



# 52"



### **Operators Manual**

IT IS THE RESPONSIBILITY OF THE OPERATOR TO MAINTAIN CUSTOMER SAFETY AT ALL TIMES, AND IT IS IMPERATIVE THAT THE DETAILS SET OUT IN THIS MANUAL ARE FOLLOWED PRECISELY,

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## SAFETY WARNING

In order to use this machine safely, be sure to read this Operators Manual carefully before installation, adjustment or use of this machine.

Whenever the owner of this machine entrusts disassembly, installation, adjustment, routine maintenance or trouble shooting to another person, the owner should ensure that that person read the appropriate precautions and relevant sections of this manual before starting work.

In order that no accidents occur when the machine is in operation, <u>strictly</u> follow the notes on safety described below. Also, carefully read <u>section 2</u>, "Precautions"

Warnings for Operation (**C** Requirements)

| NOTE: | Only operate this machine after checking that it has been installed correctly and in accordance with the installation and commisioning manual.   |
|-------|--|
| NOTE: | Parts of this machine move during game play, so there are places where the distance between the stationary section and moveable section changes. There are warning notices to keep hands and feet clear of moving parts, however if the operator feels that a person is in any danger, he should warn that person accordingly. |
| NOTE: | The warning notices must always be kept in good condition and replaced if worn, so that the customer can read it clearly.  |
| NOTE: | If there is an error or problem with this machine, operation must be<br>stopped immediately and the problem rectified before further use.  |

#### Warnings for Disassembly, Installation, Routine Maintenance, and Troubleshooting.

| DANGER: | Namco Ltd. bears absolutely no responsibility for accidents or injuries resulting from unauthorized changes to this machine.  |
|---------|---|
| DANGER: | Ensure that the machine has been turned <b>OFF</b> before making adjustments or carrying out maintenance. Also ensure only qualified personnel carry out maintenance or turn the power <b>ON</b> to this machine.   |
| DANGER: | The power supply and inside the monitor will remain hot and have areas of<br>high voltage even though the machine has been turned OFF, and there is<br>a possibility of burns or electric shock. Be careful not to touch these areas.                                   |
| DANGER: | In order to avoid injuries due to mis-operation, be sure that the voltage of the main power supply is within the prescribed limits. Also to prevent possible electric shocks due to failure, this machine <b>MUST</b> be fitted with a securely connected earthed plug. |
| NOTE:   | Do not turn the power switch <b>ON</b> until the machine has been installed correctly.  |

#### 1. SPECIFICATIONS

| FOWER SUFFLI | 23000118 | AC |  |        |  |
|--------------|----------|----|--|--------|--|
|              |          |    |  | <br>•. |  |

MONITOR :- Thomson 52" Projector Monitor (RP52)

| COIN ACCEPTOR Mars CashFlow - 1 Channe | COIN ACCEPTOR | Mars CashFlow - 1 Channe |
|--|---------------|--------------------------|
|--|---------------|--------------------------|

#### **DIMENSIONS** :-

| Assembled       | 1265(w) | х | 2245(d) | х | 2320(h) |
|-----------------|---------|---|---------|---|---------|
| Monitor Cabinet | 1250(w) | х | 645(d)  | х | 1940(h) |
| Ski Assembly    | 1265(w) | х | 1600(d) | х | 1220(h) |
| Header          | 1145(w) | х | 350(d)  | х | 380(h)  |

#### WEIGHT :-

| Assembled       | 458kg |
|-----------------|-------|
| Monitor Cabinet | 200kg |
| Ski Assembly    | 240kg |
| Header          | 18kg  |

| ACCESSORIES :- | Keys: | (Cash Door)    | 2 |
|----------------|-------|----------------|---|
|                | ,     | (Coin Door)    | 2 |
|                |       | (Service Door) | 2 |

| IEC Mains Lead<br>Operators Manual<br>Installation Manual<br>Monitor Manual<br>Monitor Remote Control W/Batteries<br>Cashflow Data<br>Floor Safety Mat & Decal<br>Floor Safety Mat & Decal<br>Floor Safety Mat Securing Plate<br>Floor Safety Mat Support Bracket<br>Joint Bracket - LHS<br>Potentiometer           | 1 1 1 1 1 1 2 2 1 1 1                     |
|---|---|
| M10x35 Hex Head Set Screw - S/Steel<br>M10 Flat Washer - S/Steel<br>M10 Spring Washer - S/Steel<br>M8x20 Hex Head Set Screw - S/Steel<br>M8 Flat Washer - S/Steel<br>M8 Spring Washer - S/Steel<br>M6 Dome Head Nut - Chrome<br>M6X25 Hex Head Screw - BZP<br>M6 Flat Washer H/Duty - BZP<br>M6 Spring Washer - BZP | 8<br>8<br>4<br>4<br>4<br>6<br>2<br>2<br>2 |
| M4 Security Wrench<br>M5 Security Wrench<br>M6 Security Wrench  | 1<br>1<br>1                               |

#### 2. PRECAUTIONS

Be sure to read this section carefully.

#### 2-1 Notes on Operation (CE Requirements)

| <u>NOTE:</u> | Only operate this machine after checking that it has been installed correctly<br>and in accordance with the Installation and Commisioning Manual  |
|--------------|---|
| <u>NOTE:</u> | Parts of this machine move during game play, so there are places where the distance between the stationary section and moveable section changes.  |
| <u>NOTE:</u> | There is a warning sticker that the player must be wearing flat shoes,<br>unsuitable footwear e.g. high heel shoes could cause the player to lose<br>balance and fall. However if the operator feels that a customer playing the<br>game is in any danger, he should warn the customer accordingly. |
| <u>NOTE:</u> | The warning sticker must always be kept in good condition so that the customer can read it clearly, and be replaced if worn.  |
| <u>NOTE:</u> | Ensure customer safety at all times. Be especially careful in the case of young children, who should be supervised by an adult at all times.  |
| <u>NOTE:</u> | If there is an error or problem with this machine, operation must be stopped immediately.   |
| <u>NOTE:</u> | Service, adustments and routine maintenance should be carried out by qualified personel only.   |

Parts of this machine swing to the left and right during game play. In order to maintain the customer's safety, the operator should strictly follow the appropriate precautions.

#### 2-2 Safety Mechanisms and Controls

For safety, this machine is equipped with a locking mechanism for securing the steps when the machine is not being played.

