

SKILLFALL

REVOLUTION



User Manual

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Before using the product, be sure to read the following:

To maintain safety:



To ensure the safe operation of this product, be sure to read the following before usage:

The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual close to the product or in a convenient place for future reference.

Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of "DANGER", "WARNING", "CAUTION", etc. are used. Be sure to understand the contents of the displays before reading the text.

 DANGER	Indicates that mishandling the product by disregarding this pictograph will cause severe injury or death
 WARNING	Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury
 CAUTION	Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and/or material damage

For the safe usage of the product, the following pictographs are used:

	Indicates "HANDLE WITH CARE". In order to protect the human body and equipment, this display is attached to places where the instruction manual should be referred to
	Indicates a "protective earth terminal." Before operating the equipment, be sure to connect it to the ground (this step may be omitted for products in which a power cable with earth is used)

- PERFORM WORK IN ACCORDANCE WITH THE INSTRUCTIONS HEREIN STATED**
 Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the site maintenance personnel should perform such work
- BE SURE TO TURN OFF THE POWER BEFORE WORKING ON THE MACHINE**
 To prevent an electric shock, be sure to turn off the power and unplug the power cable before carrying out any work that requires direct contact with the interior of the product. If the work is to be performed in the power-on status, the instruction manual herein always states to that effect
- BE SURE TO GROUND THE EARTH TERMINAL (THIS IS NOT REQUIRED IN THE CASE WHERE A POWER CABLE WITH EARTH IS USED)**
 This product is equipped with the earth terminal. When installing the product, connect the earth terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to an electric shock. After performing repair, etc. for the control equipment, ensure that the earth wire is firmly connected to the control equipment
- ENSURE THAT THE POWER SUPPLY USED IS EQUIPPED WITH AN EARTH LEAKAGE BREAKER** Using a power supply which is not equipped with the earth leakage breaker can cause a fire when earth leakage occurs
- BE SURE TO USE FUSES WHICH MEET THE SPECIFIED RATING (ONLY FOR THE MACHINES WHICH USE FUSES)**
 Using fuses exceeding the specified rating can cause a fire and an electric shock

- **SPECIFICATION CHANGES (REMOVAL OF EQUIPMENT, CONVERSIONS AND ADDITIONS) NOT DESIGNATED BY THE MANUFACTURERS ARE NOT ALLOWED**
The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and/or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated.
The manufacturer shall not be held responsible for any accidents or compensation for damage to a third party resulting from the specifications not designated by the manufacturer
 - **ENSURE THAT THE PRODUCT MEETS THE REQUIREMENTS OF APPROPRIATE ELECTRICAL SPECIFICATIONS**
Before installing the product, check for electrical specifications. The manufacturer products have a nameplate on which the electrical specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any electrical specifications different from the designated specifications can cause a fire and an electric shock
 - **INSTALL AND OPERATE THE PRODUCT IN PLACES WHERE APPROPRIATE LIGHTING IS AVAILABLE, ALLOWING WARNING LABELS TO BE CLEARLY READ**
To ensure safety for the customers, labels and printed instructions describing potentially hazardous situations are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated
 - **WHEN HANDLING THE MONITOR, BE VERY CAREFUL (APPLIES ONLY TO PRODUCTS WITH MONITORS)**
Some of the monitor parts are subject to high tension voltage. Even after turning off the power, some portions are still subject to high tension voltage. Monitor repair and replacement should be performed only by those technical personnel who have knowledge of electricity and technical expertise
 - **BE SURE TO ADJUST THE MONITOR PROPERLY (APPLIES ONLY TO PRODUCTS WITH MONITORS)**
Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or customer
 - **WHEN TRANSPORTING OR RESELLING THIS PRODUCT, BE SURE TO ATTACH THIS MANUAL TO THE PRODUCT**
- * *In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific instruction manual of such equipment*
- * *Descriptions herein contained may be subject to improvement changes without notice*
- * *The contents described herein are fully prepared with due care. However, should any questions arise or errors be found please contact the Technical Services Department*

Inspections Immediately After Transporting The Product To The Location

Normally, at the time of shipment, the products are in a state allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on the power, check the following points to ensure that the product has been transported in a satisfactory status:

- Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet? Are casters and/or adjusters damaged?
- Do the power supply voltage and frequency requirements meet with those of the location?
- Are all wiring connectors correctly and securely connected? Unless connected in the correct way, connector connections cannot be made accurately. Do not insert connectors forcibly.
- Do power cables have cuts and/or dents? Are all accessories available?
- Can all doors and lids be opened with the accessory keys? Can doors and lids be firmly closed?

Introduction

This manual is intended to provide detailed descriptions together with all necessary information covering the general operation of electronic assemblies, electromechanical, servicing control, spare parts, etc. for the product:

"Skill Fall"

This manual is intended for the owners, personnel managers in charge of operation of this product. Operate the product after carefully reading and sufficiently understanding the instructions.

In the unlikely event that the product does not function correctly, **DO NOT** allow anyone other than a technician to touch the internal system. Turn off the power to the machine, making sure to unplug the electrical cord from the outlet, and contact the office listed below or the point-of-purchase for this product.

Use of this product is unlikely to cause physical injuries or damage to property. However, points that require special attention are indicated by bold text, the words "STOP, IMPORTANT or CAUTION" and the symbols below.



Indicates important information that, if ignored, may result in the mishandling of the product and cause faulty operation or damage to the product.



Indicates a warning or caution that, if ignored, may result in the mishandling of the product and cause faulty operation or damage to the product.

SPECIFICATIONS

Machine dimensions:	760mm [Width] x 880mm [Depth]
Machine Height:	2100mm (Installed)
Machine Weight:	250kg Approx (Installed)
Machine rating:	1.2A @220V~ – 2.3A @ 110V~



Procedures not described in this manual or marked as 'to be carried out by site maintenance personnel or other qualified professionals' should not be carried out by personnel without the necessary skill or technological experience. Work carried out by unqualified persons may cause serious accidents, including electrocution.

Definition of 'Site Maintenance Personnel' or Other Qualified Individuals

Parts replacement, maintenance inspections and troubleshooting should be carried out by site maintenance personnel or other qualified professionals. This manual includes directions for potentially dangerous procedures which should only be carried out by professionals with the appropriate specialised knowledge.

The site maintenance personnel or other qualified professionals mentioned in this manual are defined as follows:

Site maintenance personnel:

Individuals with experience in maintaining amusement equipment, vending machines, etc., working under the supervision of the owner/operator of this product to maintain machines within amusement facilities or similar premises by carrying out everyday procedures such as assembly, maintenance inspections, and replacement of units/expendable parts.

Activities to be carried out by site maintenance personnel:

Amusement equipment/vending machine assembly, maintenance inspection and replacement of units/expendable parts.

Other qualified professionals:

Persons employed by amusement equipment manufacturers, or involved in design, production, testing or maintenance of amusement equipment. The individual should have either graduated from technical school or hold similar qualifications in electrical/electronics/mechanical engineering.

