



# SNORK SERVICE MANUAL

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## INTRODUCTION

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
2. Children should be supervised to ensure that they do not play with the appliance.
3. Correct Disposal of this product:

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



## 1. Brief Description

“Snork” [TW.JQ01.29] is a coin-operated, self-merchandising candy and/or prize vending game machine developed by designers of our company. The game “Snork” utilizes a reliable vacuum pick up system which is controlled by the Player to retrieve candy and/or prizes such as small toys or capsules. Within an Operator adjustable timed round of play, the Player will move the “Snork” character by using a 4-way joystick to capture and drop candy and/or prizes down the center prize chute and out to the Player. This machine is of very high quality and an unusual, whimsical design. It is as simple and quick to install as it is for small children to learn how to play.

We are confident “Snork” will be a fun, reliable, and long term income generating machine for your location!

## 2. Caution

### 2-1. Notice for Installation

- This machine is *only* intended for indoor use.
- After installation, we recommend always lowering the four stabilizing levelers down.
- Do not take apart, assemble or remove the machine at random while under power.
- Before moving or making any internal adjustments, switch the power off, and disconnect the power cord.
- Locate the machine on a flat floor. Do not place it on any uneven, unsteady or easily obstructed place.
- Avoid placing the machine in locations having very high temperatures.

### 2-2. Notice for Operation

- Inspect whether the power plug and power cord are in good condition before switching the power on. Make sure that the voltage is suitable for the machine.

- The power supply voltage must be consistent with the specifications on the back of the machine.
- Switch the power off before any maintenance or repair.
- Only qualified persons can examine and repair the electric control units.
- Only use authentic, authorized components to replace the old ones.
- When you pull out the power cord, hold the plug. Do not hold the line.
- Do not plug or unplug the plug with wet hands. Do not pull or twist the line cord heavily.

### 3. Accessories

Check that the following accessories are supplied.

Name	Qty	Remark
Manual	1	
Power cord	1	
Key	3	
Optical sensor	4	Low level
Micro switch	3	
Alt. Nose Screen “B”	1	Nose Screen “A” is installed

### 4. How to Play

- ◆ Insert coin[s] to start the game. The adjustable timed round begins and is displayed counting down.
- ◆ Use the 4-way joystick to position Snork’s nose left or right, over the desired candy and/or prize you wish to capture. By moving the joystick forward, you will control Snork’s nose in the downward direction until it reaches the surface of the candy and/or prizes as they slowly revolve around the center prize chute. Pulling the joystick back after capturing your prize will lift Snork’s nose out of the prize bin.

Then move the joystick left or right to move the captured prize over and above the center prize chute. You can now press the DROP button, (which turns off the vacuum system temporarily), and continue to hold it down to drop your prize- or, you can simply let go of the joystick at this point and at the end of the timed round, Snork will automatically return to the center and drop any captured candy and/or prizes into the prize chute for you!

- ◆ The game is Operator adjustable to either end the game at any candy and/or prize detected in the prize chute- or, you may have time left and return to try and capture even more candy and/or prizes before the time runs out!
- ◆ When the time runs out, the game is over.
- ◆ An alternate Nose tip “A” and “B” [“A” is installed at the factory] is included with the game and allows Operators to easily control the number of candy pieces and/or prizes able to be picked up at any time by having more or less holes for the vacuum suction to pass through.
- ◆ Wrapped candy, toy capsules [up to 2.5” in diameter], and many small toys may be operated separately or combined to offer a wide range of choices to Players.
- ◆ Additionally, an Operator adjustable setting within the Menu automatically lifts Snork’s nose out of the prize bin half way if the nose is held down too long to prevent piling up of candy and/or prizes and to reduce the risk of damage.
- ◆ Upon any power up of the game, the game will enter a self-diagnostic switch test to confirm the correct functions of the game. This test will determine if there are any switches within the game play system which have become disconnected or faulty and if so, a subsequent corresponding error code will be displayed in the time display on the control panel. Refer to the Troubleshooting guide in this manual for any error conditions.

