THIS SYMPTOM WILL OCCUR. THE ENCODED SIDE OF THE DISC MUST GO FACE DOWN WHEN INSTALLED.

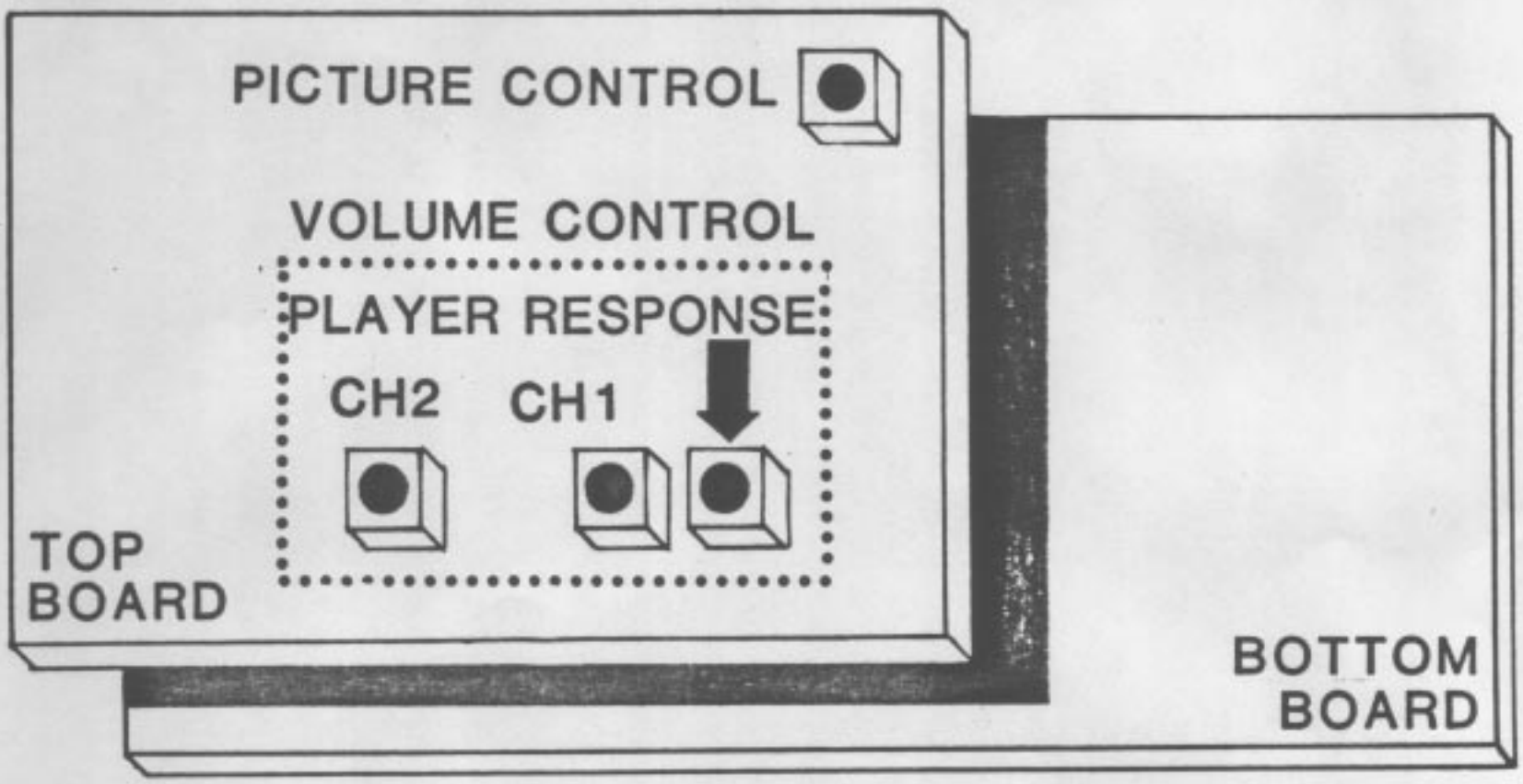
SOME DISCS HAVE BOTH SIDES ENCODED. IN THIS CASE IT DOES NOT MATTER WHICH SIDE IS DOWN. BOTH SIDES ARE THE SAME.

