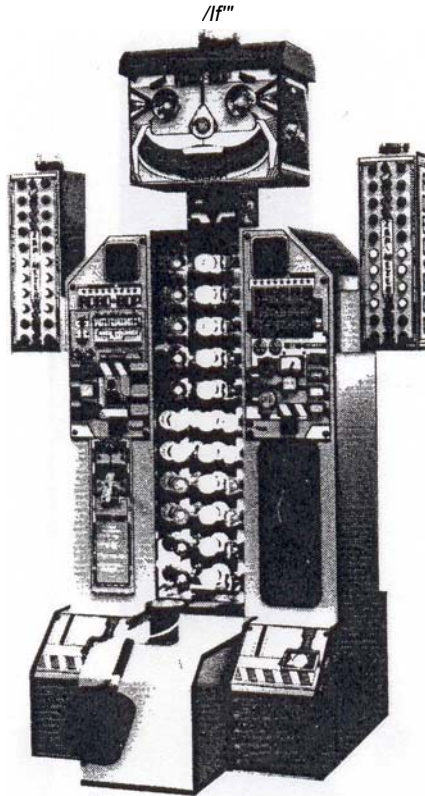


ROBO BOP OWNERS MANUAL



Coastal Amusements, Inc.
1935 Swarthmore Ave.
Lakewood, NJ 08701
908 - 905 - 6662
908 - 905 - 6815 FAX

TABLE OF CONTENTS

- I. Robo Bop Game Play
2. Safety Guide
3. Initial Inspection
4. Preparing for Installation
5. Installation
6. Operator Controls
7. Option Switch Settings
8. Normal Maintenance
9. Troubleshooting
10. Warranty
11. Robo Bop Parts List
12. Game Door Parts List
13. Ticket Dispenser Parts List
14. Drawings and Schematics

Robo Bop Game Play:

Robo Bop is a fun filled game for all ages. To get the most use out of our game, please read and follow the installation and maintenance instructions we provide.

How to Play:

1. To start the game, the player must first deposit a coin. After accepting the coin, Robo Bop will say: "Hi! Push the Button" , prompting the player to start the game play.
2. The player next indicates their gender, by pressing either one of the flashing Boy or Girl buttons. Robo Bop will then ask the player to select their age category from one of the four age groups.
3. Robo Bop will now say: 'OK, Go!"Thus prompting the player to hit the striker pad as hard as they can with the mallet.
4. After the player hits the striker pad, Robo Bop displays the score on a scale of zero to ten. The score is displayed by lighting the corresponding number of lamps on the arms and belly of the Robot. Robo Bop cheers and compliments the players based on their score.
5. At the end of the game, Robo Bop issues tickets based on the score and payout option settings. Robo Bop thanks the players and encourages them to play again.
6. While the game is not in play, Robo Bop attracts players by playing several tunes, flashing lights and talking.
7. If a player leaves the game while it is waiting for them drop another coin in a two coins per play game or to select their gender or age, or while waiting for them to hit the striker, Robo Bop will say "I'm waiting ... " several times before ending the game. If Robo Bop ends a game in this manner, it will issue a single ticket before returning to the attract mode.

SAFETY GUIDE

!

The following safety precautions apply to all game operators and service personnel. To avoid electrical shock, reduce the risk of fire hazard and prevent equipment damage, perform the following safety practices while servicing the game.

1. Disconnect the AC line cord by unplugging it from the wall outlet.
2. Do not disconnect any wiring or PCB connector while the machine is on.
3. Do not touch the SCRs on the Interface Board while the machine is on.
4. Do not replace a fuse when the machine is plugged in.
5. Replace a blown fuse only with another fuse of the same voltage and current rating.
6. Replace a bad lamp only with another lamp of the same voltage and wattage rating.

INITIAL INSPECTION

I

Before connecting power to the game, visually inspect the unit as follows:

- Remove the rear door and front access door with the appropriate packaged key.
- Examine all the major components and circuit boards to see if they are damaged.
- Check to see if all the cables and connectors are secure on the boards and power supply.
- Check the transformers and power supply to make sure they are secure. .
- Remove any foreign material such as screws, wires or staples that might have fallen loose during shipping.
- Check the on/off switch located behind the coin mechanism on the control panel.