## 5. Technical Parameter

**Model Number.....: TW.JQ01.29**

**Environment Requirement: Temperature from-10 °C ~ +40 °C , low radiation, low humidity and no serious vibration.**

**Dimension.....: W 1040 × D 1220 × H 1440 (mm)**

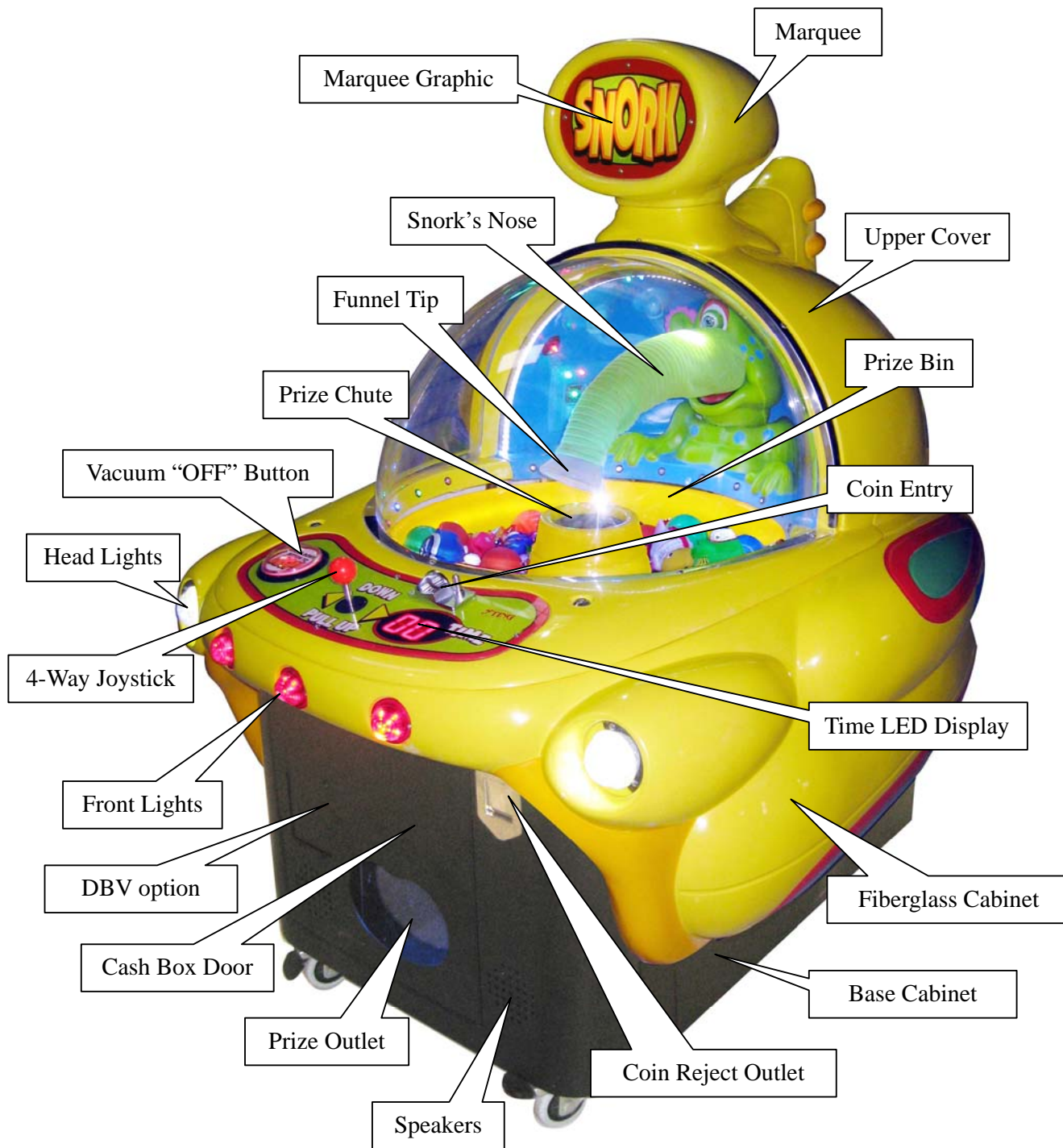
**Weight.....: 135KG**

**Power Supply.....: The power supply voltage must be consistent with the specifications on the back of the machine.**

**Maximum Power.....: 1600W**

**No. of Players .....: One player**

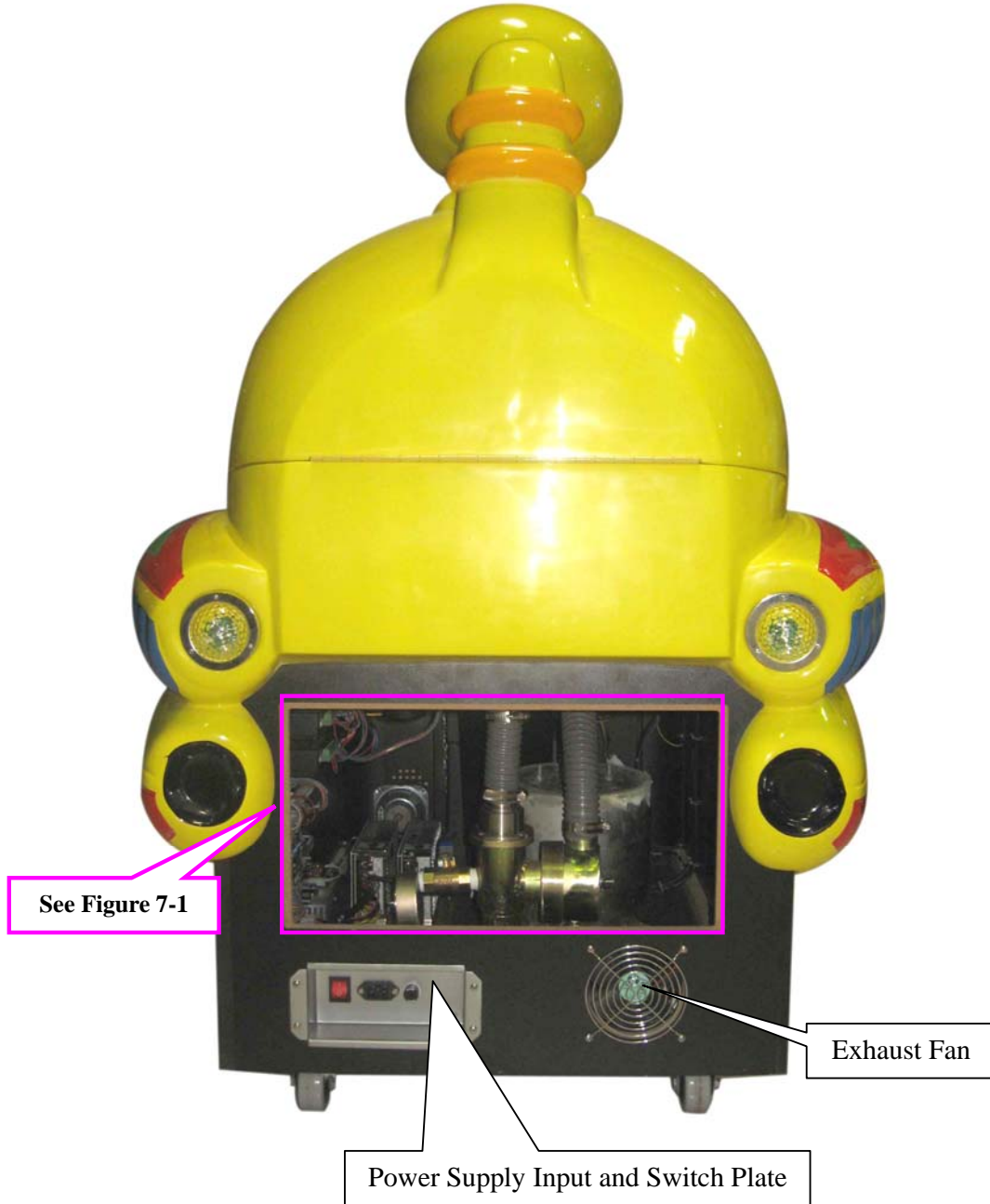
## 6. Appearance





## 7. All Parts Description and Location

### 7-1. Rear View of Cabinet Assembly:



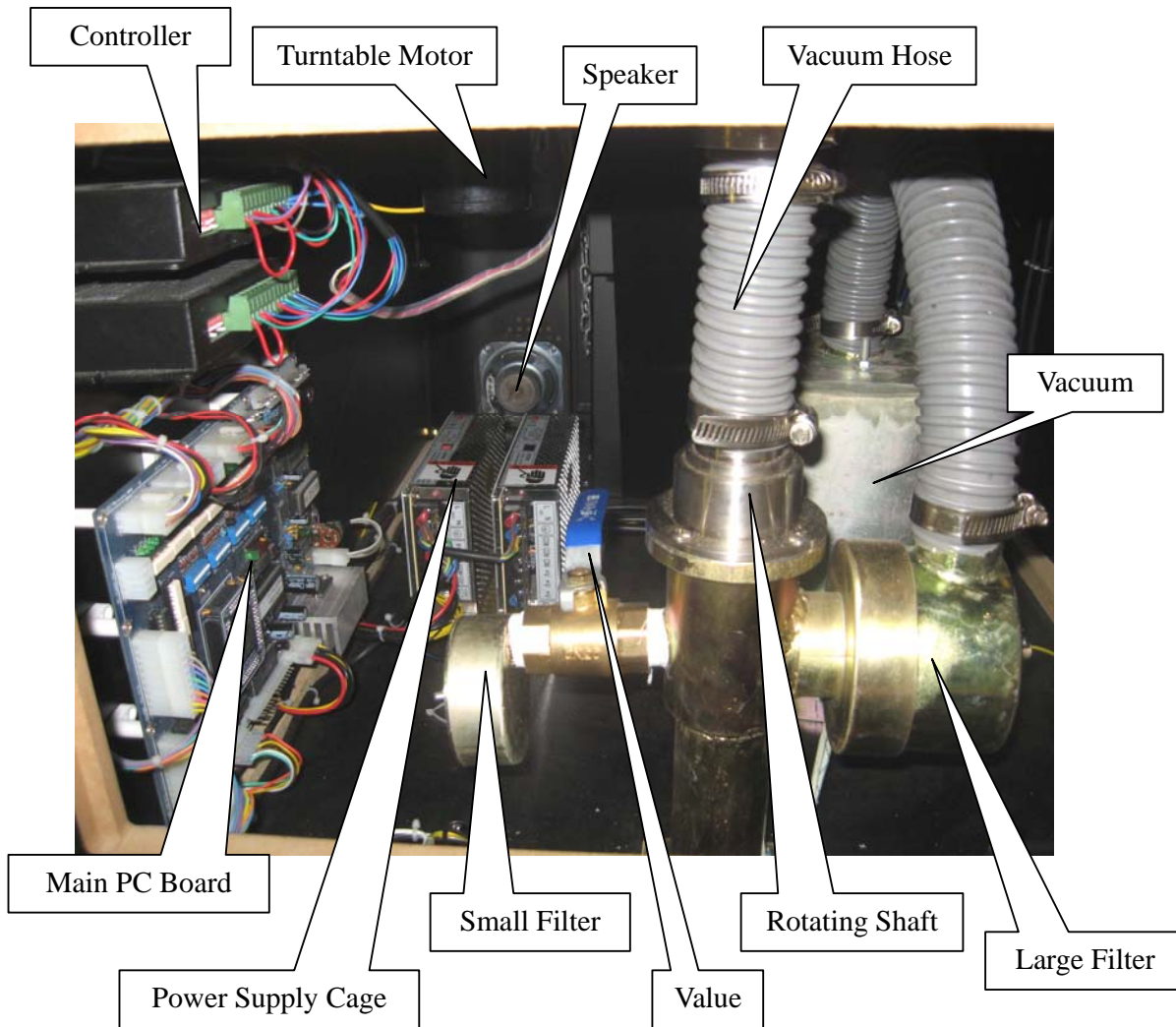
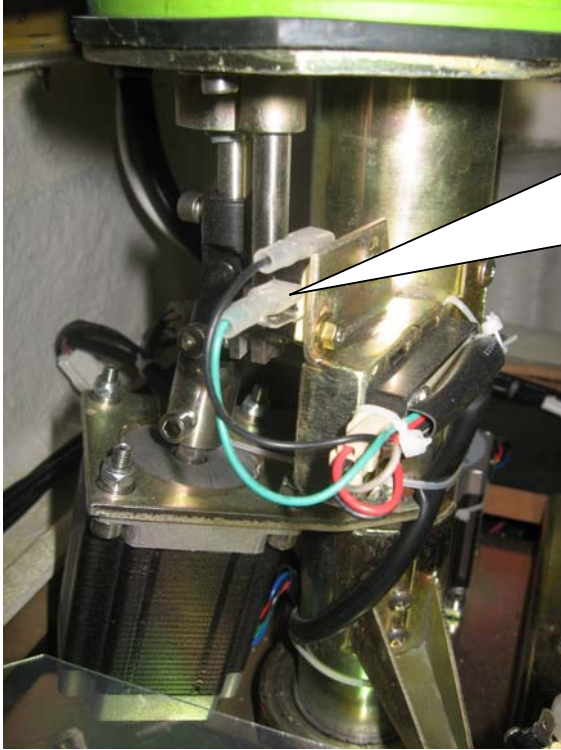
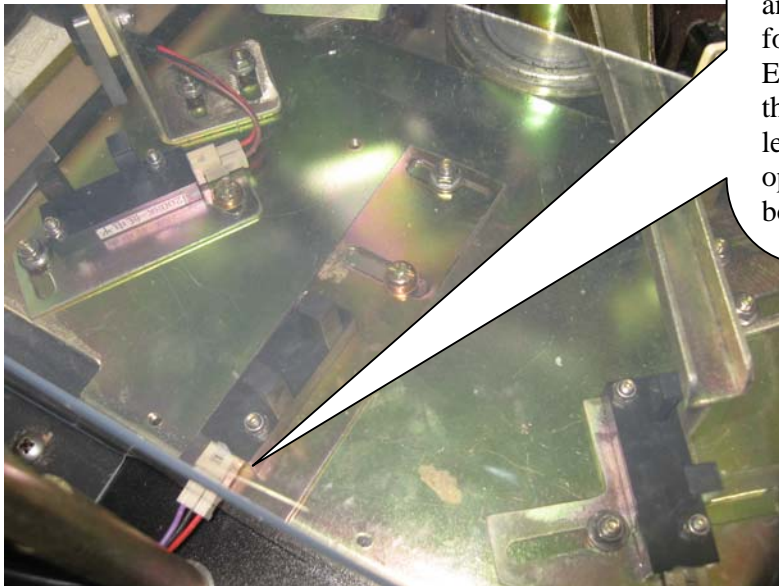


Figure 7-1

**7-2. Instruction for Up-Down and Left-Right-Center Detect:**



Use a micro switch and an opto sensor for up/down detect signal. If the opto sensor fails to work, the micro switch will assume the function to prevent damage and display an error code.



On the right side: an EOL, (end of limit) micro switch and an opto sensor controls the left boundary signal. The opto sensor in the middle is for midpoint detect. The EOL micro switch and opto sensor on the right is for right boundary signal. The EOL micro switches determine the signal control for the left-right boundary when the opto sensor signal for left-right boundary is abnormal.

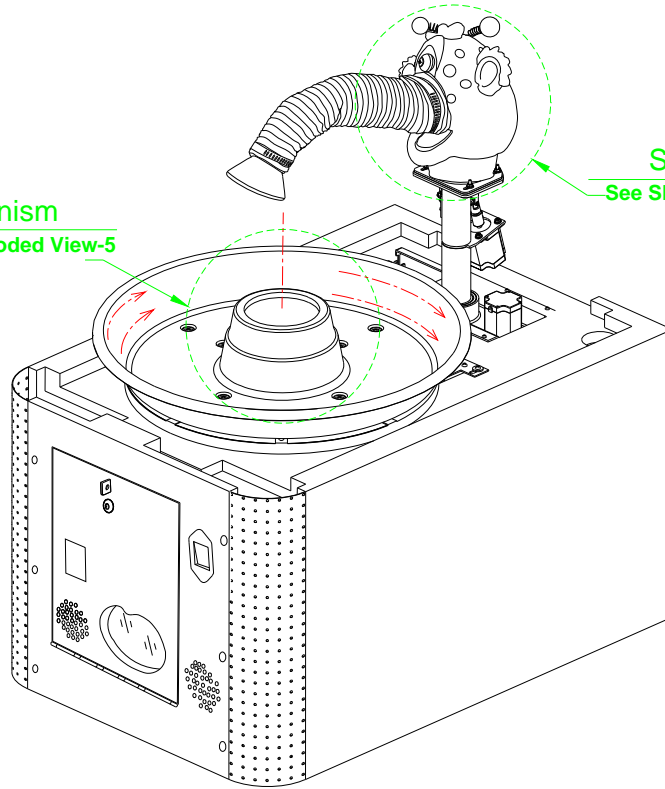
## 8. The Structure of All Parts

### SNORK Mechanism General Assembly Drawing

01.