CLIFF HANGER VOLUME CONTROLS

Sound volume controls are located on the GSI Board (Graphics and Sound Interface Board) which is the top board in the card rack.

There are three controls (See Illustration Below). CH 1 controls the volume for the left channel, CH 2 controls the volume for the right channel and CH 3 controls the balance between the left and right channels, and the Player response sounds.

CLIFF HANGER



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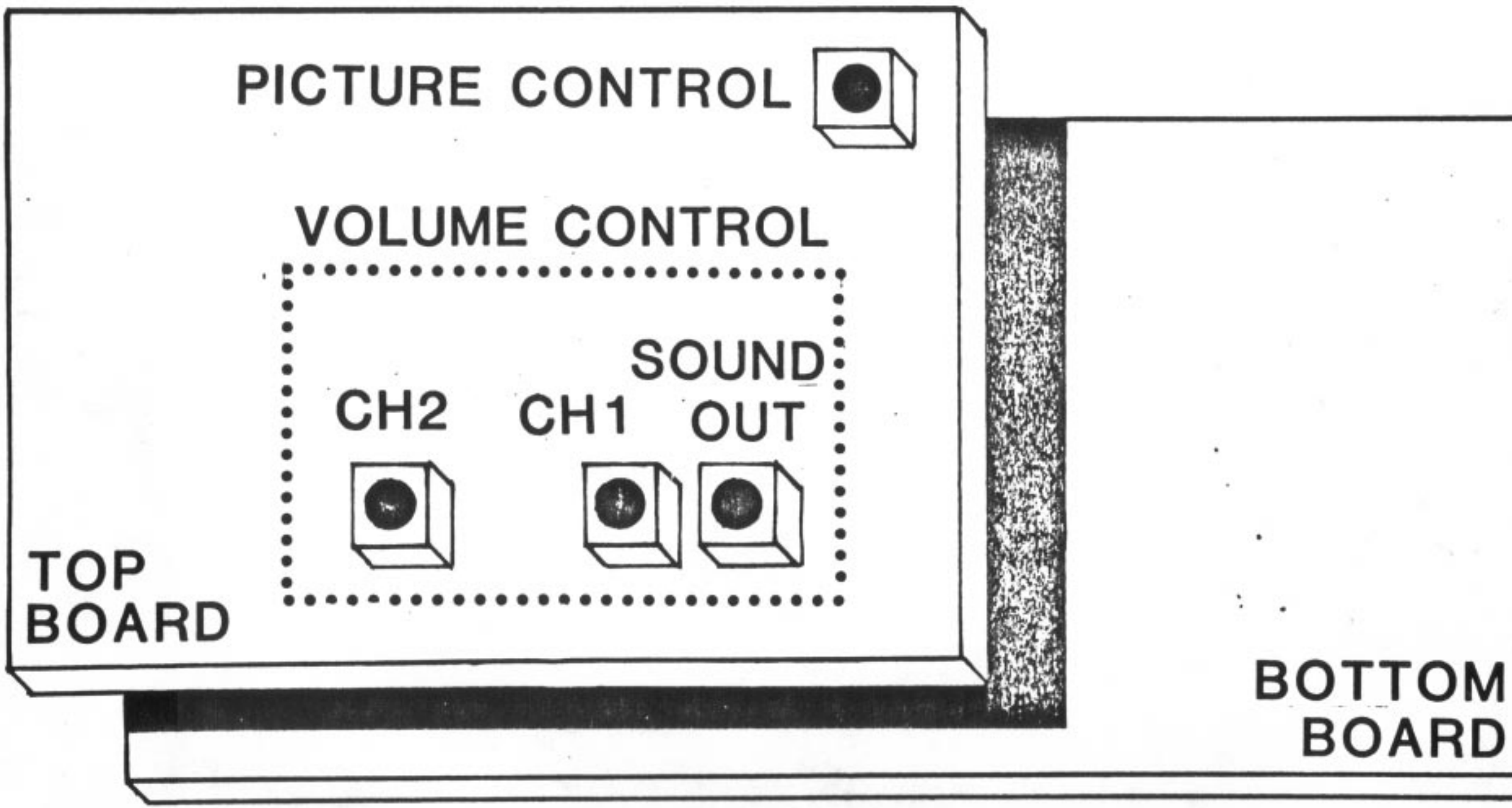
CLIFF HANGER