All our games are carefully packaged in double walled cardboard cartons with every precaution taken to ensure that all the components will remain safe and secure from damage during shipment. However, minor trouble caused by abusive handling in shipment is sometimes unavoidable. In the event that you do receive a damaged product please follow the procedure as outlined below.

- Retain the original bill of lading.
- Retain the original shipping carton.
- Notify your delivery carrier of damage.
- File a claim with the carrier.
- Notify your distributor or supplier.
- Do not apply power to any game with visible damage.

PREPARING FOR INSTALATION

|

Please locate and familiarize yourself with the following parts before assembling Robo Bop. You may find several of the drawings located in the back of this manual helpful in identifying the major components and their locations with respect to each other in this game. If you purchased more than one Robo Bop at the same time, note that the head, neck and arms are not interchangeable from one unit to another. Therefore, you should keep all the parts associated with each game together.

Major Components:

- . Main Body
- , Cabinet
- . Robot Head
- . Left Arm, Right Arm
- . Striker Assembly
- . Neck
- . Beacon

Assembly Hardware:

4 Carriage Bolts; 1/4"-20"x8"	, These bolts are used to attach the head and neck to the body.
8 Carriage Bolts; 1/4 - 20 x 4.5"	Four of these bolts will be used to attach each arm.
12 Nuts; 1/4 - 20 Hex	Use one nut per carriage bolt.
12 Lock Washers	Use one lock washer per carriage bolt.
3 Screws; # 8 x 3/4	These are used to attach the beacon to the head.
1 Hold down Bolt	This bolt will be found on the striker assembly.
3 sets of keys	One for each of the cabinet doors, coin mech and cash box.
1 Owners manual	The manual you are presently reading.

In addition, you will require the following tools:

- . 7/16" open-end wrench
- . 7/16" socket and ratchet
- . Phillips head screwdriver
- . Hammer

INSTALATION

You may find several of the drawings located in the back of this manual helpful in identifying the major components and their locations with respect to each other.

Robo Bop should be assembled in the following order:

1. Attach the beacon to the head.

To attach the beacon to the head:

- a. Remove the dome from the beacon assembly.
- b. Unscrew the three screws from the revolving light base plate using a Phillips head Screw driver and remove the revolving light assembly.
- c. Using the phillips head screwdriver, remove the three screws from the top of the head and use them to locate and latch the beacon base to the head.
- d. Pass the black and white, 120 VAC two wire connector from the beacon through the top of the head and plug it into the corresponding two wire connector inside the head.
- e. Reattach-the revolving light and replace the dome.

2. Place the neck on the main cabinet body. The side without a decal faces the rear of the cabinet.

- 3. Attach the head and neck to the main cabinet body.

To attach the head:

- a. Remove the back door of the head. Remove
- b. the back door of main body cabinet.
- c. Using two people, place the head on the neck and line the four bolt holes of the Body, neck and head up with each other.
- d. Attach the head, neck and body together using the four 1/4 - 20 x 8" bolts and a 7/16" wrench. Feed the carriage bolt from the body into the head and fasten, using the nuts and lock washers. The threaded end of the bolt should be in the head. It is important to do this so that the belly lamp door is accessible for future service to the lamps.
- e. Pass the head wiring harness up through the neck and attach both the nine and two pin connectors to the corresponding nine and two pin connectors in the head.

4. Attach the left and right arms.

To attach an arm:

- a. Using a Phillips head screwdriver, unscrew the panels from the back of the arms.
- b. Attach the arm to the body with four of the supplied 1/4 - 20 x 4.5" bolts. Using a 7/16" wrench, fasten the carriage bolt with a nut and lock washer. The threaded end of the bolt should be in the arm to allow the proper clearance.
- c. Next, pass the three connector harness found inside the arm through to the main body cabinet and plugs it into the matching two pin, four pin and ninepin connectors.
- d. Reattach the arm panels.

5. Attach the striker assembly.

To attach the striker assembly:

- a. Place the striker assembly close to the cabinet.
- b. Pass the three wire striker harness found coiled up in the main body cabinet through the cabinet base and the hole in the front of the main body cabinet. Plug the harness into the matching connector inside the striker assembly.
- c. Locate and remove the hold down bolt from the bottom panel of the striker assembly cabinet.
- d. Slide the bottom panel of the striker assembly under the main body cabinet and push the striker assembly back until it is flush with the main body cabinet.
- e. Secure the striker assembly to the main body cabinet using the hold down bolt removed earlier. Place the hold down bolt in the hole located in the bottom of the main body cabinet to prevent shifting of the striker assembly cabinet.