Activities to be carried out by other qualified professionals:

Amusement equipment/vending machine assembly, repair/adjustment of electrical/electronic/mechanical parts.

Waste of Electrical and Electronic Equipment (WEEE) Statement.

The WEEE (Waste of Electrical and Electronic Equipment) directive places an obligation on all EU based manufacturers and importers of Electrical and Electronic Equipment (EEE) to ensure waste equipment is disposed of in accordance with the directive at the end of their useful life.

The symbol shown below will be placed on all products manufactured from 13th August 2005, which indicates this product must NOT be disposed of with other normal waste. Upon purchasing any EEE from the manufacturer. The user accepts responsibility to dispose of their waste equipment by arranging to return it to a designated UK collection point (AATF) or an Approved Exporter (AE) for the correct recycling of waste electrical and electronic equipment.

For more information on Approved Authorised Treatment Facilities (AATF) within the UK please consult the government website www.gov.uk

For users outside of the UK EEE should be disposed of in accordance with the local policy on the recycling of Waste Electrical and Electronic Equipment.

Battery Recycling Statement.

The EC Directive on Batteries and Accumulators (2006/66/EC) aims to minimise the impact of batteries on the environment and encourage the recovery of the materials they contain. To achieve increased collection and recycling of waste batteries, the Directive places 'producer responsibility' obligations on manufacturers and importers of portable, industrial and automotive batteries.

The symbol shown below will be on all equipment fitted with batteries from 26th September 2008 and indicates they must NOT be disposed of with other normal waste. Instead, it is the user's responsibility to dispose of used batteries by arranging to return them to a designated collection point for the correct recycling.

For more information about where you can send your waste batteries for recycling contact your local authority office.



Disclaimer: Read before operating

It is the responsibility of the operator to operate this game in line with local jurisdictions and the countries laws. All prizes used **MUST** conform to local operating laws for this type of product.

OPERATOR NOTICE

This prize offering game device has many settings and operator options to accommodate various marketing concepts, a wide range of prizes, and use in International Territories and throughout the United States.

In the US individual state statutes and local jurisdiction codes can impact payment required amusement themed and designed games offering prizes, including the type and value of the prizes. Further the degree of skill requirements vary. Not all settings and options are suitable for every jurisdiction.

Your Responsibility as an Operator

It is solely your responsibility as the operator of the game to fully comply with laws, regulations and prize value and type limitations in the jurisdiction where you place and offer this game to the public. (Contact your legal adviser).

- **SKILL CONSIDERATIONS:** Generally the greater the degree of control that players have as to the movements of the retrieval tool the more likely that the element of “skill” will be present. This infers that the prizes offered are retrievable at any point in time when the skill requirement is achieved in accord with posted rules of play.
- Test at each service that all player controls and the machinery work and track smoothly and time and rules display are fully visible and working.
- If the machine is ever moved or violently bumped or tilted then it is recommended that the machine is re-calibrated.
- Good maintenance and cleaning of the game and cabinetry is good business and enhances your sales. A poorly maintained machine may not continue to work in the way in which it was designed.
- Tips and notices to players should be posted behind a protective cover or glass and easily viewed from the player’s position.
- Do not alter the machine’s CPU board, circuitry, components, or change the EPROM software without the manufacturer’s authorization. Doing so can result in criminal or civil liabilities, and void your factory warranty.
- Do not alter or modify this machine in any shape or form other than that described in the manual. Doing so can result in criminal or civil liabilities, and void your factory warranty.
- Neither manufacturer nor the distributor is responsible for any losses of prizes from this machine. It is the responsibility of the operator to set up that machine in accordance with the manual and maintain a level of security around the machine adequate for the level of prizes contained therein.
- If you have questions or need technical assistance call the manufacturer or your authorized distributor for guidance.



Introduction

Skill Fall Revolution is a prize redemption game where players must time their button press to drop the arrow on the peg to release the prize.

The rotating carousel allows for 64 prizes to be clipped

Player Tips & Notice

Higher value prizes may be more difficult to win. Review potential prizes and read all instructions before you decide to play.

You will learn with practise.

Not all plays result in a prize.

Do not shake or tilt the machine. It is unsafe and it will not help you to win. It may cause the machine to tilt.

Watch the timer for the time remaining for your play.

You control the drop of the push rod by pressing the "DROP" button in an attempt to press and release the prize from the peg.

Have fun!

Installation

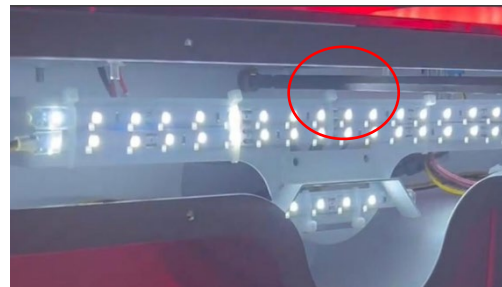
- Ensure the game is located and positioned in a clear area with a flat surface

Connect the Control Panel:

- Connect the connector

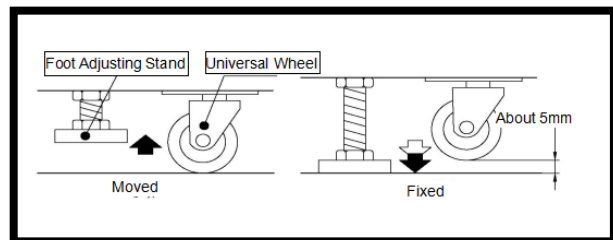


- Use the supplied fixings to secure the control panel and then fit the Plexi panel.

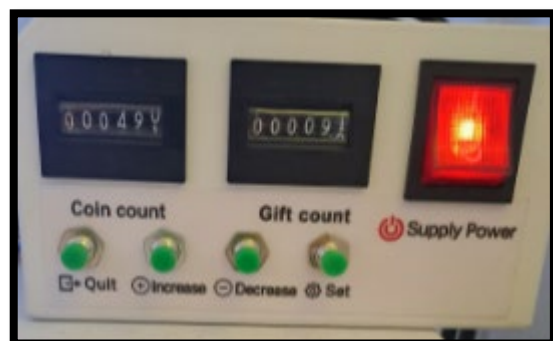


- Insert the power cable and power on at the rear
- Push the game back ensuring there is a 30cm gap at the back for ventilation

- Secure the game by winding down the leg adjusters so the game can't be moved



- Open the front door and turn on the game using the power switch



Components

Stop Button:

This is located inside the upper glass door. Use this to stop the carousel to assist with refiling prizes.

The switch is a micro type and has a 3.3v logic level. Momentarily shorting this line to ground, or pressing the switch stops the carousel motor.

The button is not game critical and only used to replenish prizes. If the circuit is short or open, the game will continue to function.