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IMPORTANT LOCKING MECHANISM INSTRUCTIONS

★ ★ ★ ★ ★ ★ ★ ★

BOTTOM FILTER DOOR LOCKING

INSTRUCTIONS:

★ ★ ★ ★ ★ ★ ★ ★

WHEN LOCKING DOOR, MAKE SURE LIP OF TOP METAL ARMOUR IS ENGAGED IN GROOVE IN CABINET.

★ ★ ★ ★ ★ ★ ★ ★

IT MAY BE NECESSARY TO LIFT DOOR SLIGHTLY WHEN CLOSING DOOR.

12B-527

On all games, there are some items that must be checked after shipment. Making these visual inspections may avoid time consuming service work later. Minor troubles caused during shipment are unavoidable. Cable connectors may be loosened, switches may go out of adjustment, and chips in sockets may have come loose.

- Check cable connectors and socketed chips to make sure they are properly seated and tight.
- Check switches for proper adjustments.
- Check transformer for any foreign material shorting across wiring lugs.
- Check that fuses are firmly seated and making good contact.
- Check switches for foreign material that may have come loose in shipment and could cause shorting of contacts.
- Check for any wires that may have become disconnected.
- Check that all cable connectors are completely seated on printed circuit board assemblies.
- Check that cables are clear of all moving parts.
- Check adjustment of the two normally open tilt switches located on the left side of cabinet by control panel.

NOTE: To protect solid state components, before touching any component in the game, discharge any possible static build-up by touching any ground circuit, e.g. ground braid.

In Cliff Hanger, Cliff is trying to enter Count Dragoe's castle to save the kidnapped Princess from Dragoe's evil clutches.

Control Cliff as he first sees and tries to save the Princess only to be outfoxed by Dragoe's henchmen as they kidnap her and spirit her off to the Count's castle.

Cliff finds the ring the Count gave the princess and his search for her leads him to a town where, in an incredible chase scene, Cliff is persued through the town and the town's sewer system by the Count's helicopter.

Cliff's adventures lead him through numerous other perilous situations that require him to have quick reflexes, great leaping ability and the skills of a Ninja.

When cliff enters the castle, he finally meets the Count face to face, and their bitter struggle in the castle clock tower almost does Cliff in.

In the surprise ending, Cliff rises up to the occasion and saves the princess.

INSTRUCTIONS (Cont'd)

Control Cliff's actions by using the two action buttons or joystick.

Use hand button to control movements of Cliff's arms.

Use foot button to control movements of Cliff's legs.

Use joystick to start movement or change directions of Cliff or car.

Use individual controls or combinations for successful moves.

CONTROL PANEL:

Joystick: 4-way joystick is used to begin movement on the screen or change the direction of movement on the screen of Cliff or Cliff's car. These direction changes are from the players perspective.

Example: If the action on the screen changes from left to right, you would have to move the joystick to the right.

Hand Button: Is used to control the movements of Cliff's arms and hands.

Example: If Cliff uses his arm or hand to block or grab something, then the Hand Button would be used for the correct move.

Foot Button: Is used to control the movement of Cliff's legs.

