

# *Crazy Curves*

## **Assembly & Operation Manual**

**P/N 990243-1 Rev D; SW Rev 14+**

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## Introduction

Congratulations! You have purchased **Crazy Curves**, Skee-Ball's bright, colorful new stop-action game. Crazy Curves combines dazzling lights with exciting motion and is sure to be an attention-getter with any crowd. Pull the real slot lever, watch the lights begin to spin around, and hit the STOP button! Try to land on 20, 60, or 1000, and win that amount in tickets. It's easy, fun, and exciting for players of all ages!

Crazy Curves features a steel frame construction with a powder-coated finished for long-lasting durability. Crazy Curves uses Skee-Ball's new universal logic board and specially designed lamp driver boards for the simplest and most reliable operations.

## Letter from Skee-Ball's service department

# Skee-Ball

America's Leading Sports Game Company

### Dear Skee-Ball Customer:

Thank you for your recent purchase of an interactive game from Skee-Ball. We know that you will be happy with its performance.

Our goal at Skee-Ball is to provide you with the best service possible on a continuing basis. We invite you to call us if we can assist you with the information on using and/or servicing your Skee-Ball game. We can be reached in our Chalfont Headquarters at (215) 997-8900, Monday through Friday from 8:30 am to 5:00 pm, Eastern Time.

Prior to calling us, it is helpful to have the following information at hand in order for us to assist you effectively:

- Serial number of game
- Software Revision Code
- Name of Distributor through which the game was purchased (if applicable)
- Date of purchase

Once again, thank you for your purchase. We look forward to helping you enjoy your Skee-Ball game to the fullest.

Sincerely,

### Service Department

## Warnings and Specifications

**READ THIS MANUAL THOROUGHLY BEFORE ASSEMBLING YOUR GAME. FAILURE TO FOLLOW THE INSTRUCTIONS COULD CAUSE DAMAGE TO YOUR GAME AND VOID YOUR WARRANTY. IN ADDITION, THE MANUAL EXPLAINS THE GAME IN DETAIL AND THE OPTIONS YOU HAVE SO THAT YOU AND YOUR PLAYERS CAN ENJOY THE GAME TO ITS FULLEST.**

THE POWER CORD MUST BE PLUGGED INTO A GROUNDED THREE-PRONG OUTLET. FAILURE TO DO SO COULD CAUSE PERMANENT INJURY OR GAME DAMAGE.

THIS GAME IS SUITABLE FOR **INDOOR USE ONLY**. THE GAME SHOULD NOT BE INSTALLED OUTDOORS OR IN AREAS DIRECTLY EXPOSED TO SUNLIGHT, HIGH HUMIDITY, DIRECT WATER CONTACT, DUST, HIGH HEAT OR EXTREME COLD. **INSTALLATION IN ANY SUCH ENVIRONMENT SHALL VOID THE WARRANTY.** REPLACEMENT OF FUSES, LAMPS AND ANY OTHER SERVICING ON THE PRODUCT SHALL BE CONDUCTED BY TRAINED PERSONNEL.