Turntable Mechanism  
See SNORK Mechanism Exploded View-5

Snork Head Mechanism  
See SNORK Mechanism Exploded View-4

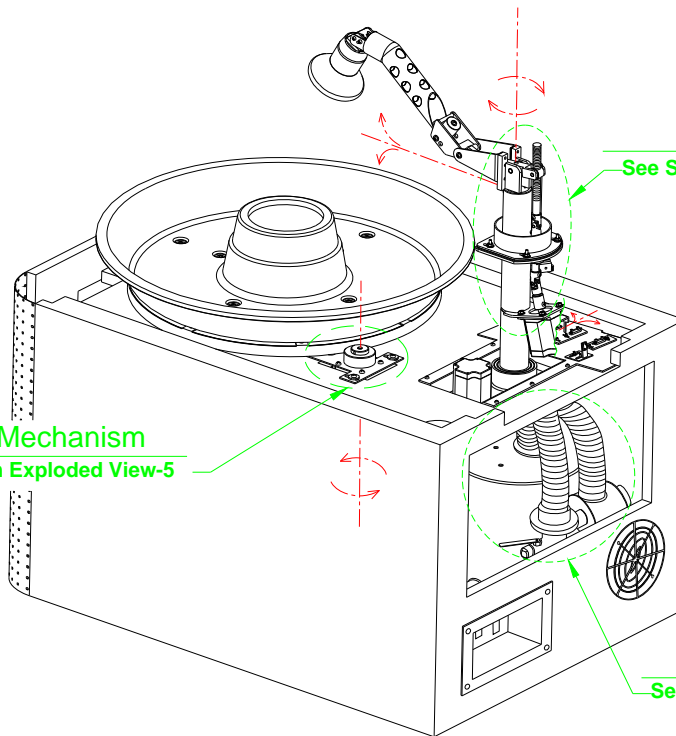


02.

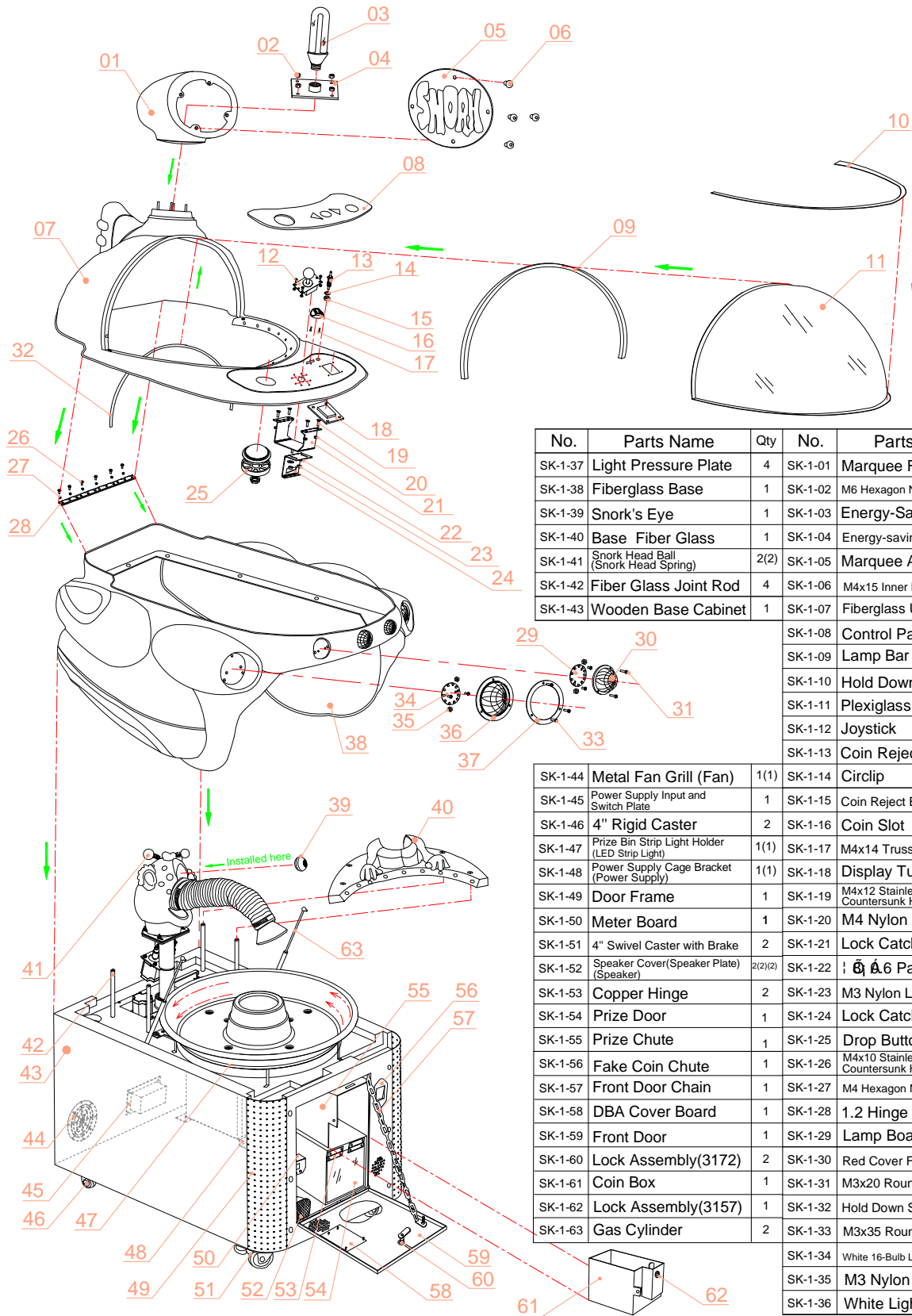
Turntable Motor Mechanism  
See SNORK Mechanism Exploded View-5