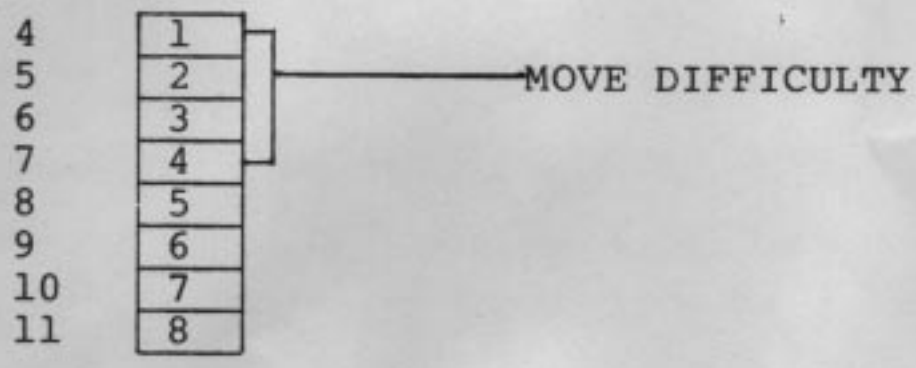
Example: If Cliff is jumping across something or climbing up something, the Foot Button would be used for the correct move.

SECTION II: GAME ADJUSTMENTS

All dip switches used for game adjustments are located on the ZPU-2000 board. The ZPU-2000 board is the bottom board in the card cage.

ZPU-2000 DIP SWITCH DESIGNATION

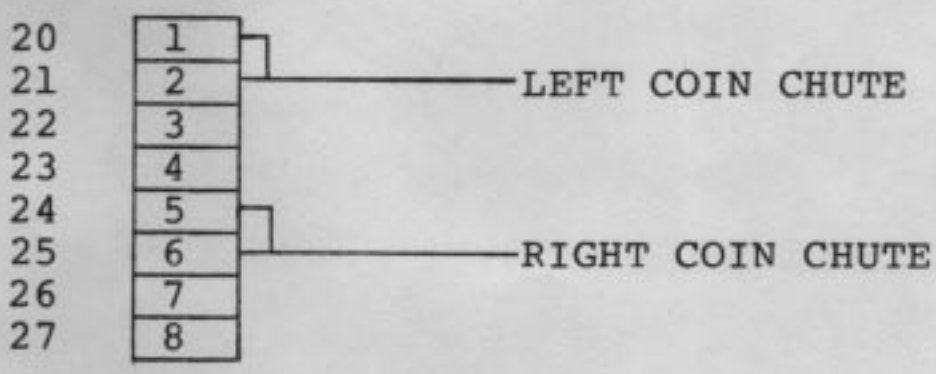
H11



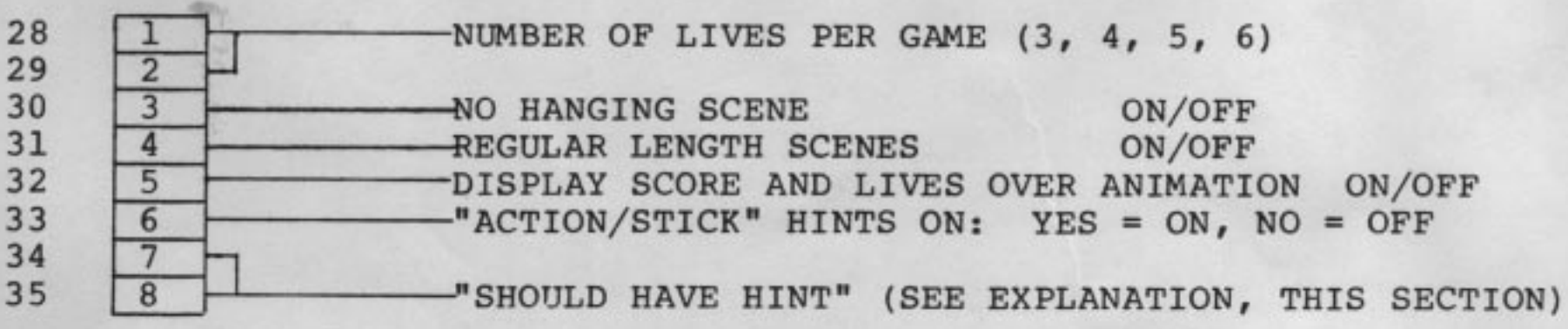
G11

12	1	SERVICE INDEX	ON/OFF
13	2	SWITCH TEST	ON/OFF
14	3	FREE PLAY	ON/OFF
15	4	PLAYER IMMORTALITY	ON/OFF
16	5	DISC TEST	ON/OFF
17	6	ATTRACT SOUND OFF	ON/OFF
18	7	SHORT SCENES	ON/OFF
19	8	BUY IN FEATURE YES/NO	ON/OFF