- The step locking mechanism is controlled as describe below. •
- After selecting the course, the step lock is released before game start. a.
- b. At game over, the steps are locked.
- C. If the steps are moved left or right while they are locking or unlocking, the motor temporarily stops in order to prevent damage to the step-lock motor. When the steps are no longer being moved left or right, the motor will restart. To prevent damage from occurring, do not move the steps while the motor is running.
- d. When the machine is first turned ON, the step-lock mechanism is checked automatically by unlocking and re-locking the steps.
- If the step-locking system fails, an error message will be displayed on the monitor e. screen.



#### 2-3 Cautions When Transporting.

- a. Do not subject the game to physical shock when transporting or moving it.
- b. Always return the levellers to the UP position before moving the machine, even for short distances.
- c. The monitor cabinet, ski assy and header assy **must** be separated before shipping.
- d. Take care not to rope any moulded (plastic) parts when transporting.
- e. Always ship the monitor section upright.

#### THIS MACHINE IS NOT DESIGNED TO BE MOVED BY FORK LIFT. DO NOT USE

#### 2-4 Cautions When Installing.

1. This machine is designed for indoor use only. <u>**Do Not**</u> install the machine in the following places





2. If this machine is installed next to walls or other machines, ensure that there is plenty of space between them.

- <u>NOTE:</u> So that customers are not injured by the movement of the Ski Tray, ensure that there is at least 300mm separation between other machines or walls. If two Alpine Racer machines are next to each other the space between them <u>must</u> be at least 600mm.
- <u>NOTE:</u> In order to gain access to the Power Supply and CPU assemblies, make sure that the rear of the machine is separated from a wall or other machine by at least 500mm.



#### 3. HOW TO PLAY

This game is based on Alpine ski racing.

The player stands on the steps and moves them left or right to control the skier. By using the inner edge when moving the steps, the skier slows down and turns quickly.

Race Mode

The player races the computer skiers and the object is to cross the goal line first. The game is over when the player crosses the finish line within the given time period, or the time period reaches zero. The time period is increased each time a player passes a check point.

If a player wins in a fast time they can enter their initials. Select letters using the select buttons and enter them by using the decision (Viewpoint) button.

• Time-Trial Mode

The object of the game is to pass between the flags (gates) and to cross the finish line in the fastest time. The rules require the player to go through the gates, so more technique is needed for this mode than the normal race mode. The game is over when the player crosses the finish line within the given time period, or the time period reaches zero. The time period is increased by one second each time a player passes through a gate.

If a player completes a course in a fast time they can enter their initials. Select letters using the select buttons and enter them by using the decision (Viewpoint) button.

A player is not disqualified for not passing through a gate, however the player will not be able to enter their initials even if they cross the finish line in a good time.

Game Mode Selection

After inserting sufficient credit, the "Game Mode Selection" screen is displayed. The player selects either the "Race Mode" or "Time-Trial Mode" by using the L/R selection buttons, and pressing the decision (Viewpoint) button.

Course Selection

After the game mode has been selected, the "Course Selection" screen is displayed.

The player can select one of three courses, "Novice", "Intermediate" and "Expert".

- Viewpoint Selection The viewpoint button can pressed at any time during a game to switch between the player's view and behind view.
  - Players View: This is the view as seen by the skier. This provides an exciting view while skiing. The race mode starts in this view.
  - Behind View: This is the view from behind the skier. This view can be used to get an understanding of the skiers posture and surrounding conditions. The time trial mode starts in this position.

#### 4. MAJOR COMPONENTS



#### 5. INSTALLATION

WARNING If the location site of this machine has a polished floor it is recommended that rubber pads are fitted under the level adjusters to prevent the machine sliding on the floor.

#### 5-1 Fitting the Header Assembly

### The Header Assembly has a forward centre of gravity, so it is important that at least <u>two people</u> are used to fit or remove the Header Assembly.

The fitting position of the Header Assembly is very high, and it is important that a means of reaching the height safely, without stretching, is available. (e.g. steps, step stools etc.)

- 1. Place the Header Assembly on to the monitor cabinet, connect the connectors and pass the connectors in to the cabinet, slide the header back ensuring that it engages fully in to the retaining brackets at the front of the monitor cabinet.
- 2. Fit the 2off M6x25 Hex Head Screws, Spring and Flat washers to retain the Header Assembly to the cabinet.



#### 5-2 Connecting the Ski Assy to the Monitor Cabinet.

- 1. Connect the connectors between the Ski Assembly and Monitor Cabinet.
- 2. Push the Ski Assembly fully up to the monitor cabinet, taking care not to trap any wires.
- 3. Fit, finger tight, a joint bracket to each side using 4off Hex Head Set Screws (M10x25), Spring and Flat Washers on each bracket. Tighten fully all screws. (Note: Joint Brackets are handed, ensure bracket is fitted with fixing holes uppermost.)



#### NOTE:-

When the machine is fully assembled and in its final position, lower the 10 level adjusters, (4 on the monitor cabinet and 6 on the ski assy), with a spanner so that all castors are raised from the floor by approximately 5mm, and the machine is level. Tighten the lock nuts with a spanner to ensure that the level adjusters do not move.



If this machine is installed on a smooth or shiny floor, it is recommended that rubber slip mats be placed under each adjustable foot to prevent the machine from moving when being played.

#### 5-3 Fitting the Safety Mat

1. Assemble the Floor Safety Mat by fitting the securing plates from underneath, the support brackets from the top and retaining the assembly together with the M6 Dome Nuts.



- 2. Place the assembled Safety Mat into position under the Ski Step Assy.
- 3. Retain the Safety Mat in position with the Hex Head Set Screws (M8x20), Spring Washers and Flat Washers



#### 6. ADJUSTMENTS

#### 6-1 Turning on the Power

After the machine has been installed, turn ON the power. The power switch is located on the rear of the monitor cabinet.

#### 6-2 Adjustment Switches

The Adjustment switches are located inside the coin door.