Main Shaft Mechanism  
See SNORK Mechanism Exploded View-2&3

Vacuum Mechanism  
See SNORK Mechanism Exploded View-6

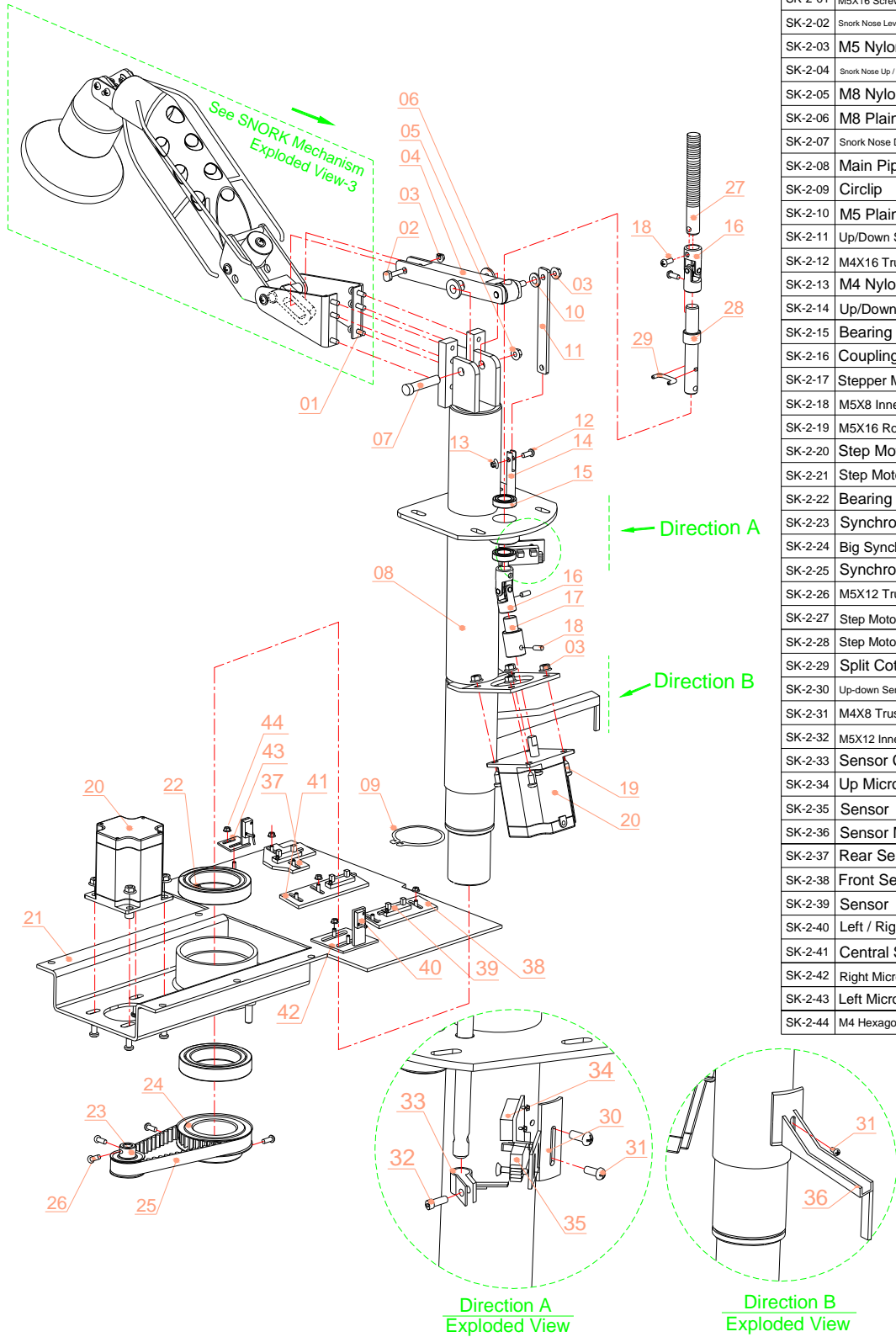


SNORK Mechanism Exploded View-1



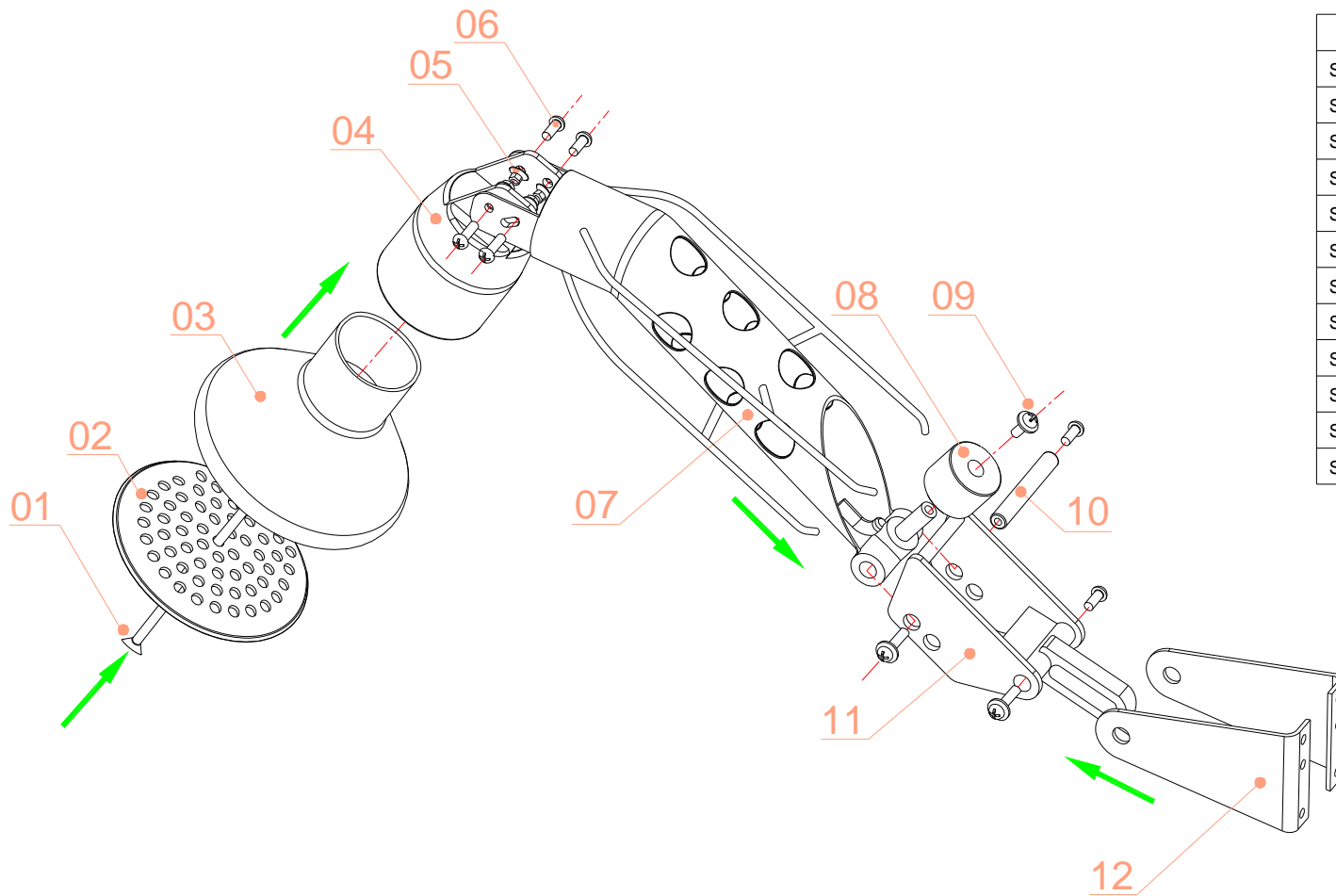
No.	Parts Name	Qty	No.	Parts Name	Qty
SK-1-37	Light Pressure Plate	4	SK-1-01	Marquee Fiber Glass	1
SK-1-38	Fiberglass Base	1	SK-1-02	M6 Hexagon Nut with Flange	4
SK-1-39	Snork's Eye	1	SK-1-03	Energy-Saving Lamp	1
SK-1-40	Base Fiber Glass	1	SK-1-04	Energy-saving Lamp Holder	1
SK-1-41	Snork Head Ball (Snork Head Spring)	2(2)	SK-1-05	Marquee Acrylic	1
SK-1-42	Fiber Glass Joint Rod	4	SK-1-06	M4x15 Inner Hexagon Screw	4
SK-1-43	Wooden Base Cabinet	1	SK-1-07	Fiberglass Upper Cover	1
			SK-1-08	Control Panel Acrylic	1
			SK-1-09	Lamp Bar	1
			SK-1-10	Hold Down Strip	1
			SK-1-11	Plexiglass Cover	1
			SK-1-12	Joystick	1
			SK-1-13	Coin Reject Bar	1
SK-1-44	Metal Fan Grill (Fan)	1(1)	SK-1-14	Circlip	1
SK-1-45	Power Supply Input and Switch Plate	1	SK-1-15	Coin Reject Bar Set Screw	1
SK-1-46	4" Rigid Caster	2	SK-1-16	Coin Slot	1
SK-1-47	Prize Bin Strip Light Holder (LED Strip Light)	1(1)	SK-1-17	M4x14 Truss Head Screw	2
SK-1-48	Power Supply Cage Bracket (Power Supply)	1(1)	SK-1-18	Display Tube Board	1
SK-1-49	Door Frame	1	SK-1-19	M4x12 Stainless Steel Countersunk Head Screw	4
SK-1-50	Meter Board	1	SK-1-20	M4 Nylon Locking Nut	4
SK-1-51	4" Swivel Caster with Brake	2	SK-1-21	Lock Catch Rank A	1
SK-1-52	Speaker Cover(Speaker Plate) (Speaker)	2(2/2)	SK-1-22	1/8" A6 Pad	2
SK-1-53	Copper Hinge	2	SK-1-23	M3 Nylon Locking Nut	2
SK-1-54	Prize Door	1	SK-1-24	Lock Catch Rank B	1
SK-1-55	Prize Chute	1	SK-1-25	Drop Button Assembly	1
SK-1-56	Fake Coin Chute	1	SK-1-26	M4x10 Stainless Steel Countersunk Head Screw	12
SK-1-57	Front Door Chain	1	SK-1-27	M4 Hexagon Nut with Flange	12
SK-1-58	DBA Cover Board	1	SK-1-28	1.2 Hinge	1
SK-1-59	Front Door	1	SK-1-29	Lamp Board	5
SK-1-60	Lock Assembly(3172)	2	SK-1-30	Red Cover For Front Light	3
SK-1-61	Coin Box	1	SK-1-31	M3x20 Round Head Screw	12
SK-1-62	Lock Assembly(3157)	1	SK-1-32	Hold Down Strip For Cover	1
SK-1-63	Gas Cylinder	2	SK-1-33	M3x35 Round Head Screw	24
			SK-1-34	White 16-Bulb Lamp Board (LED)	4
			SK-1-35	M3 Nylon Locking Nut	36
			SK-1-36	White Light Cover	4

SNORK Mechanism Exploded View-2



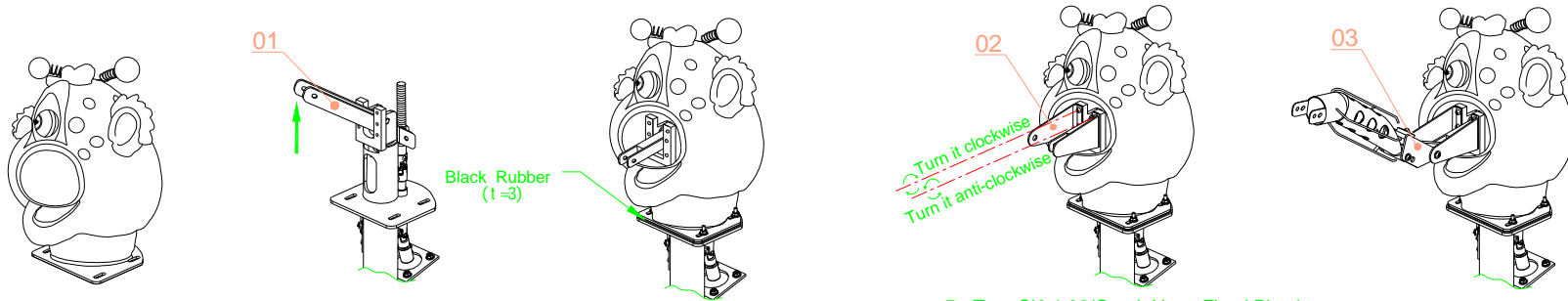
No.	Parts Name	Qty
SK-2-01	M5X16 Screw & Washer Assemble	6
SK-2-02	Snork Nose Lever Drive Flame Back Shaft	1
SK-2-03	M5 Nylon Locking Nut	10
SK-2-04	Snork Nose Up / Down Connection Fixed-Pin	1
SK-2-05	M8 Nylon Locking Nut	1
SK-2-06	M8 Plain Washer	2
SK-2-07	Snork Nose Damping Fixed Shaft	1
SK-2-08	Main Pipe Structure	1
SK-2-09	Circlip	1
SK-2-10	M5 Plain Washer	1
SK-2-11	Up/Down Sensor Joint Plate	1
SK-2-12	M4X16 Truss Head Screw	1
SK-2-13	M4 Nylon Locking Nut	1
SK-2-14	Up/Down Sensor Lever	1
SK-2-15	Bearing 608	2
SK-2-16	Coupling	2
SK-2-17	Stepper Motor Joint Shaft	1
SK-2-18	M5X8 Inner Hexagon Screw	6
SK-2-19	M5X16 Round Head Screw	8
SK-2-20	Step Motor	2
SK-2-21	Step Motor Base Bracket	1
SK-2-22	Bearing 6909	2
SK-2-23	Synchronizing Wheel	1
SK-2-24	Big Synchronizing Wheel	1
SK-2-25	Synchronous Belt	1
SK-2-26	M5X12 Truss Head Screw	4
SK-2-27	Step Motor Screw Mandrel	1
SK-2-28	Step Motor Rotating Rod	1
SK-2-29	Split Cotter Pin	1
SK-2-30	Up-down Sensor & Switch Bracket	1
SK-2-31	M4X8 Truss Head Screw	4
SK-2-32	M5X12 Inner Hexagon Screw	1
SK-2-33	Sensor Clamp	1
SK-2-34	Up Micro Switch	1
SK-2-35	Sensor	1
SK-2-36	Sensor Moving Arm	1
SK-2-37	Rear Sensor Plate	1
SK-2-38	Front Sensor Plate	1
SK-2-39	Sensor	3
SK-2-40	Left / Right Micro Switch	2
SK-2-41	Central Sensor Plate	1
SK-2-42	Right Micro Switch Plate	1
SK-2-43	Left Micro Switch Plate	1
SK-2-44	M4 Hexagon Nut with Flange	10