F11



E11



GAME ADJUSTMENTS (CONT'D)

MOVE DIFFICULTY:

SWITCHES	7	6	5	4
	OFF	OFF	OFF	OFF
	OFF	OFF	OFF	ON
	OFF	OFF	ON	OFF
	OFF	OFF	ON	ON
	OFF	ON	OFF	OFF
	OFF	ON	OFF	ON
	OFF	ON	ON	OFF
	OFF	ON	ON	ON
	ON	OFF	OFF	OFF
	ON	OFF	OFF	ON
	ON	OFF	ON	OFF
	ON	OFF	ON	ON
	ON	ON	OFF	OFF
	ON	ON	OFF	ON
	ON	ON	ON	OFF
	ON	ON	ON	ON

This setting determines the difficulty of the moves in the game by opening or closing the "WINDOW" that these moves can be made in.

FREE PLAY	DIP SWITCH 14
YES	ON
NO	OFF

PLAYER IMMORTALITY	DIP SWITCH 15
YES	ON
NO	OFF

Used for test purposes. In this mode, your player is never destroyed.

DISC TEST	DIP SWITCH 16
YES	ON
NO	OFF

Tests for faulty frames on the disc by letting the disc play from front to back checking each frame number.

If the system finds a bad frame number, it will back up 30 frames, increment the Hardware Error Column by 1, show the bad frame number in the Last Search Column, and then check that frame again.

If the frame passes the next test, the system will assume a Hardware Error.

Only if the system finds the same frame bad 7 times will it show a Disc Error. It will then show the bad frame number in the right hand column and then continue checking for bad frames.

If the system finds the same frame number bad from 1 - 6 times, it will list it as a Hardware Error. Only when it finds the same frame bad 7 consecutive times will it be listed as a Disc Error.

NOTE: This test takes between 35 to 40 minutes and checks only one side of the disc.

ATTRACT MODE SOUND OFF	DIP SWITCH 17
ON	OFF
OFF	ON

PLAY SHORT	DIP SWITCH 18	DIP SWITCH 31
NO	ON	ON
YES	OFF	ON

This shortens transistion time between scenes by removing some of the non-action parts of the game.

PLAY SHORT	DIP SWITCH 18	DIP SWITCH 31
YES	ON/OFF	OFF

Plus shortens some of the Action Scenes.

BUY IN FEATURE	DIP SWITCH 19
YES	ON
NO	OFF

Allows the player to begin a new game where the last game ended, for one credit.

NOTE: THE START BUTTON MUST BE PUSHED WITHIN SEVEN SECONDS.

NUMBER OF LIVES PER GAME:	LIVES	SWITCH 28	SWITCH 29
	3	OFF	OFF
	4	ON	OFF
	5	OFF	ON
	6	ON	ON

COIN SWITCH SETTINGS:

COIN	SWITCHES	
Left Chute	20	21
Right Chute	24	25
	OFF	OFF
	ON	OFF
	OFF	ON
	ON	ON

CREDITS	COIN
1	1
1	2
1	3
1	4

IF BOTH COIN CHUTES ARE ADJUSTED THE SAME FOR MULTIPLE COINS, CREDITS WILL INCREASE AS IF DROPPED IN SAME CHUTE.

ELIMINATES HANGING SCENE:	DIP SWITCH 30
YES	ON
NO	OFF

DISPLAY SCORE AND LIVES OVER ANIMATION:	DIP SWITCH 32
YES	ON
NO	OFF

The players score and number of lives will be displayed at the top of the screen.