If you need further assistance or have any questions, please call our customer service at 908-905-6662.

OPERATOR CONTROLS

Robo Bop has several controls that are intended to be used only by the operator, game attendant or service technician. This section describes both how and when to use them. Whenever servicing Robo Bop, please follow the safety instructions as outlined in the Safety Guide section of this manual.

Coin Error Reset:

The reset switch is the push button switch located to the left of the power on/off switch. By pressing this switch, you can clear any coin error message given when Robo Bop detects a malfunctioning or jammed coin switch.

Out of Tickets Error Reset:

The reset switch is the push button switch located to the left of the power on/off switch. By pressing this switch, you can clear the out of tickets error message given if Robo Bop detects that a problem occurred while issuing tickets. After pressing the reset button, Robo Bop will try to issue the remaining tickets. If it still has a problem, it will return to the out of tickets error. If Robo Bop is turned off while in an out of tickets error state, it will not remember how many tickets it had left to payout when it is turned back on.

Low Tickets Indicator:

The red lamp over the ticket dispenser will go on when there are approximately 120 tickets remaining in the ticket bin. The lamp will go out when the tickets are refilled.

Coins In Counter:

Located behind the ticket dispenser door on the floor of the main cabinet. Whenever Robo Bop detects a valid coin drop, this meter is incremented.

Tickets Paid Out Counter:

Located behind the ticket dispenser door on the floor of the main cabinet. This meter is incremented whenever Robo Bop issues a ticket.

OPTION SWITCH SETTINGS

!

Robo Bop has several options that can be enabled or disabled, depending on your preferences. Setting one controls these options or more of the eight DIPswitches located on the Robo Bop Controller board. You can see the Dipswitch labeled SW1 in quadrant D3 of drawing RBCON-01, located in the back of this manual.

Please note that power to the game must be turned off whenever you change the Dipswitch settings. The computer only recognizes changes made to the DIP switch settings upon powering up.

The table below summarizes the Dipswitch settings for the different options available.

	Off	On
Switch 1	Plays one game per coin.	Plays two games per coin.
Switch 2	Requires one coin per game.	Requires two coins per game.
Switch 3	Sound is on while in the attract mode.	Sound is off while in the attract mode.
Switch 4	<i>See the Awards Table Below</i>	<i>See the Awards Table Below</i>
Switch 5	<i>See the Awards Table Below</i>	<i>See the Awards Table Below</i>
Switch 6	<i>See the Awards Table Below</i>	<i>See the Awards Table Below</i>
Switch 7	Enable Coin Error checking.	Suppress the Coin Error message.
Switch 8	Always off, except when performing tests.	Lamp and switch diagnostics.

Awards Table

Lamp Score	#1	#2	#3	#4	#5	#6	#7	#8
0	1	1	1	1	3	4	5	6
1	1	1	1	1	3	4	5	6
2	2	1	1	1	3	4	5	6
3	3	2	1	1	3	4	5	6
4	4	2	2	1	3	4	5	6
5	5	2	2	2	3	4	5	6
6	6	3	2	2	3	4	5	6
7	7	3	2	2	3	4	5	6
8	8	5	3	2	3	4	5	6
9	9	6	4	2	3	4	5	6
10	10	8	5	3	3	4	5	6

Switch Settings for each Award Table

DIP Switch	#1	#2	#3	#4	#5	#6	#7	#8
Switch 4	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Switch 5	OFF	OFF	ON	ON	OFF	OFF	ON	ON
Switch 6	OFF	OFF	OFF	OFF	ON	ON	ON	ON

Please note that in schedules # 1, # 2, # 3 and # 4 awards are determined by lamp score. Schedules # 5, # 6, # 7 and # 8 represent a constant ticket per coin award, regardless of lamp score. Also note that when the two games per coin option is enabled, tickets are awarded for the highest score achieved out of both games.