SNORK Mechanism Exploded View-3



No.	Parts Name	Qty
SK-3-01	M4X60 Stainless Steel Countersunk Head Screw	1
SK-3-02	Nose Tip Screen	1
SK-3-03	Snork Funnel Tip	1
SK-3-04	Snork Funnel Tip Socket	1
SK-3-05	M4 Nylon Locking Nut	4
SK-3-06	M4X12 Truss Head Screw	4
SK-3-07	Snork Nose Support Frame	1
SK-3-08	Anti-vibration Pad	1
SK-3-09	M4X10 Screw & Washer Assemble	5
SK-3-10	Snork Nose Lever Drive Front Joint Shaft	1
SK-3-11	Snork Lever Drive Bracket	1
SK-3-12	Snork Nose Fixed Plate	2

SNORK Mechanism Exploded View-4



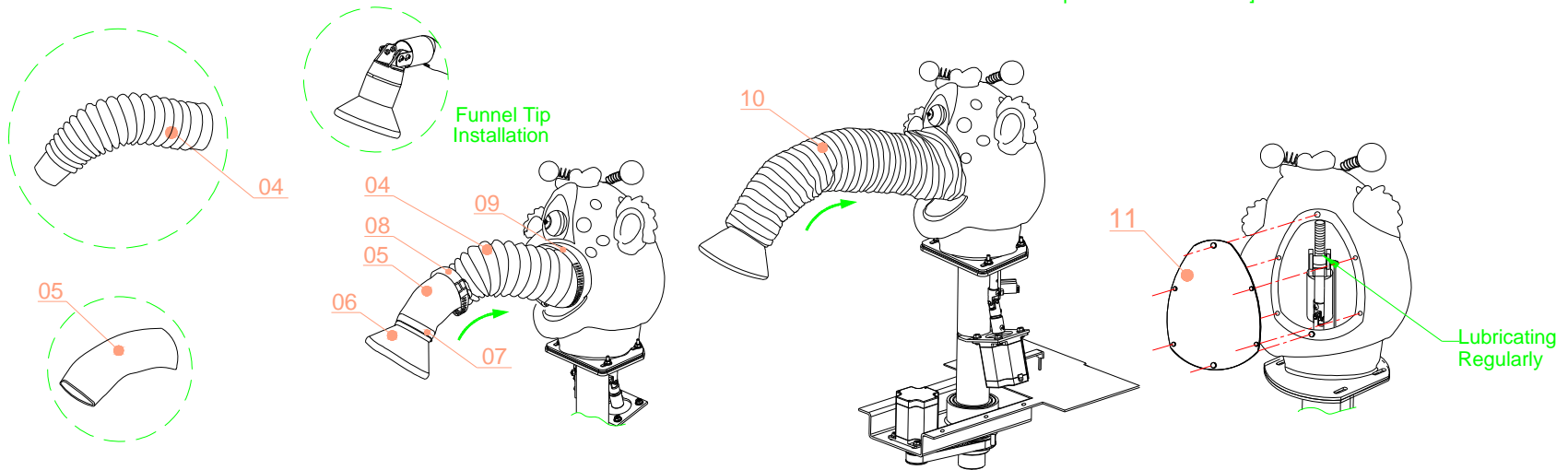
A. SNORK Head Assembly

B. Adjust SK-4-01(Snork Nose Up / Down Connection Part) to the top.

C. Fit the SNORK head assembly over the mechanism, and then adjust the SK-4-01 in horizontal position.

D. Turn SK-4-02(Snork Nose Fixed Plate) after fastening a truss head screw (M5 X16) on it as shown [prepare for the next step:mount the SK-4-03].

E. Fix SK-4-03(Snork Lever Drive Bracket) on SK-4-01, then fasten the other screws on SK-4-02.



F. Mount SK-4-04(Nose Rubber Hose) and SK-4-05 (Nose Rubber Hose A) on nose frame in turn.

G. Mount SK-4-06 (Snork Funnel Tip), and then secure SK-4-04 and SK-4-05 with SK-4-08 (2" Hose Clamp) ,SK-4-09(4" Hose Clamp ) and SK-4-07(Tyre Strap).

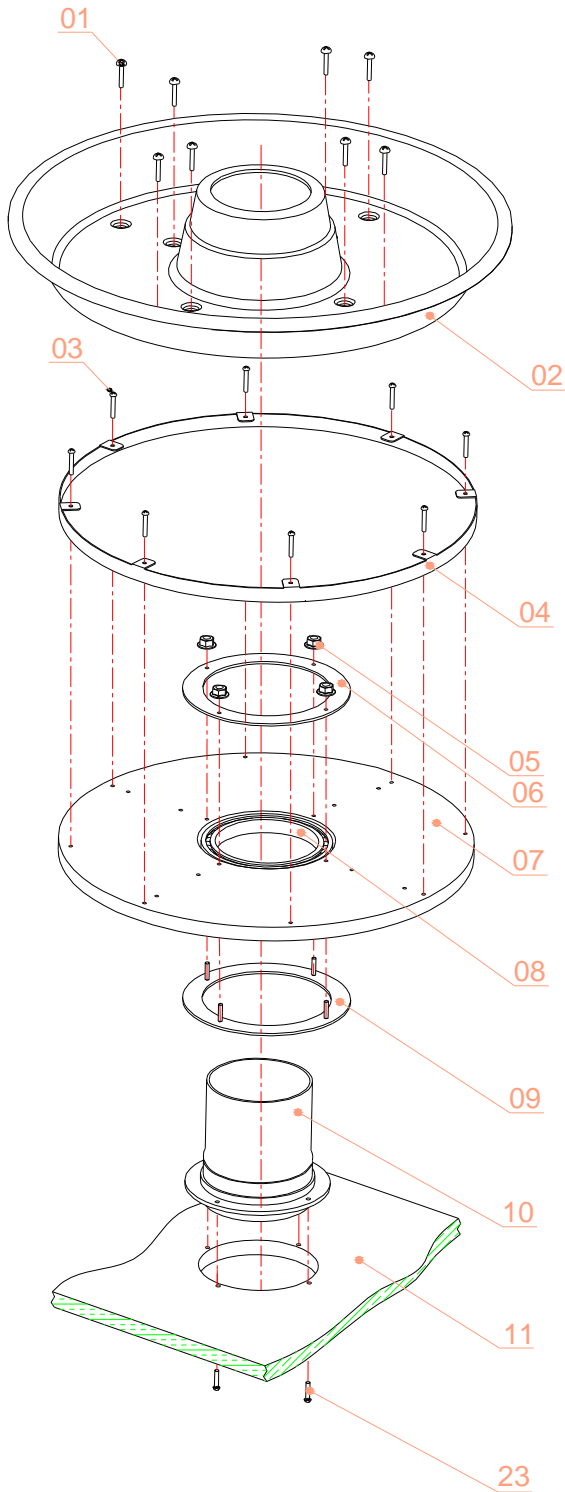
H. Finally fit over SK-4-10 (Snork Nose Cloth).

J. Release the 6 screws (M4; #0) from SK-4-11 (Head Rear Access Door); Screw rod and screw cap need to be lubricated every 60 days' use.The connection of SK-4-11 must be firm and airproof.

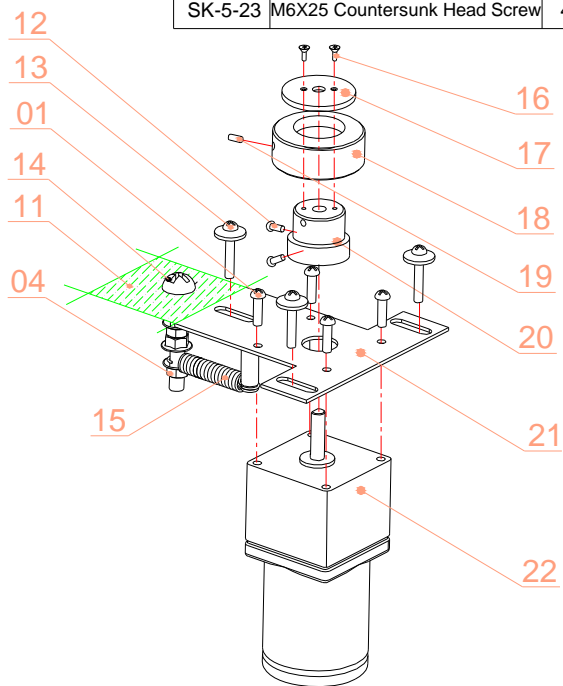


SNORK Mechanism Exploded View-5

No.	Parts Name	Qty
SK-5-01	M5X20 Truss Head Screw	16
SK-5-02	Prize Bin	1
SK-5-03	ST4X16 Self Tapping Screw	8
SK-5-04	Prize Bin Band	1
SK-5-05	M5 Nylon Locking Nut	4
SK-5-06	Bearing Bracket A	1
SK-5-07	Prize Bin Plate	1
SK-5-08	Bearing 6826	1
SK-5-09	Bearing Bracket	1
SK-5-10	Prize Bin Seat B	1
SK-5-11	Main Panel	1
SK-5-12	M4X10 Set Screw	2
SK-5-13	M5X16 Screw & Washer Assemble	2
SK-5-14	M5X45 Truss Head Screw	1
SK-5-15	Tension Spring	1
SK-5-16	M4X12 Countersunk Head Screw	2
SK-5-17	Fixing Plate	1
SK-5-18	Prize Bin Drive Axlebox	1
SK-5-19	M4X15 Set Screw	1
SK-5-20	Driving Shaft	1
SK-5-21	Prize Bin Fixed Plate	1
SK-5-22	Motor	1
SK-5-23	M6X25 Countersunk Head Screw	4