"ACTION/STICK" HINTS ON	DIP SWITCH 33
YES	ON
NO	OFF

Tells the player whether the next move is an action button or a joystick move. This hint is displayed at the bottom of the screen and should be used when the game is first set-up to help the players become familiar with the game.

"SHOULD HAVE HINT"	DIP SWITCH 34	35
NEVER	OFF	OFF
1	ON	OFF
2	OFF	ON
3	ON	ON

This mode is used to tell the player what move should have been made at the point the player failed. This can be adjusted to give a hint telling the player what he should have done after the 1st, 2nd or 3rd time the player fails at a move or not at all.

Operator may want to use this mode so as to not frustrate players when they are learning the game.

Stern recommends you set this feature to "1" upon initial set-up and then to "NEVER" as the players start to learn the game.

SECTION III: SERVICE MODES

The System provides three service modes:
(1) Power on self test for each board
(2) Service Index
(3) Switch Test

I. POWER ON SELF TEST:
ZPU-2001: This board has its own test L.E.D. and goes through its own self test on power-up. Each flash checks a particular section of the board. The L.E.D. flashes upon completion of a test.

Listed below is the sequence of flashes of the L.E.D. and what section of the board is being checked.

ZPU-2001 - 8 Flashes:

1st = Z80 Microprocessor
2nd = Rom 0 Position 1H
3rd = Rom 1 Position 2H
4th = Rom 2 Position 3H
5th = Rom 3 Position 4H
6th = Scratch Ram 6C
7th = Bookkeeping 6F
8th = Video Ram Test 4A & 5A (GSI Board)

II. SERVICE INDEX:

Access into the Service Index can be made by turning Switch No. 12 of the ZPU Board on.

SERVICE INDEX	DIP 12
ON	ON
OFF	OFF

The Service Index displays six (6) categories on the screen that provide access to Bookkeeping Information, Game and Coin Adjustment Settings and Various Diagnostic Tests.

A. The categories in the Service Index are listed below:

01 Bookkeeping
02 Game Adjustment
03 Credit/Coin Adjustment
04 Monitor Test
05 Sound Test
06 Game Play Statistics

B. Selecting a category:
To select a category you:

(1) Push the Joystick to move the cursor up the index.
(2) Push the Joystick to move the cursor down the index.
(3) To select a category, push the Player 1 Start.
(4) To exit from a category, push the Player 2 Start.

C. Description of Categories:

01 BOOKKEEPING: The Bookkeeping category contains information on:

(1) Total Plays
(2) Coins through the Left Coin Chute.
(3) Coins through the Right Coin Chute.
(4) Total seconds played
(5) Longest game in seconds
(6) Shortest game in seconds
(7) Highest Game Score
(8) Highest Scene Reached

To reset the categories back to zero, push Switch Number Two (2) on the ZPU-2000 Board (See ZPU Illustration. This resets all categories except Number 7, Highest Game Score - this is handled separately.

NOTE: Number 6 - Shortest Game in seconds is reset to 99.

HIGHEST GAME SCORE:

The System displays twenty (20) high scores in two different categories: All Time and Today.

Scores in the Today Column are reset every time the machine is turned off.

Scores in the All Time Column are retained in memory and are not reset when the machine is turned off.

Scores in the All Time Column can be cleared One At A Time by pushing Switch Number One on the ZPU-2000 Board (See ZPU Illustration. Each push of Switch One clears the highest score of the group and all other scores move up. To clear the entire column push Switch One, ten (10) times.

02 GAME ADJUSTMENTS:

Displays how a particular adjustment has been set, the dip switches controlling that function, and the status of those switches.

SERVICE MODES (CONT'D)

03 CREDIT/COIN ADJUSTMENTS:

Show what Coin/Credit combination has been set for both the Left and Right Coin Chutes, and which switches control each chute.

04 MONITOR TEST:

Displays a Red, Blue, Green or Crosshatch pattern on the screen for monitor adjustments.

To change screens, push the Player One Button.

05 SOUND TEST:

Allows you to test each sound of the game individually. To do this use the joystick to call up the sound (See Chart) you want to test. Pushing the Player One Button creates the sound.