- Service Switch.
   Press this switch to obtain game credits without incrementing the play meter.
- Test Switch Slide the test switch ON to enter test mode. Test mode allows testing and the changing of game settings. (Refer to section 6-3 "Test Mode" (page 12))

| COIN COUNTER |              |
|--------------|--------------|
| LEFT PLAYER  | RIGHT PLAYER |
| TEST SERVICE |              |

Service Bracket

#### 6-3 Test Mode

- 1. Open the coin door and slide the test switch "ON". The menu screen will be displayed on the monitor.
- 2. Select the test required by pressing the 'Left or Right Selection' push button. The selected test will 'blink'.
- 3. Enter the selected test by pressing the 'Decision' push button. Select "EXIT" to return the "Menu Screen".
- 4. After testing is completed, ensure that the test switch is returned to the "OFF" position to return to normal game mode.

The Test Switch must always be in the "OFF" position for normal game mode.





| 1. | Select item (1) "COIN<br>OPTIONS" on the<br>menu screen to set<br>the game cost and<br>related settings. | COIN OPTIONS<br>[ DEFAULT IN GREEN ]                     |
|----|--|--|
| 2. | Press 'Select L/R' to select the required item.  | GAME COST<br>1 COIN 1 CREDIT (a)                         |
| 3. | Use the 'Decision'<br>button to adjust the   | FREE PLAY OFF (b)  |
|    | settings.  | EXIT   |
| 4. | Select "EXIT" to return to the menu screen.  | SELECT L/R BUTTON : CHOOSE<br>DECISION BUTTON : CHANGE + |

*Note :-* The price of play on this machine is set within the Cashflow Coin Mech. Ensure that the Coin Options on the screen are set as shown in the following table.

| ITEM          | CONTENTS   | FACTORY SET     |
|---------------|--|-----------------|
| (a) Game Cost | No of Coins required for No. of credits settable 1 - 9 | 1 Coin 1 Credit |
| (b) Free Play | Yes/No   | NO              |

#### 6-3-2 Game Options

- 1. Select item (2) "GAME OPTIONS" on the menu screen to set the game options and related settings.
- 2. Press 'Select L/R' to select the required item.
- 3. Press the 'Decision' button to adjust the settings. Standard settings are displayed in green.
- 4. Select "EXIT" and press 'Decision' to return to the menu screen.

| GAME OPTIONS<br>[ DEFAULT IN GREEN ]   |                      |  |
|--|----------------------|--|
| GAME DIFFICULTY<br>SOUND IN ATTRACT<br>HI SCORE INITIALIZE<br>AUTO HIGH SCORE INITIALIZE | B<br>ON<br>NO<br>OFF | (a)<br>(b)<br>(c)<br>(c)<br>(c)<br>(d) |
| EXIT   |                      |  |
| SELECT L/R BUTTON : CHOOSE<br>DECISION BUTTON : CHANGE                                   | +                    |  |

| ITEM                           | DESCRIPTION   | FACTORY SET |
|--------------------------------|---|-------------|
| (a) Game Difficulty            | A (easy) to C (hard)  | В           |
| (b) Sound in Attract           | On / Off  | On          |
| (c) Hi Score Initialize        | Yes / No (If Yes Hi Score will be reset when exiting test)                      | No          |
| (d) Auto High Score Initialize | Yes / No (If Yes Hi Score will be reset every time the machine is switched OFF) | Off         |

#### 6-3-3 I/O Test

- 1. Select item (3) "I/O Test" on the menu screen to test the switches, motor and step adjust.
- 2. Press 'Select L/R' to select the required item, then press the 'Decision' button to enter the test.
- 3. Select "EXIT" and press the 'Decision' button to return to the menu screen.



- (a) Shows condition of DIP SW 4 on the PCB. In normal operation all switches are OFF. (If a switch is ON, it will be displayed in red.)
- (b) For testing Switches and Control Pots. (See 6-3-3-1)
- (c) For testing the Step-Lock Motor. (See 6-3-3-2)
- (d) For initializing the Step Control Pots. (See 6-3-3-3)

#### 6-3-3-1 Switch Test

- 1. Select Switch Test from the 'I/O Test' menu. The following screen will appear on the monitor.
- Note:- On entering Switch Test the Skis will be unlocked. Ensure that the Skis are returned to the locked condition at the end of the test by entering Motor Test (See 6-3-3-2)

|       | SWIT                | CH TEST                |                  |            |
|-------|---------------------|------------------------|------------------|------------|
|       | TEST SW<br>COIN SW  | ON<br>ON               |                  | (a)<br>(b) |
|       | SERVICE S           | W ON                   |                  | (c)        |
|       | R SELECTION F       | ON BUTTON              | ON<br>ON         | (d)<br>(e) |
|       | L SELECTIO          | ON BUTTON              | ON               | (f)        |
|       | SWING 00<br>EDGE 00 | 00 0000 (<br>00 0000 ( | CENTER<br>CENTER | (g)<br>(h) |
|       |                     |                        |                  | ()         |
| L/R S | SELECT + DE         | CISION : E             | XIT              |            |

2. The word 'ON' will appear next to items (a) to (f) each time the respective switch is operated.

When the skis are pushed left, 'SWING-CENTRE' will change to 'LEFT' and 'OK' will appear just before it reaches the extreme left,. When the skis are pushed right, 'CENTRE' will change to 'RIGHT' and 'OK' will appear just before it reaches the extreme right. '0000' will increase when the skis are moved to the right and decrease when they are moved to the left.

When the skis are tilted, 'EDGE-CENTRE' will change to 'LEFT or RIGHT' and 'OK' will appear just before they are fully tilted. '0000' will change as the skis are tilted.

Note: "EDGE" 'OK' will only appear if you stand and apply weight to the edges of the ski steps. There is no problem if 'OK' is not displayed when standing on the steps in the same way as normal play.



- 3. If 'OK' is not displayed when the edge is tilted left or right, re-initialize as described in section 6-4 "Initialization After Replacing Parts".
- 4. Operate both of the 'Select L/R' buttons and 'Decision' button together to exit and return to the 'I/O Test' menu screen.

#### 6-3-3-2 Motor Test

1. Select Motor Test from the 'I/O Test' menu. The following screen will appear on the monitor.

| MOTOR TEST   |     |
|--|-----|
| NOW MOTOR STATE : LOCK                               | (a) |
| GO MOTOR : FREE                                      | (b) |
| EXIT   |     |
| L/R SELECT BUTTON : CHOOSE<br>DECISION BUTTON : EXIT |     |

- (a) Displays the current condition of the Skis.
   Display will show 'LOCK FREEING FREE LOCKING' as the Skis are tested.
- (b) Allows the Skis to be locked and unlocked. Display will show 'FREE - NOW MOVING - LOCK' as the Skis are being tested.
- *Note:-* Ensure Skis are in the locked condition before returning to normal game mode.