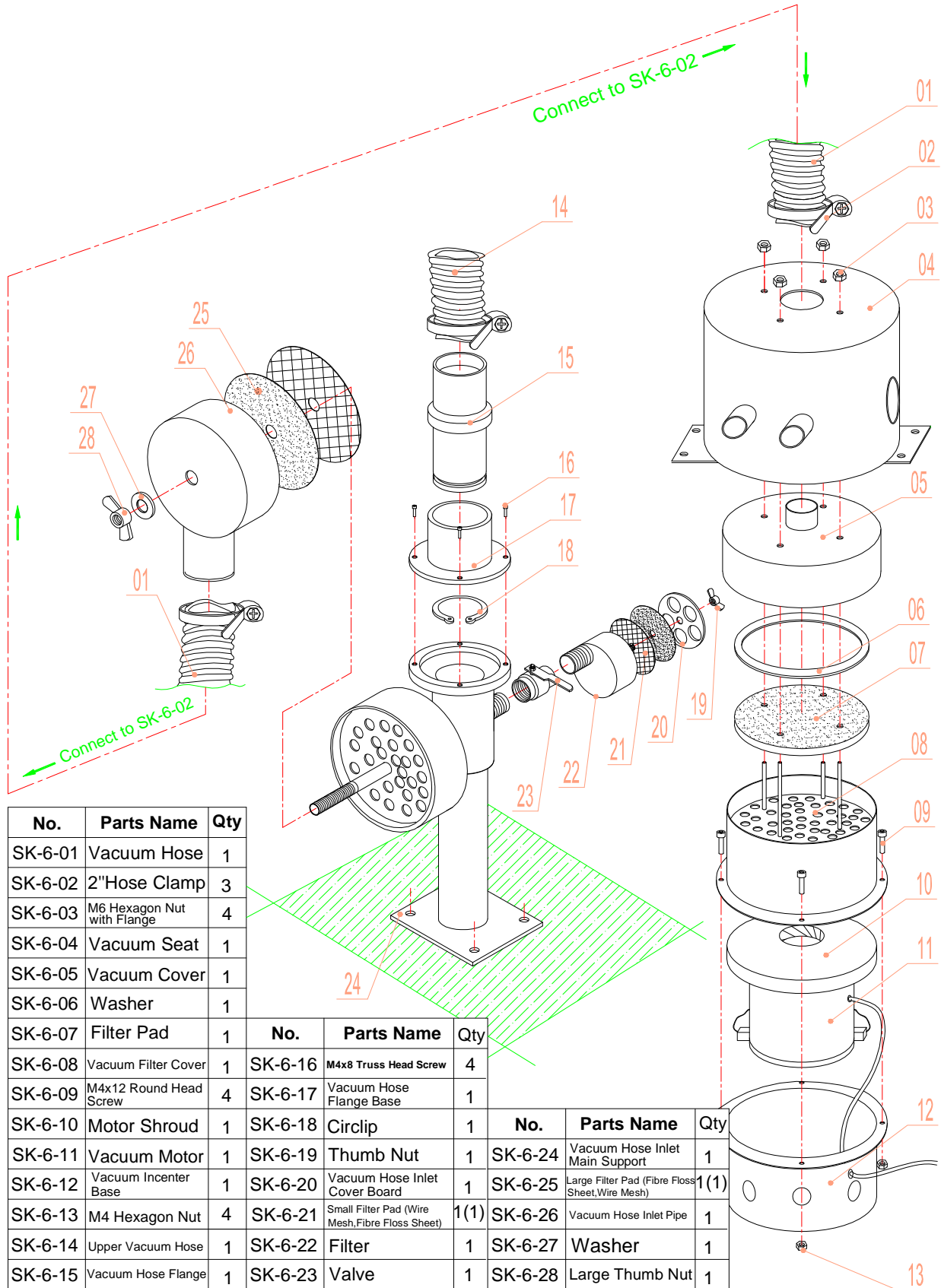


01.Turntable Mechanism Exploded View



02.Turntable Motor Mechanism Exploded View

SNORK Mechanism Exploded View-6



No.	Parts Name	Qty
SK-6-01	Vacuum Hose	1
SK-6-02	2"Hose Clamp	3
SK-6-03	M6 Hexagon Nut with Flange	4
SK-6-04	Vacuum Seat	1
SK-6-05	Vacuum Cover	1
SK-6-06	Washer	1
SK-6-07	Filter Pad	1

No.	Parts Name	Qty
SK-6-16	M4x8 Truss Head Screw	4
SK-6-17	Vacuum Hose Flange Base	1
SK-6-18	Circlip	1
SK-6-19	Thumb Nut	1
SK-6-20	Vacuum Hose Inlet Cover Board	1
SK-6-21	Small Filter Pad (Wire Mesh, Fibre Floss Sheet)	1(1)
SK-6-22	Filter	1
SK-6-23	Valve	1

No.	Parts Name	Qty
SK-6-24	Vacuum Hose Inlet Main Support	1
SK-6-25	Large Filter Pad (Fibre Floss Sheet, Wire Mesh)	1(1)
SK-6-26	Vacuum Hose Inlet Pipe	1
SK-6-27	Washer	1
SK-6-28	Large Thumb Nut	1

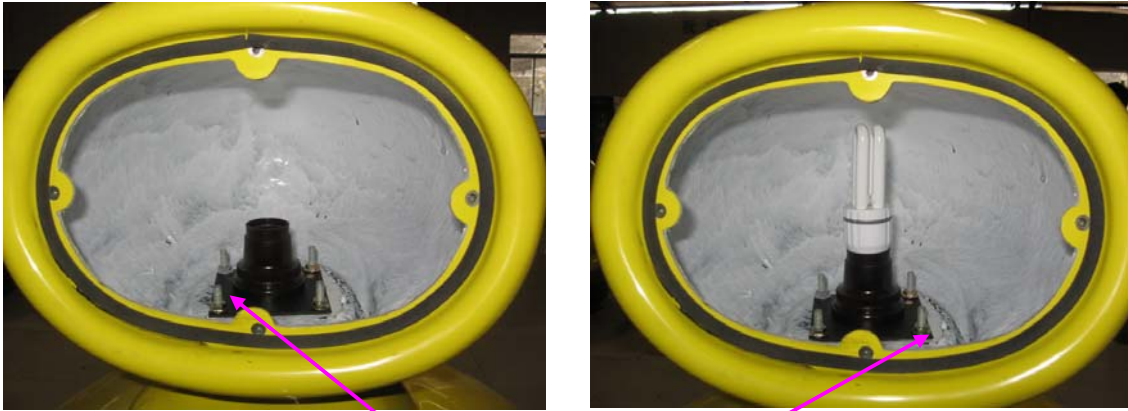
## 9. Marquee Installation Guide



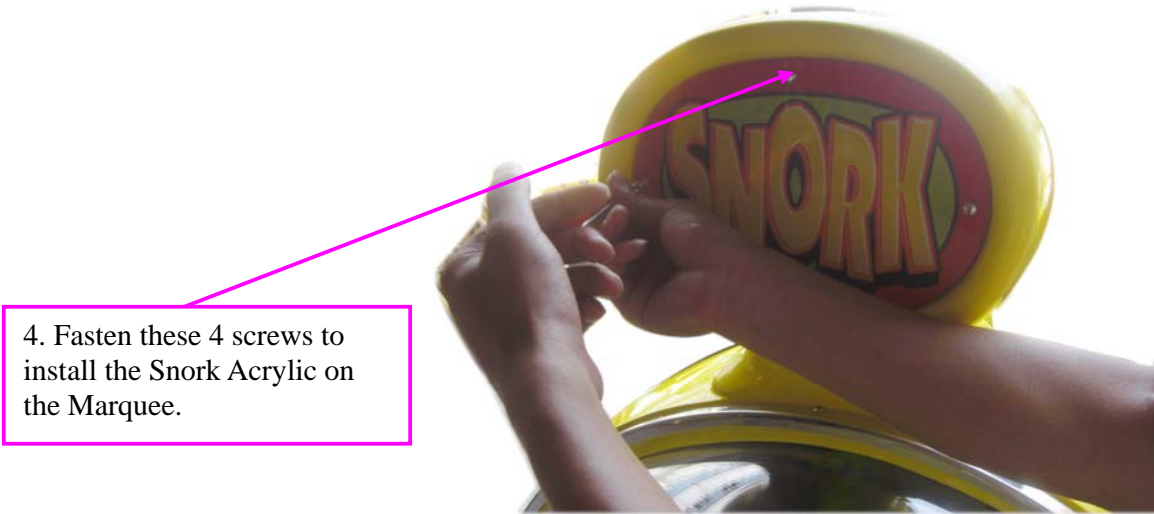
1. Release these 4pcs screws and take out the Acrylic.



2. Find the Marquee shipped in the Prize Bin. Connect the power cable and install on the top of the cabinet in this manner, using the enclosed hardware.



3. Put the Marquee on the top of the machine. Secure the lamp and marquee base with these 4 nuts and washers.



4. Fasten these 4 screws to install the Snork Acrylic on the Marquee.



5. Finish the Marquee installation!

## 10. Component

### 10-1. Counter [Meter] Board



**Total Coin:** Records the total quantity of inserted coins since the machine has been used.

**Menu:** This button enters the Menu state for game settings and adjustments. Pressing MENU, the first LED on the control panel display indicates the Menu Item. Pressing MENU will advance to each different Menu setting and then return the game to Normal.

**Clear JP/ Standby:** Press it and hold over 4 seconds and the data in the memory chip will be cleared; press this button to enter standby state when in Menu state.

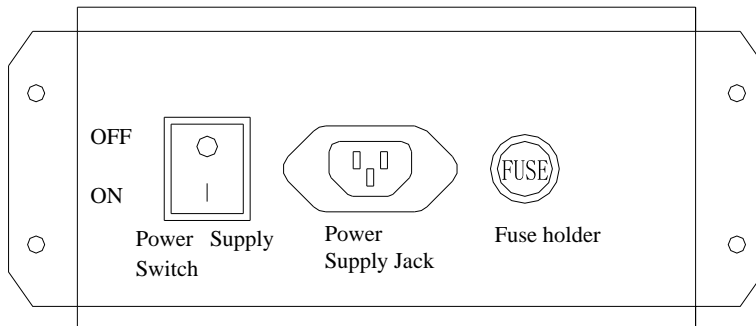
**Test/Option:** Press this button to enter the Test state; or in the free play or standby mode enter the Menu, and press this button to enter the various Option settings. The second LED indicates the Option setting chosen within that Menu. All game set up options are displayed by these Menu and Option settings on the Control Panel 2 Block LED Display.