To exit the Sound Test, push Player Two Button.

LIST OF GAME SOUNDS:
01 Good Action (Beep)
02 Bad Action (Boop)

06 GAME PLAY STATISTICS:

This category contains informatin on:
(1) Range of Scores:
This page shows the range of scores achieved in 100K points increments. It displays values from 0 to 1.4 million points. It also shows how many times each level was reached.

(2) Range of Times:
This page shows the range of time played, in minutes. Times shown are from 0 to 14 minutes and increase at one minute intervals.

(3) Range of Scenes:
This page shows the number of times the highest scene was reached per game.

Pushing the Player One Button changes the display to the next page.

Pushing Switch #2 on ZPU Board clears the page being displayed back to zero.

SWITCH TEST

The Switch Test can be turned on by:
(1) Turning Switch Number 13 of the ZPU Board on and pushing the Reset Button (SW3).

0 = Switch Open 1 = Switch Closed

CONTROL PANEL AND COIN SWITCHES:

SWITCH	STROBE	BIT
Player One/Feet	5	2
Player Two/Feet	5	3
Left Hand Button	5	4
Right Coin Switch	5	1
Left Coin Switch	5	0
ZPU Switch 1	0	6
ZPU Switch 2	0	7
Right Hand Button	5	5
N/U	5	6
Tilt Switch (2)	5	7
Joystick Up	6	0
Joystick Right	6	1
Joystick Down	6	2
Joystick Left	6	3

SWITCH TEST (CONT'D)

ZPU DIP SWITCHES:

Dip Switch 4	4	0
Dip Switch 5	4	1
Dip Switch 6	4	2
Dip Switch 7	4	3
Dip Switch 8	4	4
Dip Switch 9	4	5
Dip Switch 10	4	6
Dip Switch 11	4	7
Dip Switch 12	3	0
Dip Switch 13	3	1
Dip Switch 14	3	2
Dip Switch 15	3	3
Dip Switch 16	3	4
Dip Switch 17	3	5
Dip Switch 18	3	6
Dip Switch 19	3	7
Dip Switch 20	2	0
Dip Switch 21	2	1
Dip Switch 22	2	2
Dip Switch 23	2	3
Dip Switch 24	2	4
Dip Switch 25	2	5
Dip Switch 26	2	6
Dip Switch 27	2	7
Dip Switch 28	1	0
Dip Switch 29	1	1
Dip Switch 30	1	2
Dip Switch 31	1	3
Dip Switch 32	1	4
Dip Switch 33	1	5
Dip Switch 34	1	6
Dip Switch 35	1	7

CLIFF HANGER HARDWARE SYSTEM

Cliff Hanger uses a Z80 based microprocessor system consisting of seven (7) boards:

(1) ZPU Board
(2) GSI Board
(3) VMB Board
(4) UIB Board
(5) RFB Board
(6) CRF Board
(7) PS1200

(1) ZPU Board (located in card rack):

This board contains a Z80 microprocessor running at 4.00 MHZ. ZPU Board also contains program memory, scratch pad memory, battery backed-up CMOS ram, coin counter and lamp drivers which are used to power the infra red LED's that control the disc player in games using the LD-1100 disc player. The ZPU Board also contains the Switch Matrix Controller. This circuit controls up to 80 switches. The switches are arranged in a matrix of 10 rows (strobes) and 8 columns (bits). A diode must be in series with all switches; anode to the column (bit) line, cathode to the row (strobe) line.