#### 6-3-3-3 Step Adjust

1. Select Step Adjust from the 'I/O Test' menu.

On entering 'STEP ADJUST' test, Step Adjust on the 'I/O' Menu Screen will blink and 'INITIALIZE COMPLETED' will appear and be blinking.

Ski Step initialization is now completed.

2. Select EXIT to return to the Main Menu Screen.

#### 6-3-4 Sound Test

- 1. Select item (4) "Sound Test" on the menu screen to test the sound and speakers.
- 2. The following screen will appear on the monitor.



- 3. Select the required item by 'Select L/R' buttons. The selected item will 'blink'.
- 4. Pressing the Decision button will cause the selected value setting to blink.
- 5. Pressing 'Select R' will increase the value and 'Select L' will decrease the value.
- 6. Press 'Decision' button to return to item select mode.
- 7. When selecting the 'Request Song No.' test, 'Select R' button will increase the song number and 'Select L' will decrease the number. The 'Decision' button will produce the sound of the song number selected. (Request Song 01 will produce a stereo sound test. Sound will be produced from the speakers in the following order:- Left speaker, Right speaker, Both speakers)
- 8. Press both Select L/R buttons and Decision button together to return to Sound Test Menu from Request Song No. Test

| Item | Description   | Factory Set |
|------|---|-------------|
| а    | Set left speaker volume 00 Quietest - 3F Loudest  | ЗA          |
| b    | Set right speaker volume 00 Quietest - 3F Loudest   | ЗA          |
| с    | Select sound for testing. Each number will produce a different sound. 01 will generate a stereo test. |             |

#### 6-3-5 Monitor Test

- 1. Select item (5) "Monitor Test" on the menu screen to set up and adjust the monitor.
- 2. On entering monitor test, the screen will display one of the following test patterns.

GRADATION PATTERNCROSSHATCHGREENCROSSHATCHWHITEWHITE WINDOW(H)WHITE WINDOW(M)WHITE WINDOW(L)INTERLACE PATTERNVIEW ANGLE ADJUSTVIEW ANGLE ADJUST(CRT)VIEW ANGLE ADJUST(PROJECTOR)FULL WHITE

- 3. Use 'Select L/R' buttons to change to the next pattern and 'Decision' button to return to the Main Menu.
- 4. Refer to monitor manual for monitor adjustments.

#### 6-3-6 ADS Data

- 1. Select item (6) "ADS Data" on the menu screen to view machine history details.
- 2. The following screen will appear on the monitor.

|                    |                     |              | ADS            |                     |              |                |                       |
|--------------------|---------------------|--------------|----------------|---------------------|--------------|----------------|-----------------------|
| ΡΙΑΥ               | RACE<br>NOV<br>0000 | INT<br>0000  | EXP<br>0000    | T.T.<br>NOV<br>0000 | INT<br>0000  | EXP<br>0000    | (a)                   |
| GOAL<br>EXT0       | 0000                | 0000         | 0000           | 0000                | 0000         | 0000           | .(b)<br>.(c)          |
| EXT1<br>EXT2       | 0000<br>0000        | 0000<br>0000 | 0000<br>0000   |                     |              |                | <br>(d)<br>.(e)       |
| GATE               | NC                  | ····         | IN             | 0000<br>IT          | 0000<br>E    | 0000<br>XP     | <br>. (†)             |
| RACE<br>T.T.       | 000'0<br>000'0      | 0"00<br>0"00 | 000'0<br>000'0 | 00"00<br>00"00      | 000'<br>000' | 00"00<br>00"00 | <br>(g)<br>(h)        |
| PLAY TI<br>PLAY NI | ME<br>UMBEF         | 000' C<br>R  | 00" 00<br>0000 | INITIAL             | IZE          |                | <br>(i)<br>(j)<br>(k) |
| L/R SEL<br>DECIS   | .ECT<br>SION        | : CH<br>: EN | OOSE<br>TER    | EXIT                |              |                | . ,                   |

| Item            | Description  |
|-----------------|--|
| (a) Play        | Total number of games played at each difficulty level for each course.                     |
| (b) Goal        | Total number of games completed at each difficulty level for each course.                  |
| (c) Ext0        | Number of games finishing at 1st extended time gate at each difficulty level in race game. |
| (d) Ext1        | Number of games finishing at 2nd extended time gate at each difficulty level in race game. |
| (e) Ext2        | Number of games finishing at 3rd extended time gate at each difficulty level in race game. |
| (f) Gate        | Total number of gates completed for each difficulty level in T.T. game.                    |
| (g) Race        | Total time in Hrs, Mins, Secs each difficulty level has been played in race game.          |
| (h) T.T.        | Total time in Hrs, Mins, Secs each difficulty level has been played in T.T. game.          |
| (i) Play Time   | Total time in Hrs, Mins, Secs game has been played.  |
| (j) Play Number | Total number of game plays.  |
| (k) Initialize  | Resets all ADS Data to zero.   |

#### 6-3-7 Others

- 1. Select item (7) "Others" on the menu screen.
- 2. On entering 'Others' the following screen will appear on the monitor.

| OTHERS<br>(DEFAULT IN GREEN)                     |            |
|--|------------|
| BACK UP MEMORY INITIALIZE                        | NO         |
| EXIT   |            |
| L/R SELECTION BUTTON : CHOOS<br>DECISION : CHANG | 3E<br>5E + |

3. Selecting Back Up Memory Initialize will return all adjustable settings to factory preset.

#### 6-4 Initialization After Replacing Parts

Initialization must be performed after replacing the game PC board, Rom or Step Controls. If initialization is not performed, the game will not function correctly. During initialization, ensure that the step edges are level.

#### 6-4-1 Adjustment Method (a)

1. When the power is turned ON the step-lock motor is automatically checked. The motor check first locks the steps (If not already locked), unlocks, then locks them again.

Note: Ensure that the test switch is OFF during motor check. Also ensure that the steps are not touched during the motor check, or the check will not be performed correctly.