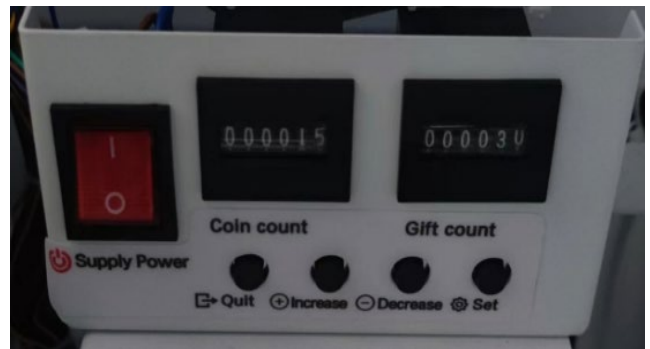
Control Panel:

Set: Enter setting and move through the options

Decrease/Down: Moves back through options.

Increase/Up: Change parameter setting.

Quit: Exits the menu (or cycle to the end of the options)

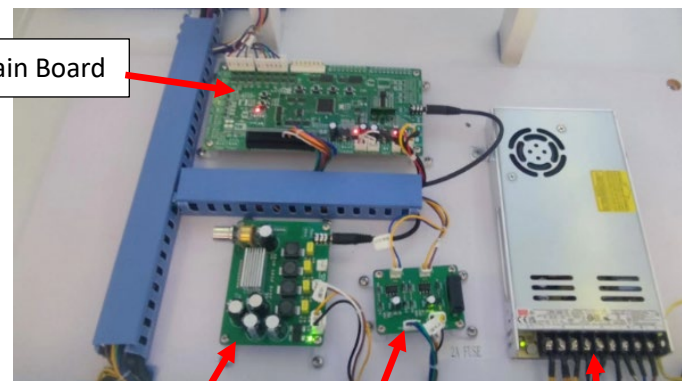


Electrical layout:

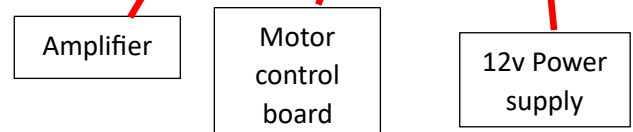
Main Board: Game and IO functions

Audio amplifier: Use the pot on this device to change master volume. The options menu also has volume control.

Motor control board: This device controls the turntable and drop motors. See page 11 for more detailed operation.



12v Power Supply: All DC voltage for the game is supplied from this device



Prize sensor:

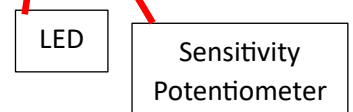
There are two of these devices and are in the lower part of the pay-out chute. They detect when a prize falls into the chute. The game uses this device to calculate pay-out and does not use the encoder sensor to qualify a win as there may not be a prize on the peg that is hit.

The sensor is 12v driven with a 3.3v logic level (Active high)

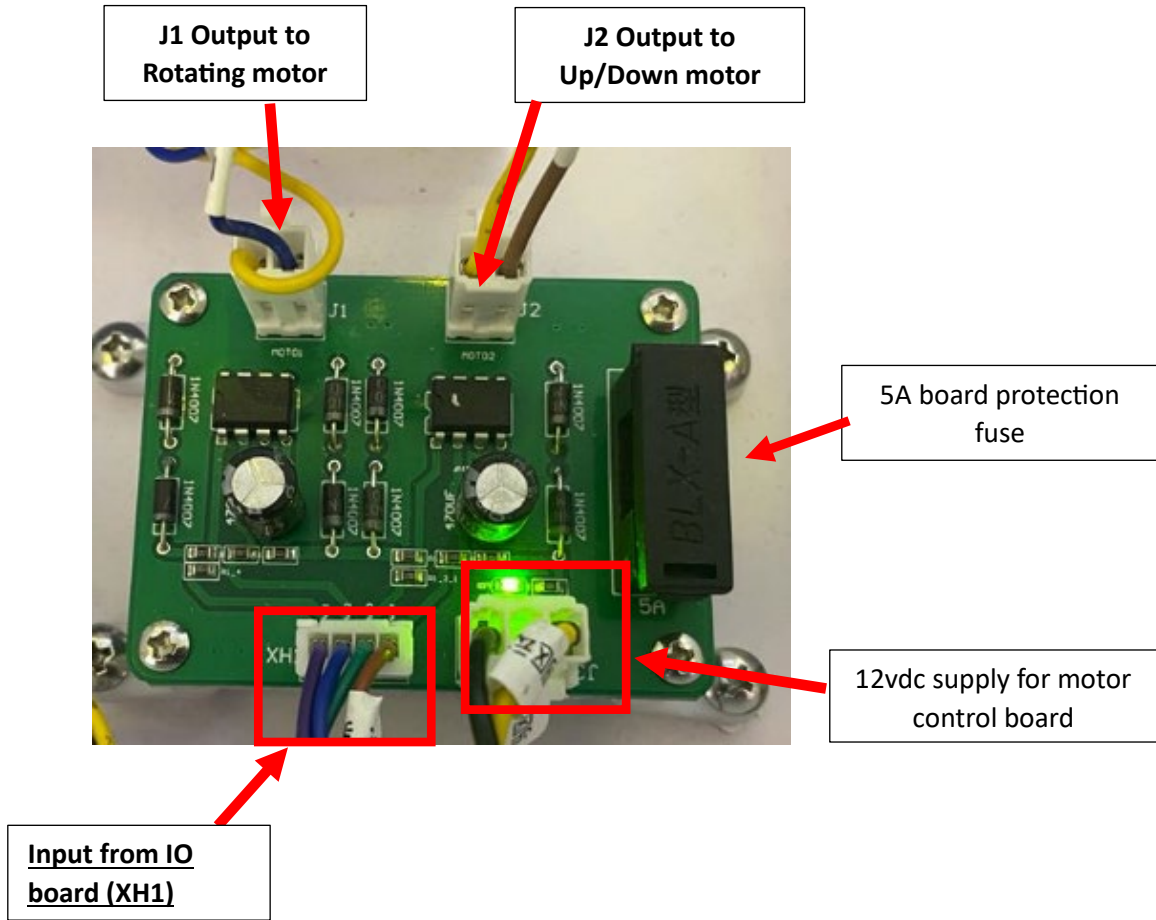
When the sensor is blocked, the LED will illuminate.

The logic sits at 0vdc; to check this, reference against any +dc voltage at the IO board.

The sensor has a potentiometer to adjust sensitivity in brighter locations.