(2) GSI Board (located in card rack):

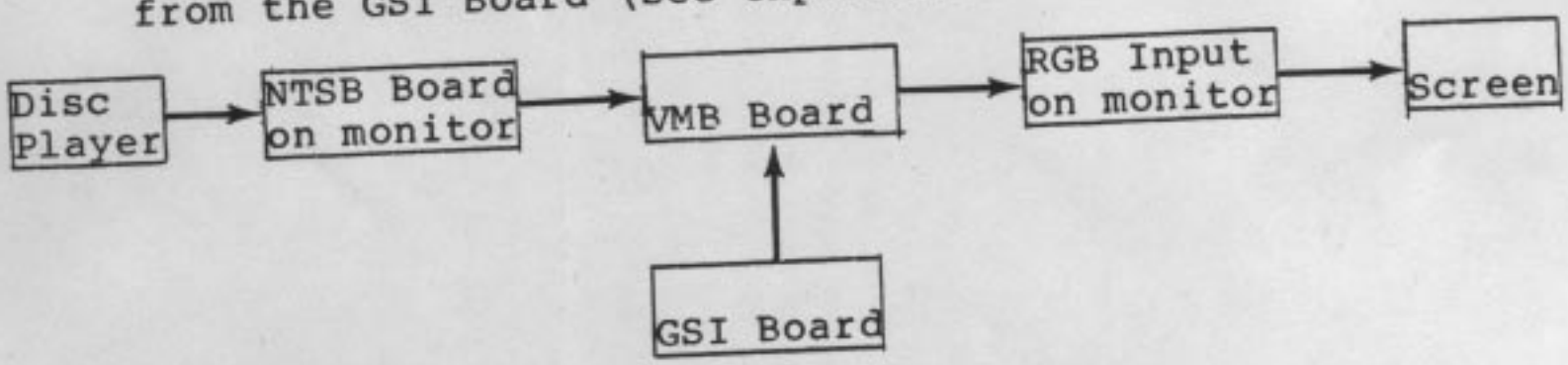
Graphics and Sound Interface Board:

- Generates non-disc graphics and sound.
- Reads the frame number from the disc and feeds that information to the ZPU Board.
- Provides an interrupt to the ZPU Board when the disc player is in search mode (INT).
- Provides an interrupt to the ZPU Board each time it reads a frame number on the disc.
- Had dual audio amps for stereo sound.
- Has volume controls.
- Provides switching signal to VMB Board. B-Y and R-Y signal the VMB Board to switch from disc player graphics to GSI generated graphics. They are analog signals, when the signals are negative, disc player video is on the screen, when the signals are positive, GSI graphics are on screen. (With Analog signals ground = positive).

(3) VMB Board (located on side of cabinet behind monitor):

Video Multiplexer Board:

The VMB board is a video matrix board which acts as a matrix switch. It controls what video will be on the screen, disc player video or GSI generated video. The switching signal comes from the GSI Board (see explanation of GSI Board).



(4) RFB Board:
Rectifier and Filter Board
Provides +12 VDC unregulated at 2 amps for audio amps on GSI Board.

(5) UIB Board (Located on front wall of cabinet below control panel:
Universal Interface Board
The UIB Board is the diode board fro the switch matrix. All switches except ZPU switches go through this board.

(6) CRF Board (Located in cage):
This is the R.F. Filter Board for the logic system, as well as providing static protection for the system.

(7) PS1200:
Provides voltages for the logic boards. This system is using:
+5 VDC +/-.20
+12 VDC
-5 VDC

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NAME OF GAME_____ DATE_____

SERIAL # _____ INSPECTOR _____

WAS GAME RECEIVED IN GOOD CONDITION (CABINETS, PANELS, ETC. . . .)? ☐ YES ☐ NO

IF NO, EXPLAIN:_____

_____

_____

DID GAME WORK WHEN RECEIVED? ☐ YES ☐ NO

IF NO, WHAT WAS THE PROBLEM: ☐ LOGIC BOARDS ☐ MONITOR

☐ POWER SUPPLY ☐ CONTROL PANEL

☐ OTHER _____

_____

_____

IN YOUR OPINION WHERE WAS THE PROBLEM CREATED? ☐ ENGINEERING ☐ SHIPPING

☐ PRODUCTION ☐ MECHANICAL

_____

WHERE COULD IMPROVEMENTS BE MADE (SERVICING, GAME OPERATION, ETC. . . .):

_____

_____

_____

WERE ALL SCHEMATICS & MANUALS INCLUDED? ☐ YES ☐ NO

IF NO, WHICH DO YOU NEED: _____

_____

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