### 10-2. Power Supply Input Panel

**Power Supply Switch:** For power ON / OFF.

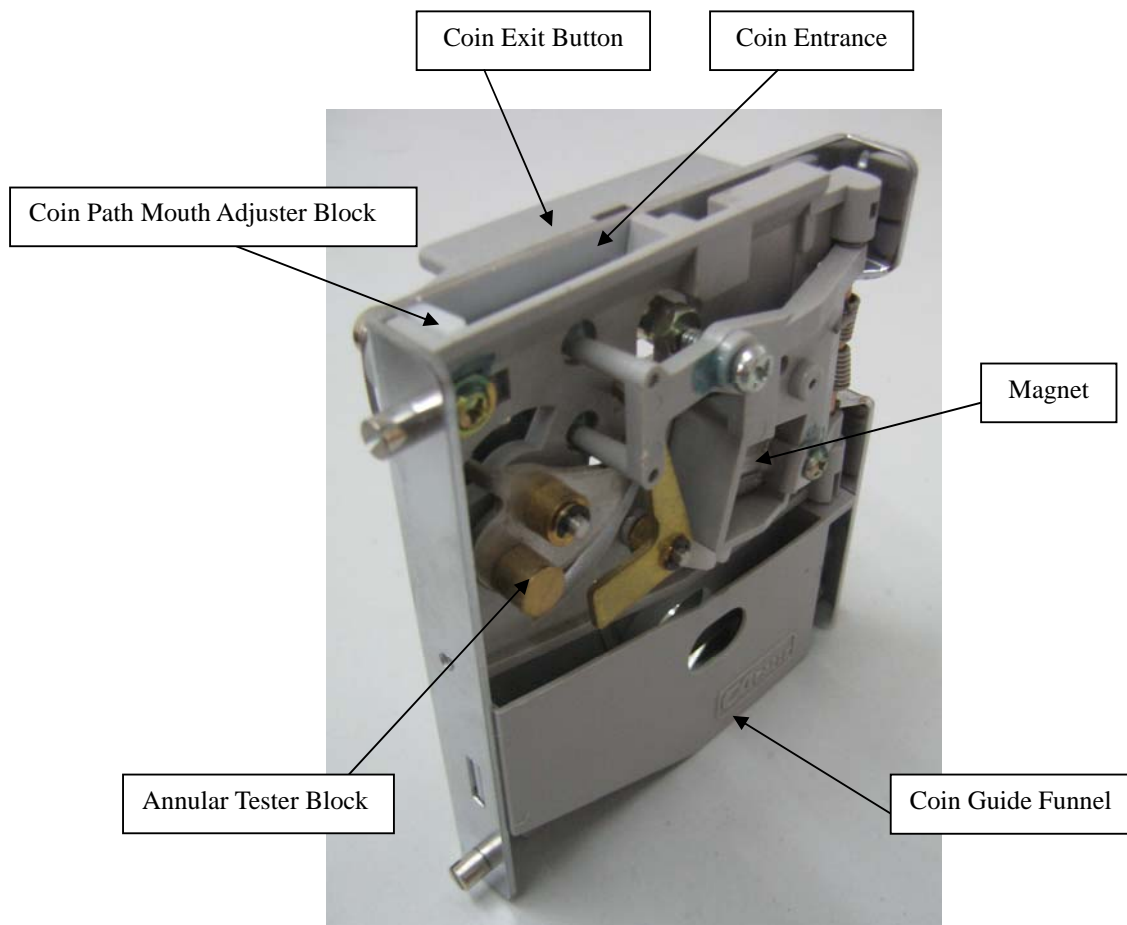
**Power Supply Jack:** Input AC power according to the instruction of the machine.

**Fuse:** There is an AC fuse in the fuse holder. Its specification is  $\phi$  6mm  $\times$  30mm.



### 10-3. Coin Selector

#### 10-3-1. Mechanical Coin Selector



Continued on the next Page;

**This coin mechanism is a mechanical type. It is with high precision and steady performance. It has the function of super magnet for guarding against coin cheat such as anti-false coin, (“slug”) anti-fishing, tampering or machine inclination.**

**Acceptable Coin Size:  $\phi$  24mm $\sim$   $\phi$  26mm in diameter, 1.6mm $\sim$ 2.0mm in thickness, every country has different size of coins depending on the coin mechanism.**

**Coin Exit Button: If the inserted coin gets blocked in the coin selector, press it, the coin will come out of the exit.**

**Coin Exit: If the inserted coin is wrong denomination, it will usually come out of the coin exit automatically.**

**Coin Path Mouth Adjuster Block: Adjust the diameter of the coin. If you have to set inserting minor coin, move it right. In general situation, you do not insert minor coins, so move the block left. It can control the diameter of suitable coins by 0.1mm.**

**Annular Tester Block: Control floor level of diameter of acceptable coin. Used together with blocking stick limitation adjuster piece, adjusts the diameter of the coin to varies within a limitation of 0.1mm. Coins of different specifications are suitable for different types of annular tester block. As for test block of the same specification, the larger it is, the tighter it is and the smaller is, the looser it is.**

**Magnet: Select coins with suitable iron-contained quantity. Those containing a large iron quantity easily get absorbed, while those containing a small iron quantity get through easily; if iron- all-over coins are used, remove the magnet.**

### 10-3-2. Electronic Coin Selector



**This is an upright electronic coin selector with high precision and stable capability.**

**Coin Exit:** If the inserted coin is wrong denomination, it will usually come out of the coin exit automatically.

**Rated Voltage:** DC+12V, **Working current:** 30mA, **CONUTER:** connect to the coin counter, **GND:** to ground, **COIN:** signal of coin insertion output.

**Acceptable Coin Size:**  $\phi 23\text{mm} \sim \phi 28\text{mm}$  in diameter, 1.5mm~2.6mm in thickness, every country has different size of coins.

**Coin-in Time Adjustment:** FAST (20mS FAST) . MIDDLE (40mS MIDDLE) . SLOW (60mS SLOW) ,three section of pulse. It has been defaulted to MIDDLE.

**Output Current Level Adjustment:** NO or NC, it has been defaulted to NO.



## 11. Troubleshooting

To assist in troubleshooting the main logic board has a green LED for each input. When the green LED is on this indicates the input is high (blocked) for that input position. For example, the game displays an E5 error indicating the left sensor is blocked or has failed. With the nose in the home position you would expect to see only 2 green LEDs lit on the board, one indicating the nose is in the vertical home position and the other indicating the nose is in the horizontal home position. Using a piece of paper make the sensor change state (open and block the sensor), you should see the corresponding led on the main board blink as you block and open the sensor. If it does not, replace the sensor.

At power up, a self-diagnostic test occurs. Normal operation is as follows;

Nose goes up past sensor, touches upper micro and returns down to sensor. The height of the nose should be approximately  $\frac{3}{4}$ " to 1" above the prize chute. To adjust the height, move the sensor plate holding the up/dn sensor and the micro switch.

**Caution:** It only takes a very small change in position to have a very large effect on the nose height. Call for technical service if you have any questions before you make this adjustment.

Following the up/dn test and no error state occurs, the nose moves to the far left contacting the EOL (end of limit) micro switch past the left opto sensor, then changes direction (right) and moves to check the right EOL micro switch and sensor, then returns to the home position opto sensor in the mid-point. When all of these switch positions have been verified and no error has been found- the game then goes to normal operation.

At any time you should desire to perform this diagnostic test, or to determine a specific switch failure (error condition), simply turn the power off and back on again. Any error will be listed and shown by specific Error Code in the LED time display on the control panel.

Refer to the Error Code table in this manual for further identification and solutions.

## 11-1. Error Codes

NO.	CODE	DESCRIPTION	CORRECTIVE ACTION
0	E0	Two switches or sensors are active (blocked) at the same time	Clean sensor or replace sensor / micro See 7.2 for illustrations
1	E1	Coin Selector error	Coin switch blocked (closed) remove blockage or replace switch
2	E2	Prize Sensor Board error	Clean sensor or replace sensor
3	E3	Center Home Sensor error	Clean sensor or replace sensor See 7.2 for illustrations
4	E4	Up / Dn Sensor Error	Clean sensor or replace sensor See 7.2 for illustrations
5	E5	Left Sensor error	Clean sensor or replace sensor See 7.2 for illustrations
6	E6	Right Sensor error	Clean sensor or replace sensor See 7.2 for illustrations
7	E7	Left Micro Switch Error	Clean sensor or replace micro See 7.2 for illustrations
8	E8	Right Micro Switch Error	Clean sensor or replace micro See 7.2 for illustrations
9	E9	Up Micro Switch error	Clean sensor or replace micro
10	EE	Both Up Micro Switch and Up / Dn Sensor are active (blocked) at the same time	Clean sensor or replace sensor / micro See 7.2 for illustrations

## 11-2. Common Problems

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
<b>No power at startup</b>	<ol style="list-style-type: none"> <li>1. The power is not on.</li> <li>2. Power supply box failure</li> <li>3. Crystal oscillator stops.</li> <li>4. The chip for main program is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power supply AC voltage.</li> <li>2. Check +5 and +12 DC output. Replace power supply cage if there is no output.</li> <li>3. Replace the 24M crystal oscillator on the main PC board, the grounding voltage for two pins should be in the range from 2.1 to 3.1.</li> <li>4. Replace the chip for main program.</li> </ol>
<b>LED is not full brightness (dim).</b>	<ol style="list-style-type: none"> <li>1. This section has been burnt out.</li> <li>2. No IC6B595 output.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace LED</li> <li>2. Replace IC6B595</li> </ol>
<b>No sound</b>	<ol style="list-style-type: none"> <li>1. Speaker damage</li> <li>2. Amplifier IC is burnt out.</li> <li>3. 6295 IC is burnt out.</li> <li>4. No +12V power reaches amplifier IC.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect the power and check D.C. resistance for speaker. Replace speaker.</li> <li>2. Replace the fore signal terminal if the power supply is OK, or amplifier IC is damaged. Speaker is OK if it buzzes.</li> <li>3. If item 1, 2, 4 work well, it is may be 6295 IC failure or the speech chip failure.</li> <li>4. Make sure that the +12V power supply is provided for TDA1557.</li> </ol>
<b>Nose bangs against the canopy.</b>	<b>Signal sensor for left / right boundary works improperly.</b>	<b>Check micro switch for boundary signal.</b>
<b>Up/down movement of nose failure</b>	<b>Nose signal error or up/ dn motor failure</b>	<b>Check sensor signal and micro for nose.</b>
<b>Nose swings</b>	<b>Stepper driver error</b>	<b>Check the voltage of driver.</b>
<b>No head movement at power up</b>	<b>Up / Dn Stepper motor or driver problem</b>	<b>Verify dip setting of stepper motor controllers are correct</b>