If the first lock is not completed within fifteen seconds from power up, an error display screen appears.
 If this happens, refer to section 6-4-2

 "Adjustment Method (b)", and initialize the controls. If the error display screen is still showing after the controls have been initialized, refer to section 6-4-3, "Handling Motor Errors".
 After the motor check is successful the attract screen is displayed.

MOTOR ERROR 1 PLEASE STEP ADJUST

 To initialize the controls, Switch the test switch ON while pressing the service button.
 The screen displays the "SWITCH TEST" screen with INITIALIZE

COMPETED flashing, Initialization is completed.

4. Turn the test switch OFF to return to normal game mode.

| SWITCH TE  | ST   |
|--|--|
| TEST SW OF<br>COIN SW OF<br>SERVICE SW OF<br>R SELECTION BUT<br>DECISION BUTTO<br>L SELECTION BUT<br>SWING 0000 00<br>EDGE 0000 00 | N<br>N<br>TTON On<br>N ON<br>TTON ON<br>000 CENTER<br>000 CENTER |
| INITIALIZE COMPLE  | TED<br>N : EXIT  |

#### 6-4-2 Adjustment Method (b)

- 1. Slide the test switch ON.
- 2. Turn the power OFF and then back ON again.
- 3. Select "I/'O TEST" and press the decision button (View Change).
- 4. Select "STEP ADJUST" and press the decision button. The controls are now initialized.
- 5. After initialization is completed, turn the test switch OFF. The motor check begins. If the motor still does not operate correctly, there is a problem with the motor or switches, and an error will be displayed on the screen. Refer to section 6-4-3, below, "Handling Motor Errors", for fault finding.

#### 6-4-3 Handling Motor Errors

If a problem has occurred with the step-lock motor, an error message and method of rectifying will be displayed on the screen.

- 1. Errors at Start-up
- a. When the power is turned ON the step-lock motor is automatically checked. The motor check first locks the steps (If not already in locked position), unlocks, then locks them again.
- Note: Ensure that the test switch is OFF during motor check. Also ensure that the steps are not touched during the motor check, or the check will not be performed correctly.
- b. If the first lock is not completed within fifteen seconds from power up, the following error display screen appears.
  If this happens, refer to section 6-4-1 "Adjustment Method (a)", and initialize the controls.

MOTOR ERROR 1 PLEASE STEP ADJUST

c. If an error other than the one shown above is displayed, it is possible that a fuse has blown, there is a problem with the step-motor mechanism or the steps are not moving freely.

- d. If the first lock is completed within fifteen seconds, but the steps cannot be released, Motor Error 2 screen is displayed until the fault is rectified.
- e. If after the steps have been freed, they do not re-lock, as an emergency measure, Motor Error 3 screen is displayed. This allows the step-lock mechanism to be overridden and the game to be operated with the steps permanently in the free position.
- WARNING: It can be dangerous to operate the machine with the steps permanently free, so the fault MUST be repaired as soon as possible.

MOTOR ERROR 3 DO YOU WANT TO OPERATE

YES>PUSH DECISION BUTTON NO>PUSH L/R SELECT BUTTON

- If the game is to be operated with the steps in the free condition, press the decision button. If either the Left or Right Select button is pressed the game will cease to function until the fault has been rectified.
- 2. An Error Occurs During Play.
- a. If the motor stops function during game play, the following error screen will be displayed.
- b. Turn the power OFF and then back ON. The motor will be checked automatically.
- c. If there is still a problem, follow the instructions detailed in section 6-4-3 (1), "Errors At Start-up".

WARNING! STEP LOCK DEVICE IS OUT OF ORDER CALL THE ATTENDANT IMMEDIATELY.

MOTOR ERROR 2 OPERATION STOP!!

#### 7. MAINTENANCE

DANGER: In order to prevent injury or electric shock to service personnel, ensure that the MAIN POWER IS OFF before attempting any maintenance.

DANGER: Before performing any work not described in this manual, be sure to contact your distributor to receive instructions or answers to questions.

#### 7-1 Care of the Projector Monitor

The projection tube lenses have been manufactured from plastic material. Prevent contact with the lenses, because various lens faces have been provided with a special coating which is easily damaged.

**Only** the side of the <u>lens directed towards the mirror</u>, the mirror and the <u>projection screen</u> are allowed to be cleaned.

If cleaning is absolutely necessary, observe the following points :

- Blow off dust, or remove with a dust brush or soft lint-free cloth.
- If necessary, clean with a soft lint-free cloth, moistened with water to which a little detergent has been added.
- <u>**DO NOT USE</u>** organic solvents such as alcohol, dry cleaning naptha, trichlorethylene, acetone, etc., these agents may cause permanent damage to the plastic lenses or projection screen.</u>





#### 7-2 Replacing the Fluorescent Tube

- 1) Remove the ten socket button head screws (M5x12), and remove the side vacforms (five screws on each vac-form)
- 2) Remove the two countersunk screws (M5x12) from the bottom of the acrylic.
- 3) Remove the two socket button head screws (M4x25), and remove the header acrylic retaining bracket.
- 4) Remove the header acrylic.
- 5) Replace the fluorescent tube.
- 6) Reassemble in reverse order.



#### 7-3 Replacing Push Button Switches and Lamps

- 1) Remove six security screws (M5x20) and two security screws (M5x12), and lift off the top cover taking care not to strain the wiring.
- 2) Disconnect the connector.



3) Separate the switch/lamp holder from the button by pulling it directly away from the button.



- 4) Replace the lamp or switch ensuring that the correct wires are replaced on the terminals.
- 5) Reassemble in reverse order.

#### 7-4 Replacing the Step Limit Switches

WARNING: Ensure that the machine is disconnected from the main power supply before commencing work.

- 1) Remove the top cover. (See Section 7-3)
- 2) Remove four security screws (M5x12) securing each side vac-form to the mast assembly and remove both side vac-forms and front vac-form as one assembly.



3) Remove two pozi head screws (M4x10) and remove the limit switch mounting bracket.



4) Remove two pozi head screws (M3x16) and replace the limit switch ensuring the wires are replaced on the correct terminals.



5) Reassemble in reverse order.

#### 7-5 Replacing the L/R Turn Control Pot

WARNING: Ensure that the machine is disconnected from the main power supply before commencing work.