Motor control board

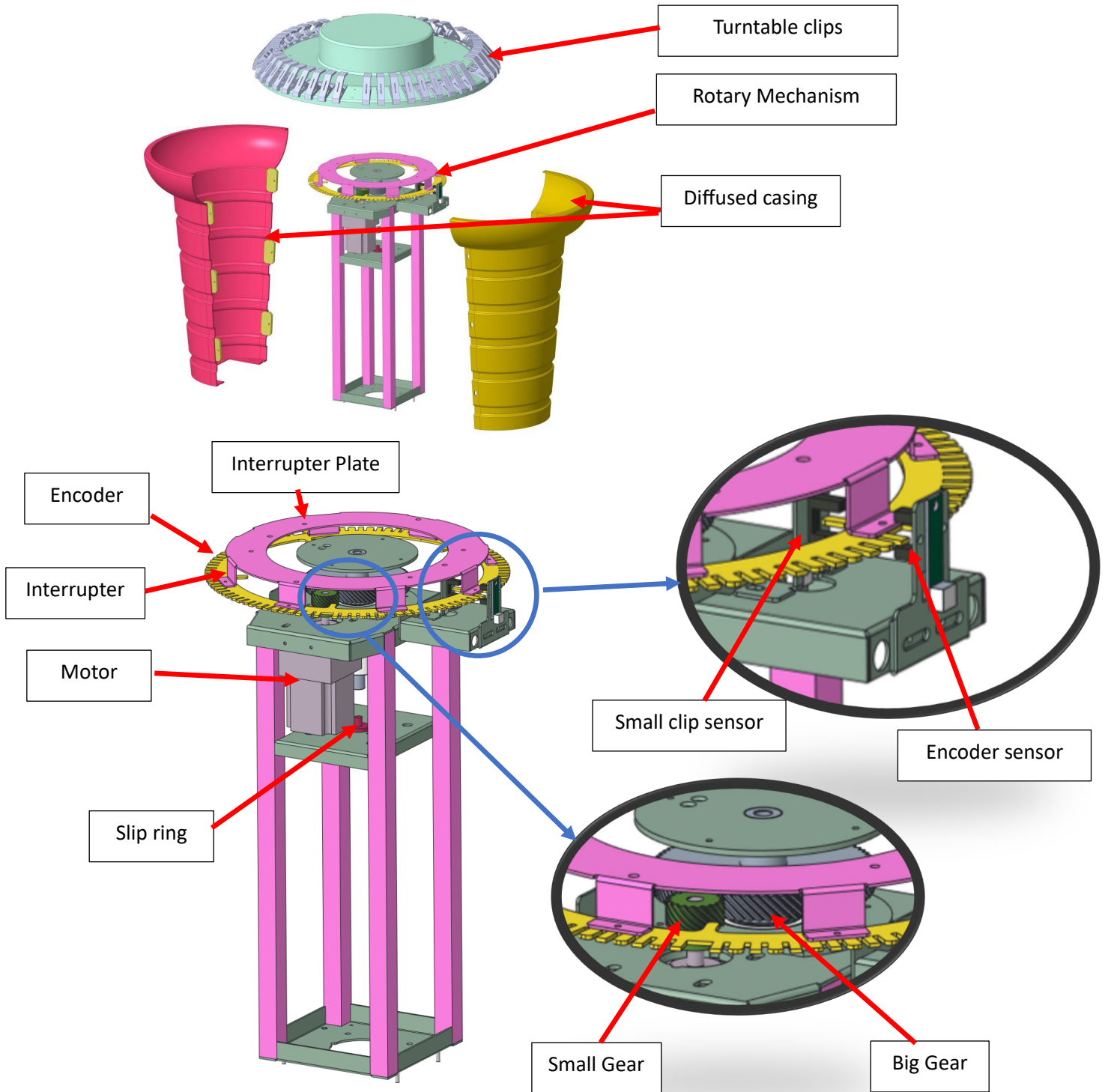


XH1 Input				
Wire colour	Pin identifier	Function	Logic Level	Trigger
Purple	PWM1	Turntable motor CW	6v	Active low
Blue	PWM2	Turntable motor CCW (Not used in this version)	6v	Active low
Green	PWM3	Arrow motor Up	6v	Active low
Brown	PWM4	Arrow motor down	6v	Active low
J1 Output				
Yellow	Pin 1	0v logic (Turntable motor)	12v	Active low
Blue	Pin 2	12v for (Turntable motor)	12v	NA
J2 Output				
Yellow	Pin 1	12V +/- Supply (Up/Down arrow motor)	NA	H-Bridge
Brown	Pin 2	12V +/- Supply	NA	H-Bridge

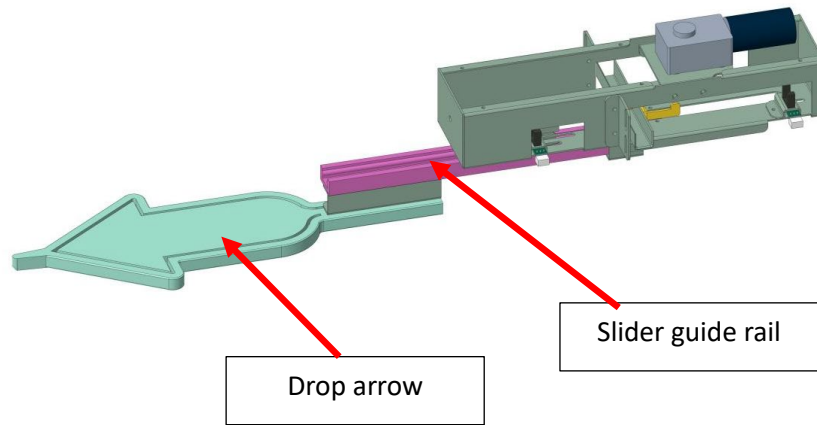
Mechanical Layout

Rotating mechanism

Remove the body shrouding to access the rotating motor, encoder wheel and sensors