## 12. Appendix

### 12-1. PIN Connection on Main Board [Ver: 03]

Update: April 29<sup>th</sup>, 2009

PLUG CODE	PIN CODE	PIN COLOR	FUNCTION	I/O NO.	FUNCTION OF I/O
<b>J1</b> [Power Input Connector]	PIN 1	4*0.5-Red	+5V Input;	----	Power Input;
	PIN 2	4*0.5-Black	GND;	----	
	PIN 3	4*0.5-Black	GND;	----	
	PIN 4	4*0.5-Yellow	+12V Input;	----	
<b>J4</b> [#2 Serial Output Connector]	PIN 1	6*0.3—Green	CLK;	----	Digital LED Board Output Connection turns: 1. TIME[2 digits, 1.5 inches].
	PIN 2	6*0.3—White	DAT;	----	
	PIN 3	6*0.3—Brown	LTH;	----	
	PIN 4	6*0.3—Yellow	+12V Output;	----	
	PIN 5	6*0.3—Black	GND;	----	
	PIN 6	6*0.3—Red	+5V Output;	----	
<b>J5</b> [Ticket Out Connector]	PIN 1	4*0.3—White	#1 Ticket Out Drive;	OUT #22	Ticket Out Connector; [#2 Ticket Out Not Used]
	PIN 2	4*0.3—White	#2 Ticket Out Drive;	OUT #21	
	PIN 3	4*0.3—Yellow	+12V Output;	----	
	PIN 4	4*0.3—Yellow	+12V Output;	----	
	PIN 5	4*0.3—Black	GND;	----	
	PIN 6	4*0.3—Black	GND;	----	
	PIN 7	4*0.3—Green	#1 Ticket Feedback;	IN #30	
	PIN 8	4*0.3—Green	#2 Ticket Feedback;	IN #25	
<b>J6</b> [Base Function connector]	PIN 1	10*0.3—Yellow	+12V Out;	----	Base Function connector;
	PIN 2	Null	+5V Out;	----	
	PIN 3	10*0.3—Black	GND;	----	
	PIN 4	Null	GND;	----	
	PIN 5	10*0.3—Blue	No Connect;	----	
	PIN 6	Null	Menu;	IN #27	
	PIN 7	Null	No Connect;	----	
	PIN 8	Null	No Connect;	----	
	PIN 9	10*0.3—Purple	Test;	IN #28	
	PIN 10	10*0.3—Orange	Clear JP;	IN #29	
	PIN 11	10*0.3—White	#1 Coin Signal;	IN #31	
	PIN 12	10*0.3—Green	Clear Alarm For No Ticket;	IN #32	
	PIN 13	10*0.3—Gray	Ticket Qty;	OUT #23	
	PIN 14	10*0.3—Brown	Coin Qty;	OUT #24	

PLUG CODE	PIN CODE	PIN COLOR	FUNCTION	I/O NO.	FUNCTION OF I/O
<b>J11</b> [Volume Ctrl]	PIN 1	4*0.15—Green	Right Signal Input;	----	Volume Ctrl;
	PIN 2	4*0.15—White	Left Signal Input;	----	
	PIN 3	4*0.15—Red	Right Signal Output;	----	
	PIN 4	4*0.15—Yellow	Left Signal Output;	----	
	PIN 5	Shielded line	GND;	----	
	PIN 6	Shielded line	GND;	----	
<b>J12</b> [Speaker]	PIN 1	2*0.75-White	Left Speaker +;	----	Speaker;
	PIN 2	2*0.75-Black	Left Speaker -;	----	
	PIN 3	2*0.75-Red	Right Speaker +;	----	
	PIN 4	2*0.75-Black	Right Speaker -;	----	
<b>InCON1</b> [#1~#15 Input]	PIN 1	0.3—Brown	Input;	IN #1	SNORK Release Signal
	PIN 2	0.3—Pink	Input;	IN #2	Prize test signal
	PIN 3	0.3—Orange	Input;	IN #3	Joystick left signal
	PIN 4	0.3—SkyBlue	Input;	IN #4	Joystick right signal
	PIN 5	0.3—Green	Input;	IN #5	Joystick up signal
	PIN 6	0.3—Blue	Input;	IN #6	Joystick down signal
	PIN 7	0.3—Purple	Input;	IN #7	The test of the midpoint “home” position between left and right
	PIN 8	0.3—Gray	Input;	IN #8	US test
	PIN 9	0.3—White	Input;	IN #9	
	PIN 10	0.3—SkyBlue	Input;	IN #10	
	PIN 11	0.3—Brown	Input;	IN #11	LS boundary signal
	PIN 12	0.3—Pink	Input;	IN #12	RS boundary signal
	PIN 13	0.3—Orange	Input;	IN #13	LEOL boundary signal
	PIN 14	0.3—SkyBlue	Input;	IN #14	REOL boundary signal
	PIN 15	0.3—Green	Input;	IN #15	UEOL test
	PIN 16	0.3—Black	GND;	----	
	PIN 17	0.3—Red	+5V Output;	----	
	PIN 18	0.3—Yellow	+12V Output;	----	
<b>InCON2</b> [#16~#27 Input]	PIN 1	0.3—Brown	Input;	IN #16	
	PIN 2	0.3—Pink	Input;	IN #17	
	PIN 3	0.3—Orange	Input;	IN #18	
	PIN 4	0.3—Sky Blue	Input;	IN #19	
	PIN 5	0.3—Green	Input;	IN #20	

PLUG CODE	PIN CODE	PIN COLOR	FUNCTION	I/O NO.	FUNCTION OF I/O
	PIN 6	0.3—Blue	Input;	IN #21	
	PIN 7	0.3—Purple	Input;	IN #22	
	PIN 8	0.3—Gray	Input;	IN #23	
	PIN 9	0.3—White	Input;	IN #24	
	PIN 10	0.3—Sky Blue	Input;	IN #25	
	PIN 11	0.3—Brown	Input;	IN #26	
	PIN 12	0.3—Pink	Input;	IN #27	
	PIN 13	0.3—Orange	Input;	IN #28	
	PIN 14	0.3—Black	GND;	----	
	PIN 15	0.3—Red	+5V Output;	----	
	PIN 16	0.3—Yellow	+12V Output;	----	
<b>OutCON1</b> [#1~#11 Output]	PIN 1	0.3—Brown	Output	OUT #1	Vacuum motor
	PIN 2	0.75— Yellow	+12V Output;	----	
	PIN 3	0.3—Pink	Output	OUT #2	DROP button indicator light
	PIN 4	0.75— Yellow	+12V Output;	----	
	PIN 5	0.3—Orange	Output	OUT #3	Front light #1
	PIN 6			----	
	PIN 7	0.3—SkyBlue	Output	OUT #4	Front light #2
	PIN 8			----	
	PIN 9	0.3—Green	Output	OUT #5	Front light #3
	PIN 10			----	
	PIN 11	0.3—Blue	Output	OUT #6	Left and right head lights
	PIN 12			----	
	PIN 13	0.3—Purple	Output	OUT #7	Left and right rear lights
	PIN 14			----	
	PIN 15	0.3—Gray	Output	OUT #8	Bin red LED
	PIN 16	0.3—Yellow		----	
	PIN 17	0.3—White	Output	OUT #9	Bin blue LED
	PIN 18	0.5—Yellow		----	
	PIN 19	0.3—SkyBlue	Output	OUT #10	Bin green LED
	PIN 20			----	
	PIN 21	0.3—Brown	Output	OUT #11	Prize light , test light
	PIN 22			----	
	PIN 1	0.3—Brown	Output	OUT #12	Tail light, spot light
	PIN 2	0.5—Yellow		----	

PLUG CODE	PIN CODE	PIN COLOR	FUNCTION	I/O NO.	FUNCTION OF I/O	
OutCON2 [#12~#21 Output]	PIN 3	0.3—Pink	Output	OUT #13	#1 background light	
	PIN 4			----		
	PIN 5	0.3—Orange	Output	OUT #14	#2 background light	
	PIN 6			----		
	PIN 7	0.3—SkyBlue	Output	OUT #15	#3 background light	
	PIN 8			----		
	PIN 9	0.3—Green	Output	OUT #16	Left motor pulse signal	
	PIN 10			----		
	PIN 11	0.3—Blue	Output	OUT #17	Right motor direction signal	
	PIN 12			----		
	PIN 13	0.3—Purple	Output	OUT #18	Up motor pulse signal	
	PIN 14			----		
	PIN 15	0.3—Gray	Output	OUT #19	Down motor direction signal	
	PIN 16			----		
	PIN 17	0.3—White	Output	OUT #20		
	PIN 18			----		
	PIN 19	0.3—SkyBlue	Output	OUT #21		
	PIN 20			----		
	Instruction for Manufacture of Main Board	1	Adopts Golden Dragon V3.0C[or more advanced downward toleration version]main board;			
		2	Y1 uses 24 MHz crystal oscillator.			

**Note: Do not change the Step Motor Controller DIP Setting at random!**

**1. Left / Right Step Motor Controller DIP Setting:**

PIN	8	7	6	5	4	3	2	1
ON	ON	ON	ON		ON	ON	ON	
OFF				OFF				OFF

**2. Up / Down Step Motor Controller DIP Setting:**

PIN	8	7	6	5	4	3	2	1
ON	ON	ON				ON	ON	
OFF			OFF	OFF	OFF			OFF

## 12-2. Function &amp; Testing Standard [Ver: 03]

## Game System Operator Parameters Settings:

Press the MENU button to access system parameters setting during non-game play. The Control Panel Time Display LEDs will show the game settings. The left LED displays the MENU item. The right LED displays the current Menu OPTION. When pressing the OPTION button, the right LED displays the desired OPTION setting. Pressing the MENU button will advance the left LED to change the MENU item. Again, pressing the OPTION button will change the OPTION desired. Also, at any time, pressing Clear JP, the game returns to Normal operation state and enters the parameters settings.\*

Snork Menu /Option Table: **The options with “\*” denote factory default.**

MENU	OPTION [Function Test Button]	ACTION
0	0	Standby State
1	0	Free Play
1	1*	Need insert coin(s) to play
2	0	1 Coin/Credit
2	1*	2 Coins/Credit
2	2	3 Coins/Credit
2	3	4 Coins/Credit
3	0	Not to save parameter when power off
3	1*	Save parameter when power off
4	0	Music off when machine is in attraction state.
4	1*	Music on when machine is in attraction state.
5	0	Playtime = 10 seconds
5	1	Playtime = 15 seconds
5	2	Playtime = 20 seconds
5	3*	Playtime = 25 seconds
5	4	Playtime = 30 seconds
5	5	Playtime = 35 seconds
5	6	Playtime = 40 seconds
5	7	Playtime = 45 seconds
6	0*	Winning prize is available at any playtime.
6	1	The game is over once a prize is won.
7	0	Snork nose does not lift automatically in playtime.
7	1*	Snork nose lift up automatically in every 6 seconds
7	2	Snork nose lift up automatically in every 8 seconds
7	3	Snork nose lift up automatically in every 10 seconds
8	0	The lowest location =3400 steps
8	1*	The low location = 3300 steps
8	2	The medium location = 3200 steps
8	3	The proper location = 3100 steps
9	0*	Not enter the test to check all Nose Sensors and Micro Switches
9	1	Enter the test to check all Nose Sensors and Micro Switches

**\*Note: You must reset the Main PC Board or restart the power after change the Menu Setting !**

**Notice: Contents subject to change without notice.**