- 1) Remove eight security screws (M5x20) and remove the front Vac-form.
- 2) Remove two pozi head screws (M4x10) and remove the control pot cover.





- 3) Disconnect the connector, slacken the pot retaining grub screw (M4x8) and remove the control pot and bracket.
- 4) Replace the control pot taking care to ensure that the wires are replaced to the correct terminals.



- 5) Reassemble in reverse order.
- 6) Re-initialize game. (See 7-7 "Adjustments When Replacing Parts")
- NOTE: When refitting the control pot ensure that the pot locating tab engages in the hole in the mounting bracket and that the grub screw (M4x8) engages on the flat of the pot shaft.



#### 7-6 Replacing the Tilt Control Pot

- 1) Remove the front vac-form. (See Section 7-3)
- Remove four security head screws (M5x12) and remove the Ski Step front vacform.



3) Disconnect the connector, slacken the pot retaining grub screw (M4x8) and remove the control pot and bracket.



- 4) Replace the control pot taking care to ensure that the wires are replaced to the correct terminals.
- 5) Reassemble in reverse order.
- 6) Re-initialize game. (See 7-7 "Adjustments When Replacing Parts")
- NOTE: When refitting the control pot ensure that the pot locating tab engages in the hole in the mounting bracket and that the grub screw (M4x8) engages on the flat of the pot shaft.



#### 7-7 Removing the Step Rubber

1) Remove three security screws (M5x12) and retaining bracket from the outside edge of the step rubber, Lift the rubber edge and remove the three inner security screws (M5x12) and retaining bracket.



2) Tilt the step assembly and remove three security screws (M5x12).



4) Refit in reverse order.

#### 7-8 Step-Lock Maintenance

#### 7-8-1 Releasing the Step-Lock

- 1. Turn the power switch ON
- 2. Press the service switch, and start the game.
- 3. When the game starts, the restriction plate (see diag.) moves to the released position.
- 4. When the steps are released, turn the power OFF.
- 5. To re-lock the steps turn the power ON and the steps will re-lock in the power up motor check.

#### 7-8-2 Greasing the Step-Lock

#### WARNING

Make sure that the power is turned OFF. If work is to be carried out with the covers removed, take care not to trap hands or fingers in the mechanism.

The step-lock should be greased every three to four months.

- 1. Remove the control panel and vac-forms (See sections 7-3 and 7-4).
- 2. Apply grease to the following locations.
- Between the restriction plate and guide rails, and between the cam follower.
- Screw shaft
- Pillow shaft
- Sub torsion bar axle



#### 7-8-3 Inspecting the Pillow Unit

#### WARNING

Make sure that the power is turned OFF. If work is to be carried out with the covers removed, take care not to trap hands or fingers in the mechanism.

When greasing the step-lock, inspect the pillow assembly for any problems.

- 1. Release the step-lock and swing the steps to the left and right, and check the pillow units for any wear. Also check that the Hex Head Screws (M14x45) are tight.
- 2. Swing the steps left and right, and check that the main torsion bar is secure. Also check that the Hex Head Screws (M10x25) are tight.
- 3. Reassemble the vac-forms and control panel. Remember to connect the connector when refitting the control panel.



#### 8. TROUBLE SHOOTING

- Ensure that the power is turned OFF before making adjustments or replacing parts.
- If none of the items below correspond to your problem, or if the problem is not corrected by the treatment described below, contact your dealer for further advice.
- Always return PC Boards to your dealer for repair. Never test the PC board for continuity with a multimeter or similar device. The PC Board contains sensitive devices which could be damaged or even destroyed by the internal voltage of such test equipment.
- When sending parts for repair, clearly indicate the problem, and send them in secure and adequate packing. Especially in the case of sending PC Boards, wrap them in sponge or bubble wrap prior to packing, so that they do not receive excessive shock.

#### 8-1 General Problems

| Symptom  | Cause  | Treatment   | Ref. Page |
|--|--|---|-----------|
| The machine does not work even though the power is ON.           |  | Switch OFF and back ON.   |           |
| Operation is unstable or the machine does not operate correctly. | Is the mains supply within 10% of the rated voltage. | Remove any heavy duty<br>equipment (air conditioners,<br>large rides, etc.) from the same<br>power line, and ensure that the<br>supply is within the correct<br>limits. |           |
|  | Have parts been changed.                             | Reinitialize the game.  | pg21 6-4  |
| The game goes off.   | Is the mains-in plug secure.                         |   |           |
|  | Has a fuse blown.                                    | Switch the power OFF and check the mains-in filter fuse and fuses on the PSU board.   |           |

#### 8-2 Projector Assy

| Symptom                             | Cause                                  | Treatment   | Ref. Page |
|-------------------------------------|--|---|-----------|
| There is no picture on the monitor. | Monitor switched OFF.                  | Check ON/OFF switch on front of monitor.                            |           |
|                                     | Is the signal loom connected properly. | Check SCART connector is secure and connected to the AV1 connector. |           |

#### 8-3 Header Assembly

| Symptom                                | Cause  | Treatment                       | Ref. Page         |
|--|--|---------------------------------|-------------------|
| The fluorescent lamp does not come on. | Is the connector loose or disconnected.        | Connect the connector securely. | pg44<br>schematic |
|  | Is the fluorescent tube or starter burned out. | Replace tube or starter.        | pg25 7-2          |

#### 8-4 Mast Assembly

| Symptom   | Cause                                 | Treatment                               | Ref. Page         |
|---|---------------------------------------|---|-------------------|
| There is no sound from a speaker.                     | Is a connector loose or disconnected. | Connect the connector.                  | pg44<br>schematic |
|   | Is the volume too low.                | Adjust volume setting.                  | pg18 6-3-4        |
| "WARNING!" is displayed. the step lock does not work. | Is a connector loose or disconnected. | Connect the connector.                  | pg44<br>schematic |
|   | Is a fuse blown.                      | Check and replace fuse on<br>PSU board. |                   |
| Pushbutton lamp does not light.                       | Is a connector loose or disconnected. | Connect the connector.                  | pg44<br>schematic |
|   | Is the lamp loose in the holder.      | Insert lamp properly.                   | pg26 7-3          |
|   | Is the lamp burned out.               | Replace lamp.                           | pg26 7-3          |