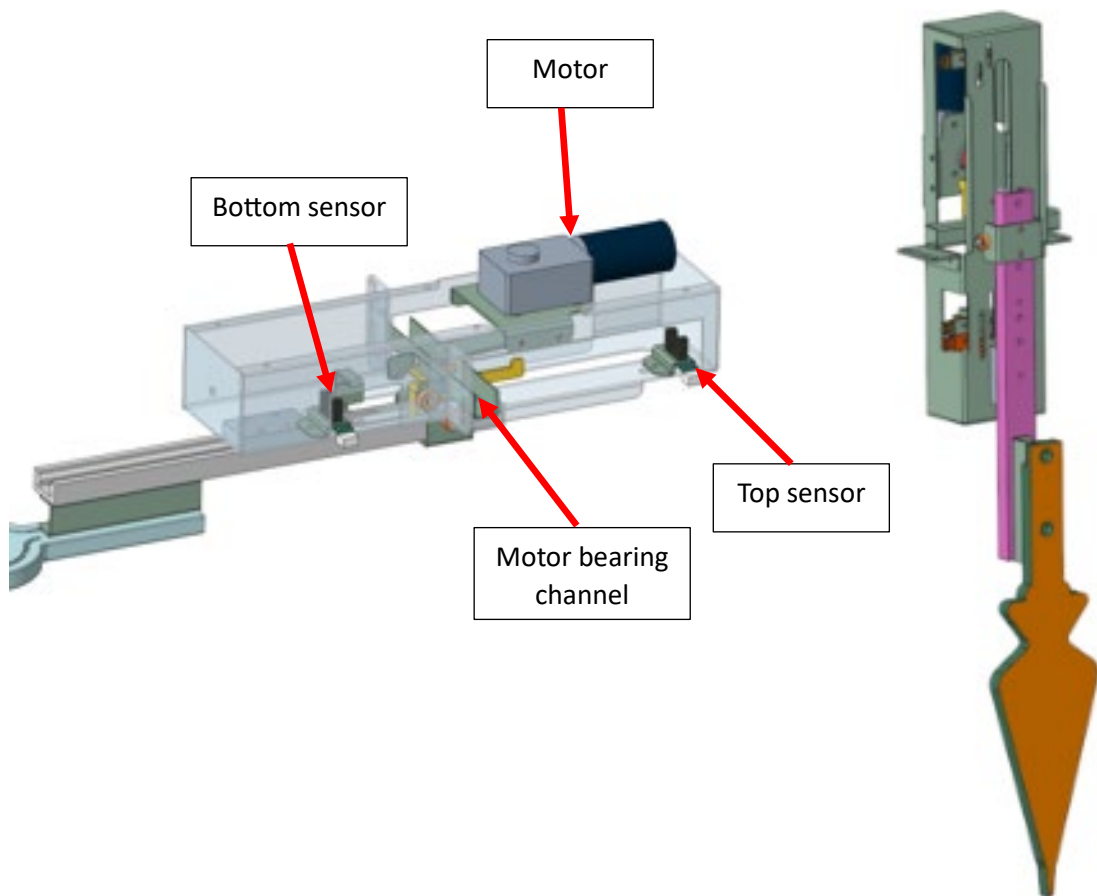
Drop mechanism



There is a H-Bridge circuit for the motor which is controlled by the motor control board. +12v for down, -12v for up.

The arrow motor can be driven in a single direction when in forced up/down test and reversed mechanically via the cam when it reaches the top.

The sensors are to set top and bottom positions, which are 12 v supplied with a 3vdc logic level (active low).



Settings

Control panel configuration and access

Set: Enter setting and move through the options

Decrease/Down: Move back through options

Increase/Up: Increases parameter setting

Quit: Exits the menu (or cycle to the end of the options)

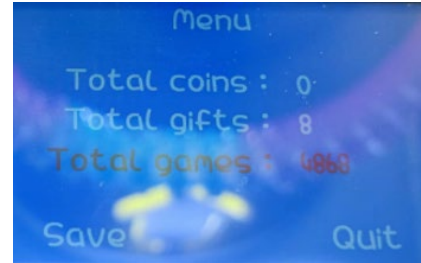


- Press “Set” to enter “Audit and Settings options”
- Press “Set” to cycle through the options menu
- To change a parameter, use the “Increase” button.
- Press “Quit” to exit and return to game at any time.

NOTE: All settings are executed and committed as you change them so there is no save function. Moving through the options and coming out at the end will save functions automatically.

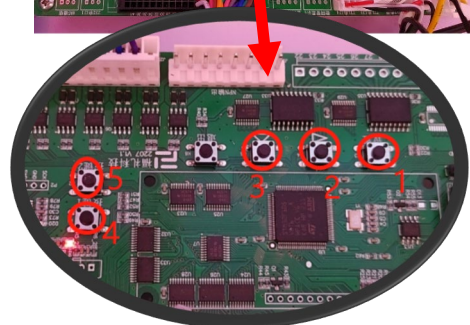
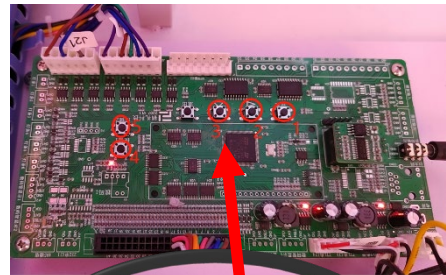
Reset audits/Bookkeeping

- To reset the bookkeeping, you will need to have the game powered on.



- Open the back door of the game and locate the main board.
- Press the following buttons as shown in the picture in sequence with intervals of 1 seconds between presses.

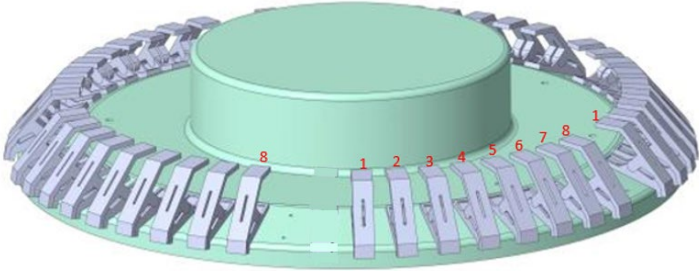
Button Number	Number of presses
1	6
2	2
3	2
4	2
5	2



Settings and Audits

Option Name	Option description
General settings	
Coins to Play	Number of pulses required to start a game. - e.g. 1= 1 coin to play
Game Time	Amount of time allocated to the player to press the drop button. If a player does not press the button, the game will time out and auto drop the arrow.
Standby Volume	Volume level of background audio when the game is not being played
Game Volume	Volume level of audio when the game is being played
Audits/Bookkeeping	
Total Coins	Audit of total coins inserted since data clear. This records pulses received by the game and not actual plays. Note: If the game is set to 2 coins to play and there had been 10 plays, the total coins would be 20.
Total Gifts	Audit of number of prizes dispensed/ Won since data clear
Total Games	Audit of number of actual games played.
Operator settings	
Prize Every Time	ON/OFF: On = The game will guarantee a prize for every credit. If no prize is won, the game remains open for free play until the prize sensor detects a prize. Off = Standard operating mode (Skill mode)

Test Mode

Test Mode	
<p>Press the external game play button to activate each test mode that is highlighted in RED on the external LCD.</p> <p>IMPORTANT: DO NOT operate "Forced turntable" if the arrow is down. This will destroy the pegs.</p>	
Rod move down	<p>Tests the drop arrows motor <u>DOWN</u> function, and if the sensors are functional.</p> <p>To operate, select the option and use the start button on the game control panel to operate the test.</p> <p>Each single press of the button will descend the arrow approx. 25% down until it reaches its lower limit switch. Any further presses will not further activate the motor.</p> <p>Note: If you have a fault or disconnected sensor, this test will not activate.</p>
Rod move up	<p>Tests the drop arrows motor <u>UP</u> function, and if the sensors are functional.</p> <p>To operate, select the option and use the start button on the game control panel to operate the test.</p> <p>Each single press of the button will ascend the arrow approx. 25% upwards until it reaches its top limit switch. Any further presses will not further activate the motor.</p> <p>Note: If you have a fault or disconnected sensor, this test will not activate.</p>
Verify	<p>This option will verify the accuracy of the encoder sensor. Each test should stop the carousel motor directly above the selected peg.</p> <p>There are 8 tests in this mode to test the 64 individual pegs.</p> <p><i>Verify option 1-8</i></p> <p>1 = Peg #1 2= Peg #2 (Directly to the right of peg #1)</p> <p>Operation examples:</p> <p>Select "1" on this option (Test all pegs at position #1)</p> <p>Press the start button on the control panel and the carousel will rotate and stop at the next peg. It should be over the peg in the win zone.</p> <p>Press the start button again, and it will rotate clockwise to the next #1 peg.</p> <p>Select "2" on this option.</p> <p>Press the start button on the control panel and the carousel will rotate and stop at the nearest peg #2. It should be over the peg in the win zone.</p> <p>Press the start button again, and it will rotate clockwise to the next peg at position #2</p> <p>Do the same for all other pegs 3-8.</p> <p>See below image for example of peg positions.</p> <div style="text-align: center;">  </div>