NORMAL MAINTENANCE

This game requires regular maintenance to several parts. The following items are to be regularly inspected or serviced in order to maintain the earning potential of the game. You may require slightly different service intervals depending on the actual operating conditions and frequency of play. Whenever servicing or cleaning this game, please follow the safety instructions as outlined in the Safety Guide section of this manual.

Perform the following service on a "as needed" basis:

- Keep the cabinet clean by wiping it with a soft cloth.
- Use a small amount of *Glass Plus* or other similar solvent-free window cleaner.

Perform the following service every week:

- Clear the ticket dust from the opto sensor on the ticket dispenser.
- Check the rubber boot on the striker to ensure its integrity and continued protection.

Perform the following service every 6 months:

- Check the seating of the EPROM's on all PCB's by pressing down on them.
- Check the striker PCB and see that it remains securely fastened to the striker assembly.
- Check the line cord and plug for bent prongs and frayed or broken wiring.

Never oil the striker plunger. The plunger is made of nylon and does not require further lubrication.

Replace burned out bulbs, as needed with new bulbs of the following voltage and wattage specifications:

	Voltage	Wattage	Type
Belly Center Lamps	130	12	E14
Belly Side Lamps	24	5	E14
Beacon Lamp	120	25	42-705
Arm Lamps	24	3	E11
Grid Lamps	24	3	E11
Eye Lamps	24	3	E10
Ear Lamps	24	3	E10
Nose Lamp	24	3	E10
Mouth Lamps	24	3	E11

TROUBLESHOOTING

Robo Bop has a self-diagnostic mode that allows you to test all the lamps and switches as well as the ticket dispenser. To enable this diagnostic, first turn off the game and open the back door. Locate the bank of eight DIPswitches on the Robot Controller board. You can see this switch bank in quadrant D3 of drawing RBCON-01. Switch # 1 is the top switch with the ON setting to the right and the OFF setting to the left. Place DIPswitch # 8 in the ON position, and then turn the power to the game on. Robo Bop will enter an initialization routine, and when it beeps, is ready to begin the diagnostic. A lamp or matching set of lamps will be turned on, one at a time, each time you press any switch. The CANCEL button will return Robo Bop to the beginning of the diagnostic routine. The lamps are lit starting from the bottom belly lamps through the grid lamps. After lighting the last grid lamp, the next button push will open the coin lockouts and turn on the lockout lamps. By pressing a button one more time, the ticket dispenser will dispense eleven tickets.

The above test should allow you to isolate a defective or suspect part of the game. Following is a list of common problems and ways to fix them. You can find a complete set of schematics and board component locations in the back of this manual.

When the game strikes all by itself:

The most likely problem is with the wires coming from J1 on the striker board. Check for continuity, while flexing the wires, and replace if needed.

Make sure that the LED on the striker board is red when lit, it should be lit when the READY lamp is on. If it does light up, check the beam alignment. The LED may not be aligned with the phototransistor.

It is also possible that the 74LS244 at location U24 on the Robot controller board could be defective.

Robo Bop does not coin up:

Check the continuity of the wires and the fit of the connectors coming from the coin switch.

The 74LS244 at location U24 on the Robot Controller board may be defective.

The ticket dispenser works sporadically or does not work at all:

First check the wires and connectors coming from the dispenser; you may have a loose connector or broken wire. If this does not help, replace the ticket dispenser with a known good unit. If the problem goes away, the ticket dispenser is defective and should be replaced.

If after replacing the ticket dispenser you are still experiencing problems, check the following components on the Robot Controller board. If tickets are being dispensed, but are not being counted, check the 74LS244 at location U24. If Robo Bop is not dispensing tickets at all, check the 8255 at location U 13 and the SN75452B at location U17.

The coin lockouts don't work:

Check the continuity of the wires and the fit of the connectors coming from the lockout coils. You may have a loose connector or broken wire.

Check the lockout mechanism for debris blocking the coin path or mechanical damage to the mech.

If the wiring is good, check the SN7451 at U16 on the Robot Controller board.

Robo Bop does not do anything after turning the power switch on:

First, make sure the unit is plugged in and has a working source of AC power. Next, check the AC line fuse located in the fuse holder mounted on the AC power box. If the fuse is bad, replace it. Robo Bop uses an 8 amp, fast acting 1 1/4 x 1/4 fuse for AC line over current protection.