#### 8-5 Step Assembly

| Symptom                         | Cause                                 | Treatment                                    | Ref. Page         |
|---------------------------------|---------------------------------------|--|-------------------|
| The step control does not work. | Is a connector loose or disconnected. | Connect the connector.                       | pg44<br>schematic |
|                                 | Has the game been initialized.        | Initialize the game.                         | pg21 6-4          |
|                                 | Is the control pot broken.            | Perform the switch test to check control.    | pg16<br>6-3-3-1   |
|                                 |                                       | Replace the control pot.                     | pg28 7-5          |
| The tilt control does not work. | Is a connector loose or disconnected. | Connect the connector.                       | pg44<br>schematic |
|                                 | Has the game been initialized.        | Initialize the game.                         | pg21 6-4          |
|                                 | Is the control pot broken.            | Perform the switch test to<br>check control. | pg16<br>6-3-3-1   |
|                                 |                                       | Replace the control pot.                     | pg30 7-6          |

# *WARNING:* Many of the parts used in this machine, including metal work, have been manufactured to special specifications. To ensure continuing safety and correct operation, replace only with genuine NAMCO parts.



| ITEM | DESCRIPTION                      | PART No. |
|------|----------------------------------|----------|
| 1    | HEADER ACRYLIC                   | 30000222 |
| 2    | HEADER VAC-FORM - RHS            | 45000721 |
| 3    | HEADER VAC-FORM - LHS            | 45000720 |
| 4    | HEADER WOODEN HOUSING            | 37100086 |
| 5    | HEADER METAL HOUSING COVER       | 45000584 |
| 6    | HEADER ACRYLIC RETAINING BRACKET | 45000581 |
| 7    | HEADER VAC-FORM DECAL LHS/RHS    | 40000266 |
| 8    | FLUORESCENT TUBE 3ftx1" 20w T8   | 64500013 |



| ITEM | DESCRIPTION                            | PART No  |
|------|--|----------|
| 1    | THOMSON 52" PROJECTION MONITOR         | 84000030 |
| 2    | PROJECTOR CABINET SIDE DECAL - LHS/RHS | 40000284 |
| 3    | ALPINE RACER PCB ASSY - SYSTEM 22      | XAR-PCB  |
| 4    | SMPSU 5v/30A - 12v/5A                  | 83000001 |
| 5    | ELKAY BLOCK 5 WAY                      | 66000014 |
| 6    | FUSE 1¼" 2A QUICK-BLO                  | 63500504 |
| 0    | FUSE 1¼" 3A SLO-BLO                    | 63500547 |
| 7    | BRIDGE RECTIFIER 25amp                 | 71000040 |
| 8    | TRANSFORMER                            | 67700019 |
| 9    | 3 CHANNEL POWER AMPLIFIER              | 45000725 |
| 10   | SCHAFFNER MAINS-IN FILTER              | 66000016 |
| 11   | ADJUSTABLE FOOT M16x95                 | 88300079 |
| 12   | SWIVEL CASTOR 75mm                     | 59000005 |
| 14   | PROJECTOR CABINET FRONT DECAL          | 40000283 |



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| ITEM | DESCRIPTION  | PART No  |
|------|--|----------|
| 1    | MAIN BASE METALWORK                                | 45000585 |
| 2    | MAIN BASE EXTENSION ARM - RHS                      | 45000586 |
| 3    | MAIN BASE EXTENSION ARM - LHS                      | 45000587 |
| 4    | MAIN BASE EXTENSION ARM VAC-FORM - LHS             | 45000588 |
| 5    | MAIN BASE EXTENSION ARM VAC-FORM - RHS             | 45000589 |
| 6    | SNOW FIELD VAC-FORM - LHS                          | 45000590 |
| 7    | SNOW FIELD VAC-FORM - RHS                          | 45000591 |
| 8    | SIDE WOOD - LHS                                    | 37100078 |
| 9    | SIDE WOOD - RHS                                    | 37100079 |
| 10   | SIDE WOOD DECAL - LHS                              | 40000267 |
| 11   | SIDE WOOD DECAL - RHS                              | 40000268 |
| 12   | COIN TOWER   | 45000592 |
| 13   | PLAY INSTRUCTION DECAL                             | 40000276 |
| 15   | FRONT CENTRE EXTENSION BOX                         | 45000595 |
| 16   | PROJECTOR/BASE JOINT BRACKET - LHS                 | 45000722 |
| 10   | PROJECTOR/BASE JOINT BRACKET - RHS                 | 45000723 |
| 17   | FRONT EXTENSION BOX - LHS/RHS                      | 45000597 |
| 18   | REAR EXTENSION BOX - LHS/RHS                       | 45000598 |
| 19   | STEP ON FLOOR BASE                                 | 45000599 |
| 20   | STEP ON FLOOR BASE SAFETY DECAL                    | 40000269 |
| 21   | FLOOR BASE SUPPORT BRACKET - LHS/RHS               | 45000600 |
| 22   | FLOOR BASE SECURING PLATE                          | 45000601 |
| 23   | SKI POLES FRONT SUPPORT BAR                        | 45000602 |
| 24   | SKI POLE - LHS                                     | 45000710 |
| 24   | SKI POLE - RHS                                     | 45000711 |
| 25   | SKI POLES FRONT SUPPORT BAR CLAMP                  | 45000604 |
| 26   | SKI POLE GRIP BAR - LHS/RHS                        | 45000605 |
| 27   | SKI POLE GRIP WASHER                               | 45000606 |
| 28   | SKI POLE/GRIP BAR JOINT - RHS                      | 45000607 |
| 29   | SKI POLE/GRIP BAR JOINT - LHS                      | 45000608 |
| 30   | FRONT CENTRE TOP COVER PLATE                       | 45000609 |
| 31   | SNOW FIELD VAC-FORM SUPPORT BRACKET REAR - RHS     | 45000611 |
| 32   | SNOW FIELD VAC-FORM SUPPORT BRACKET REAR - LHS     | 45000610 |
| 33   | SNOW FIELD VAC-FORM REAR SECURING BRACKET          | 45000612 |
| 34   | BASE EXTENSION ARM VAC-FORM TOP FIXING BRACKET     | 45000613 |
| 35   | BASE EXTENSION ARM VAC-FORM LHS/RHS FIXING BRACKET | 45000614 |
| 36   | SKI POLE DECAL                                     | 40000270 |
| 37   | MAST SIDE VAC-FORM LOWER KICK BRACKET              | 45000615 |
| 40   | SWIVEL CASTOR - 75mm                               | 59000009 |
| 41   | SWIVEL CASTOR - 50mm                               | 59000001 |
| 42   | ADJUSTABLE FOOT M20x70mm                           | 25000010 |
| 43   | SKI POLE GRIPS (pair) - BLACK                      | 45000617 |