Force move down	<p>Tests the drop arrow motor <u>DOWN</u> function. This test should be used to test the motor function when the sensor is disconnected or defective. Each press of the start button on the control panel will descend the motor approx. 30%.</p>
Force move up	<p>Tests the drop arrow motor <u>UP</u> function. This test should be used to test the motor function when the sensor is disconnected or defective. Each press of the start button on the control panel will ascend the motor approx. 30%.</p>
Forced turntable	<p>Tests the rotating carousel motor. DO NOT operate "Forced turntable" if the arrow is down. This will destroy the pegs.</p> <p>Operation Press the stat button on the control panel to turn on the carousel motor. The motor will run indefinitely until the start button is pressed again where it will turn off.</p>
Exit test	<p>Press "Set" until you reach the end of the test menu, and it will go back to game Pressing "Quit" at any time will also return to game mode.</p>

Troubleshooting

Problem	Countermeasures
No credit	<ol style="list-style-type: none"> 1) Check the credit board has power and a flashing LED 2) Check the coin acceptor is connected to the credit board 3) Press the service button on the credit board to see if this issues a credit 4) Check the signal line is 3vdc. Short to 0v to test. 5) Contact your vendor/distributor for further advise.
No drop arrow movement	<ol style="list-style-type: none"> 1) Try force movement in test mode 2) Check motor control board has power 3) Check wiring between motor control board and main board, and between motor control board and motor 4) Check voltage at motor while in test 5) Check limit sensor for top/bottom is not short circuit 6) Contact your vendor/distributor for further advise
Rotating motor movement	<ol style="list-style-type: none"> 1) Try force turntable test in the test menu 2) Check that the "Stop" button inside the glass door is OK. 3) Check motor control board has power 4) Check wiring between motor control board and main board, and between motor control board and motor 5) Check voltage at motor while in test 6) Contact your vendor/distributor for further advise
No power to game	<ol style="list-style-type: none"> 1) Check AC supply to the game is OK 2) Check the fuse is OK in the IEC inlet 3) Check the front power switch is illuminated and there is voltage present 4) Contact your vendor/distributor for further advise
No Sound	<ol style="list-style-type: none"> 1) Check the amplifier has power & the volume is turned up 2) Check system sound settings 3) Check wiring between the amplifier and main board is ok 4) Check wiring between the amplifier and speaker is OK 5) Check the speaker is between 4-6 Ohms with the power off. 6) Contact your vendor/distributor for further advise
Prize bookkeeping incorrect	<ol style="list-style-type: none"> 1) Check the prize sensor is not blocked. 2) Check the encoder sensors using the verify function in test 3) Check it is not set to "Prize Every Time" mode
Limit sensor errors	<ol style="list-style-type: none"> 1) Check upper & lower limit sensors for the arrow are connected 2) Check the sensor has a 12v supply 3) Check the sensor logic voltage is high, and pulls low when blocked Logic voltage is 3vdc (active low)
LCD not responsive or displaying correct data	Check that the data cable is connected to J9 on the main board (COM4).
Test menu showing random data & partially unresponsive	The LCD or main board software are incompatible or corrupted. Send the versions to Sega support to verify they are compatible. This can occur if you replace one of the parts and the FW is incompatible. See page 20 for details.

Software version check.

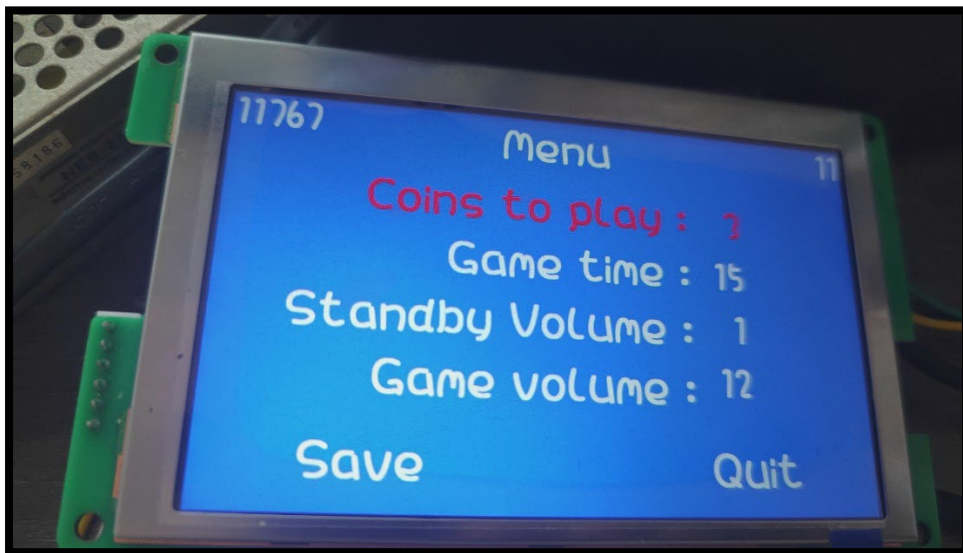
The software on the main board and LCD need to be paired. If replacing one of these parts, please speak to your distributor about how to do this.

- Open the service door and press “Set”.

Skill Fall:

Main board: 11767

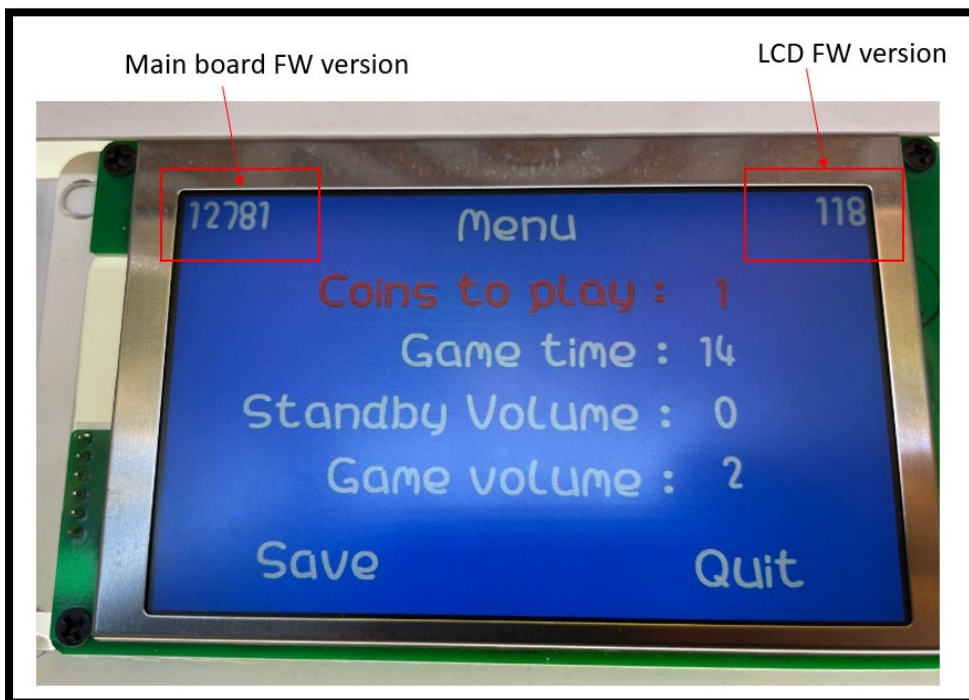
LCD: 11



Win Fall:

Main board: 12781

LCD: 118

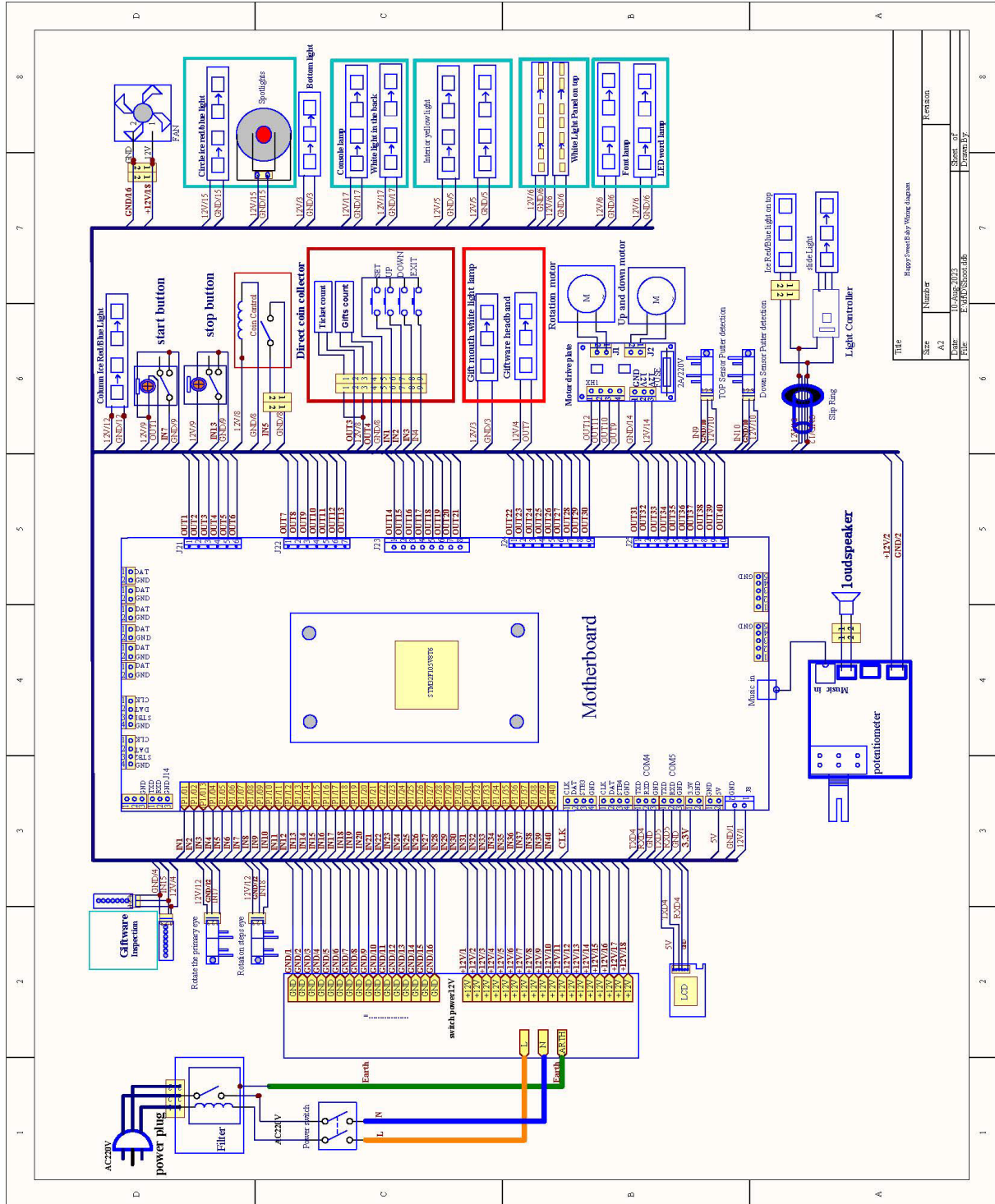


Technical documentation

IO map:



Main Control Board		Main Control Board		Main Control Board		Main Control Board	
IN JP1-8		Input Port		OUT J21_1-8	MOS/2.5A	Output Port	
1	k1	Setting Button		1		Left Button Light	
2	k2	Add Button		2		Right Button Light	
3	k3	Substraction Button		3		Code table for left gift	
4	k4	Exit Button		4		Code table for right gift	
5		Insert coin signal L		5		Code table for inserting coin on the left	
6		Insert coin signal R		6		Code table for inserting coin on the right	
7		Console button signal L		7		Left light ring for the mouth of gift	
8		Console button signal R		8		Right light ring for the mouth of gift	
IN JP8-16				OUT J21_9-16	MOS/2.5A		
9		Upper F sensor for left up and down push motor (12V)		9	2pcs of motor control board	Left push motor revolve clockwise (12V)	
10		Down F sensor for left up and down push motor (12V)		10		Left push motor revolve anticlockwise (12V)	
11		Upper F sensor for right up and down push motor (12V)		11		Left rotating motor clockwise (12V)	
12		Down F sensor for right up and down push motor (12V)		12		Left rotating motor anticlockwise (12V)	
13		Stop button for left revolving motor		13		Right push motor revolve clockwise (12V)	
14		Stop button for right revolving motor		14		Left push motor revolve anticlockwise (12V)	
15		Test for dropping gifts on the left		15		Right rotating motor clockwise (12V)	
16		Test for dropping gifts on the right		16		Right rotating motor anticlockwise (12V)	
Main Control Board							
2811Light						4.3inch LCD display on the left	
J15	LED1	2811Light Control ,colorful light		GND	Serial Port1		
J16	LED2	Out LED		5V	Serial Port1		
J17	LED3	Inner LED		RX	TTLSerial Port1	Connect with TX and baud 115200 of serial port 5 on the mainboard	
J18	LED4	Top LED		TX	TTLSerial Port1	connect with RX of serial port 5	
J19	LED5			4.3inch LCD display on the right			
J20	LED6			GND	Serial Port1		
				5V	Serial Port1		
				RX	TTLSerial Port1	Connect with TX and baud 115200 of serial port 4 on the mainboard	
				TX	TTLSerial Port1	connect with RX of serial port 4	