Once you are sure that Robo Bop has AC power, check the +12 volt DC and +5 volt DC supply. Both of these voltages can be checked at J6 on the Robot Controller board. If there is a problem with either of these supply voltages, check the DC switching power supply for AC input. If the AC to the switching power supply is good, check the wiring harness for a possible short in the DC supply wiring. The DI switching power supply is internally protected against short circuits, overheating as well as providing output-current limiting. If you still don't have both; +12 and, +5, volts DC, you will still have to replace the power supply.

If you have the proper DC supply voltages, check the serial cable going from J 13 on the Robot Control board to J4 on the Digital Sound board.

LIMITED WARRANTY

Coastal Amusements Inc. warrants all electronic components in its product to the original purchaser to be free from defective materials and workmanship. Under this warranty, the product will be repaired or replaced, at the option of the company. There will be no charge for parts or labor when returned to an authorized service center or distributor.

This warranty does not apply to any product whose exterior has been damaged or defaced. It also does not apply to products altered or repaired by someone other than an authorized distributor. This warranty extends for 90 days from the date of shipment. It covers all costs for parts and labor.

Under this warranty, the original purchaser is entitled to have parts and labor rendered at no cost within the period of warranty. The product must be prepaid before shipping or taking to an authorized distributor along with proof of purchase.

This is an exclusive written warranty of the original purchaser. It shall not extend beyond the period of time listed above. In no event shall Coastal Amusement Inc., be liable for consequential economic damage or consequential damage to property. Some states do not allow a limitation on the period of time an implied warranty lasts or an exclusion of consequential damage. In such a case the above limitation and exclusion may not apply. In addition, this warranty gives specific legal rights and other rights which vary from state to state.

ROBO BOP PARTS LIST

I

Part #	Part Description
	Mallet
	Metal Striker
	Striker PCB
	Digital Sound PCB - Robo Bop
	Robo Bop Controller PCB
	Robo Bop Interface PCB
	Over 1 Under Door with cash box
200u	Switching Power Supply
SP-20	Inner Spring
SP-375	Outer Spring
KE993 1 KE610ABF	12 volt Coin In 1 Ticket Out meter
	Isolation Transformer, wired
346P4	24 V AC Lamp Transformer, wired
	4" Speaker, wired
DL-1275	Ticket Dispenser
	Kick plate, black anodized
	Ticket Guide, black
	Speaker Cover, black
	One Hole Switch plate
	Universal Bracket
	Belly Plexi Bracket
	Ticket Bin, low ticket type
D44c-R1RC	Roller Micro switch, 1 0 A 1125 V AC
272-332	Low Ticket Light, red, snap in
	Strobe, clear
MV110	Beacon
	Chrome Background for eyes & ears
	Decals, main cabinet, 13 decals per set
	Decals, numbers for belly
	Button, rectangular, 14 V lamp, Ages
	Button, round, 1" less switch
	Button, 1" square, 14 V lamp, red, less switch
	Button, 2" round, 14 V, Boy
	Button, 2" round, 14 V, Girl
	Button, 2" square
	Button, 2" square, less switch
	Switch, toggle
8411k11	Switch, reset
	Center Belly Lamp, 130 V -12 watt bulb
	Side Belly Lamp, 24 V - 5 watt bulb
	Eyes, Ears & Nose Lamps, 24 V - 3 watt bulb
	Arms, Grid & Mouth Lamps, 24 V - 3 watt bulb
	Dome, 4", clear
	Striker Boot

GAME DOOR PARTS LIST

Parts Listing for the Coin Co 2822 Series with Optional Cash Box:

Coin Co Part #	Part Description
905640	Coin Door Frame
404696-2	Coin Door
404696	Service Door
404697-1	Coin Door Inner Panel
404767	7/8-Inch Flat Key Lock
905651-2	CAM, Lock
905484	Coin Return Door
904590-2	Coin Return Bezel
404604	Button Assembly
904716-1	Lamp (12 volts)
904717	Lamp Socket
904722	Wire Key Holder
404645	Coin Inlet Chute Assembly
904583-1	Coin Return Lever
404603	C.R.E.M. Coil (10/12 V DC)
404602	Armature Assembly
904598-1	Coin Return Box
904935	AP.F. Bar
404601	Switch and C.R.E.M. Bracket