| ITEM | DESCRIPTION                         | PART No. |                       | ITEM                       | DESCRIPTION                            | PART No. |
|------|-------------------------------------|----------|-----------------------|----------------------------|--|----------|
| 1    | MAIN MAST METAL WORK                | 45000643 |                       | 21                         | JOINT AL-050-12                        | 45000667 |
| 2    | MAST FRONT COVER VAC-FORM           | 45000644 | 1 [                   | 22                         | PLAY INSTRUCTION ACRYLIC               | 30000220 |
| 3    | MAST SIDE VAC-FORM - LHS            | 45000645 |                       | 23                         | CONTROL PANEL DECAL                    | 40000271 |
| 4    | MAST SIDE VAC-FORM - RHS            | 45000646 |                       | 24                         | FRONT CLOSING BRACKET COVER PLATE      | 45000662 |
| 5    | CONTROL PANEL VAC-FORM              | 45000647 |                       | 25                         | SPONGE RETAINING BRACKET               | 45000663 |
| 6    | SPEAKER MESH FRONT SUPPORT BRACKET  | 45000648 | [                     | 26                         | BEARING UCFL201                        | 45000669 |
| 7    | LOUDSPEAKER WOODEN CABINET          | 37100081 |                       | 27 JOINT AL-050-10         |  | 45000666 |
| 8    | LOUDSPEAKER GRILLE                  | 45000649 |                       | 28                         | L/R STOP BUMPER K1-40                  | 45000664 |
| 9    | LOCKING PLATE GUIDE RAIL            | 45000650 |                       | 29                         | ADJUSTABLE FOOT M16x95                 | 88300079 |
| 10   | THREAD ROLLED DRIVE SHAFT CS-16V149 | 45000715 |                       | 30                         | 30 LOCKING MOTOR 24Vdc-350.8RPM-0.221A |          |
| 11   | LIMIT MICRO SWITCH MOUNTING BRACKET | 45000652 |                       | 31                         | LIMIT MICRO SWITCH V1541C25            | 60000012 |
| 12   | FRONT CLOSING BRKT SUPPORT BRACKET  | 45000653 |                       | 32                         | FAN SWITCH MOUNTING BRACKET            | 45000697 |
| 13   | FRONT CLOSING BRACKET               | 45000654 |                       | 33                         | PUSHBUTTON MCPB - RED                  | 60200247 |
| 14   | LOCKING PLATE                       | 45000655 |                       | 34 PUSHBUTTON RPB - YELLOW |  | 60200227 |
| 15   | THREAD ROLLED DRIVE GUIDE           | 45000656 |                       | 35                         | LOUDSPEAKER 51/2" FULL RANGE           | 62000065 |
| 16   | L/R POT COVER                       | 45000658 | 36 MOTOR FILTER BOARD |                            | 45000743                               |          |
| 17   | WOODRUFF KEY 25x4x4                 | 45000659 |                       | 37                         | AXIAL FAN 130mm                        | 67000074 |
| 18   | SPEAKER GRILLE SPONGE               | 45000660 |                       | 38                         | SUB BASS DRIVE SPEAKER - 61/2"         | 62000068 |
| 19   | PLAY INSTRUCTION MOUNTING BRACKET   | 45000661 |                       | 39                         | SUB BASE SPEAKER GRILLE                | 45000701 |
| 20   | JOINT L-050                         | 45000668 |                       | 40                         | SUB BASS WOOFER CABINET                | 37100084 |



| ITEM | DESCRIPTION                          | PART No       |
|------|--------------------------------------|---------------|
| 1    | STEP ASSY MAIN METAL STRUCTURE       | 45000618      |
| 2    | STEP TRAY ASSY                       | 45000619      |
| 3    | STEP VAC-FORM - FRONT                | 45000620      |
| 4    | STEP VAC-FORM - REAR                 | 45000621      |
| 5    | STEP RUBBER                          | 45000622      |
| 6    | ROSTA SPRING BRACKET - FRONT 38x60   | 45000623      |
| 7    | ROSTA SPRING BRACKET - REAR 38x60    | 45000624      |
| 8    | ROSTA SPRING SWING BRACKET 38x60     | 45000625      |
| 9    | STEP CENTERING ARM                   | 45000626      |
| 10   | STEP RUBBER RETAINING BRACKET        | 45000627      |
| 11   | STEP SWING BEARING                   | 45000628      |
| 12   | STEP SWING BEARING SPACER            | 45000637      |
| 13   | SWING L/R POT MOUNTING BRACKET       | 45000628      |
| 14   | EDGES POT MOUNTING BRACKET           | 45000629      |
| 15   | STEP LOCATING PLATE - UPPER          | 45000630      |
| 16   | STEP RUBBER SUPPORT BRACKET          | 45000631      |
| 17   | EDGES POT COVER BRACKET              | 45000632      |
| 18   | ROSTA SPRING BRACKET                 | 45000639      |
| 19   | ROSTA SHAFT BEARING BRACKET - TOP    | 45000640      |
| 20   | ROSTA SHAFT BEARING BRACKET - BOTTOM | 45000641      |
| 21   | BEARING LFB-1410                     | 45000642      |
| 22   | ROD EYE RBL-6-D                      | 45000633      |
| 22   | CONNECTING SHAFT 160x8               | 45000634      |
| 23   | ROSTA SPRING DRS38x60                | 45000572      |
| 24   | ROSTA SPRING DRS27x100               | XEH09-262-262 |
| 25   | ROSTA SPRING DRS18x30                | 45000573      |
| 26   | ROSTA SPRING DRS18x50                | 45000574      |
| 27   | ROSTA SPRING RETAINING BRACKET BR-18 | 45000575      |
| 28   | PILLOW BEARING UCP-208               | 45000635      |
| 29   | ROLLER BEARING CF12-1-A              | 45000636      |
| 30   | POTENTIOMETER                        | X008-023      |

#### **10. SCHEMATICS**