Wiring Schematic



Parts listing

Part Number	Description	Picture
OJ-SUF-011	Small Gear 18 teeth	
OJ-SUF-012	Big Gear 72 teeth	
OJ-SUF-013	Bearing 6003Z	
OJ-SUF-014	Bearing 624Z	
OJ-SUF-015	Linear Slider (No guide rail)	
OJ-SUF-016	Short Key HB68	
OJ-SUF-020B	Peg (Big) Each	
OJ-SUF-020S	Peg (Small) Each	
OJ-SUP-021	Supply Power LRS-350-12	
OJ-SUP-023-WF	Mainboard WINFALL	

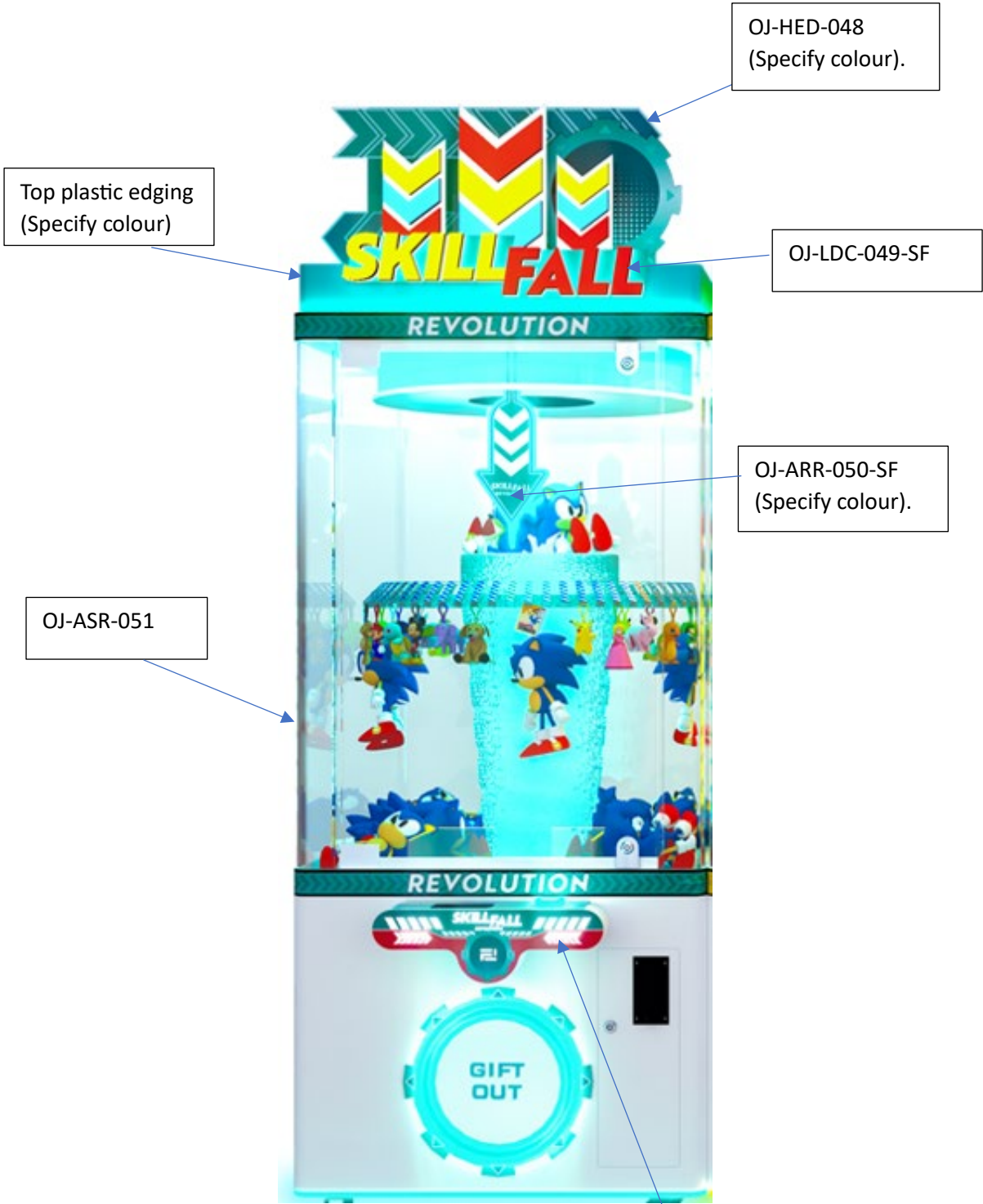
OJ-MBP-024	Motor Control pcb.	
OJ-MCP-025	Rainbow LED controller	
OJ-CLD-026	Amplifier	
OJ-LCD-030-SF	LCD	
OJ-SBK-031	Start button	
OJ-STP-032	Stop Button	
OJ-SWT-033	Setup switch	
OJ-BST-034	Rocker switch	
OJ-DGR-036	Slip ring - MC400-P0410-VC	

OJ-TLS-037	Opto sensor - KI669	<p>KI669 槽宽8mm 电压5-12V 防尘防尘特常闭型</p> 
OJ-SPK-038	4" Speaker 25W	
OJ-FIL-039	Mains Filter CW2B-10A-T	
OJ-PRD-040	Prize Sensor	
OJ-PMT-041	12v Arrow motor 12V10RPM	
OJ-TUB-042	Turntable motor Z2D25	
OJ-SLE-043	Downlight 7W	
OJ-YDB-044	12v LED bar	
OJ-ROD SENSOR-52	Arrow Sensor	

OJ-TPE-046-R	Top plastic edging (Red)	See PAGE 26
OJ-TPE-046-B	Top plastic edging (Blue)	See PAGE 26
OJ-TPE-046-G	Top plastic edging (Yellow)	See PAGE 26
OJ-ARROW-R-L	HEADER ARROW LARGE (RED)	
OJ-ARROW-Y-L	HEADER ARROW LARGE (YELLOW)	
OJ-ARROW-G-L	HEADER ARROW LARGE (GREEN)	
OJ-ARROW-R-M	(HEADER ARROW MED (RED)	
OJ-ARROW-Y-M	(HEADER ARROW MED (YELLOW)	
OJ-ARROW-G-M	(HEADER ARROW MED (GREEN)	
OJ-ARROW-R-S	HEADER ARROW SMALL (RED)	
OJ-ARROW-Y-S	HEADER ARROW SMALL (YELLOW)	
OJ-ARROW-G-S	HEADER ARROW SMALL (GREEN)	
OJ-HED-048	Upper Header	See PAGE 26



OJ-LDC-049-SF	Skill Fall Header	See PAGE 27
OJ-ARR-050-SF	Arrow Skill fall	See PAGE 27
OJ-ASR-051	Acrylic Surround	See PAGE 27
NOTE: The colour specific options are dependent on the colour version of the game that you have. Please select the colour that matches our product.		



Top plastic edging
(Specify colour)

OJ-HED-048
(Specify colour).

OJ-LDC-049-SF

OJ-ARR-050-SF
(Specify colour).

OJ-ASR-051

OJ-SF-PANEL-R	Front control panel acrylic (red)
OJ-SF-PANEL-Y	Front control panel acrylic (Yellow)
OJ-SF-PANEL-G	Front control panel acrylic (Green)



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