### Crazy Curves Specifications:

Dimensions: 47"W x 41"D x 131"H

Current: 110 VAC / 2.8 Amps typical, 4.0 Amps max

Weight: approx 350 lbs

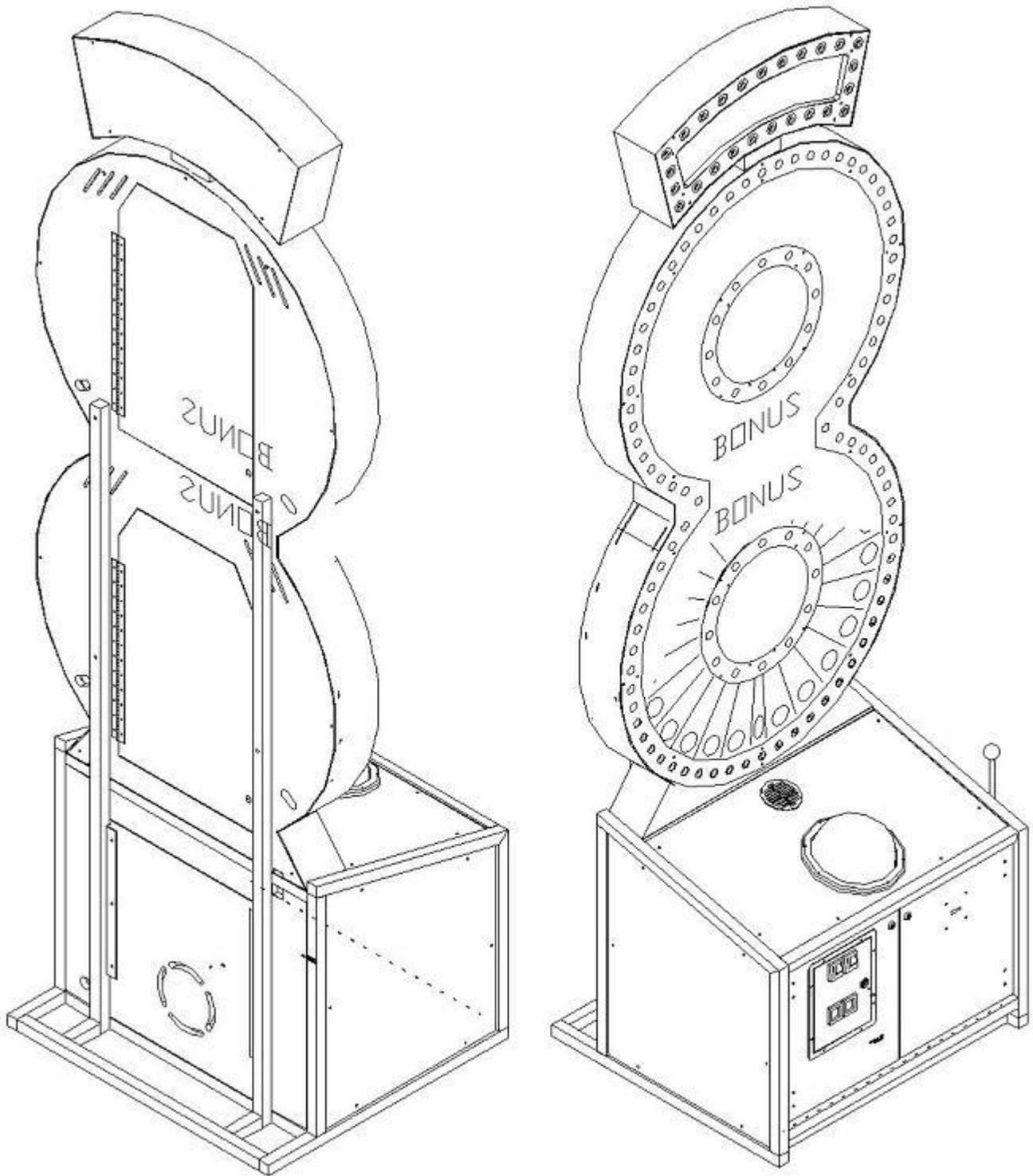
Shipping Weight: approx 400 lbs

Crated Dimensions: 48"L x 46"W x 95" H

## Assembly Instructions

- 1) Remove Ring from Base (two shipping brackets are used)
- 2) Remove Marquee from Base (two shipping brackets are used)
- 3) Remove Base from Pallet (2x4 wood blocking and two ¼-20 bolts are used)
- 4) Place the base of the game as close to the desired location as possible
- 5) Remove the back of the Marquee (this uses #3 Phillips head self tapping screws)
- 6) Remove shipping brackets from Marquee back (this is thru bolted with #10 screws)
- 7) Standing the Ring in an upright position, open the back top back door and remove the shipping brackets
- 8) With assistance, place the Marquee on top of the Ring. **MAINTAIN SUPPORT ON THE MARQUEE UNTIL IT IS BOLTED INTO POSITION.**
- 9) Using two (2) 5/16-18 x 3” bolts with KEP nuts, secure the Marquee to the Ring. This is thru bolted.
- 10) Place the back of the Marquee into its original position, reusing the original screws, and secure.
- 11) When the Marquee is in position and secure, make the following connections. Please note: all of these connections are in the top of the game and will be accessed through the top door.
  - a. The 2 pin A/C to the fluorescent bulb
  - b. The 2 pin LED line marked “4-3” or “43”
  - c. The 9 pin LED line marked “4-4” or “44”
  - d. The 9 pin LED line marked “4-5” or “45”
  - e. The 9 pin LED line marked “4-6” or “46”
- 12) Close and lock all opened rear doors.
- 13) With assistance, slowly lean the Ring and Marquee assembly forward and lift.
- 14) Lifting the Ring & Marquee, carefully position the bottom of the Ring to it’s resting point on the top of the base and slowly lean the Ring into an upright position. **MAINTAIN SUPPORT ON THIS RING UNTIL IT IS BOLTED INTO POSITION.**
- 15) Open both rear doors.
- 16) Using four (4) 5/16-18 x 3” bolts with KEP nuts to secure the Ring to the upright bars.
- 17) Using four (4) 5/16-18 x 2-1/2” bolts with KEP nuts, secure the bottom of the Ring to the Base.
- 18) Take the two (2) A/C fluorescent lines and feed them into the base of the game.
- 19) Accessing through the front doors, connect the two A/C lines to the ballasts.
- 20) While inside the base of the game, feed upward the three (3) pin KK / A/C Power line (black) and the eight (8) pin KK Data line.
- 21) Returning to the back of the game, make the following connections:
  - a. Connect the three (3) pin A/C Power line to Board 1 – J2. Orienting the BLACK line to position 1. Position 1 is denoted on the board with the use of a white dot.
  - b. Connect the eight (8) pin Data line to Board 1 – J1. Orienting the ORANGE line to position 1. Position 1 is denoted on the board with the use of a white dot.
- 22) At the point the game is fully assembled.
- 23) Close and secure the back doors.
- 24) Test for game play.
- 25) Slide into position.

## Assembled Game Drawing





## Options

### Option 0: Tests and / or Accounting

**Range:** 0 - Exit change nothing (Press **AUX1** and **AUX2** Together)

1 - Run Diagnostics (Pressing **Reset/Menu** will place the game in Diagnostic Mode)

Use an **AUX** button to select a test then press **Reset/Menu** to begin that test.

Test 1: Outputs

t\_01

subtest 1: displayed as: "to 1" LAMP TEST  
subtest 2: displayed as: "to 2" STOP\_BUTTON\_STROBE  
subtest 3: displayed as: "to 3" COIN\_COUNTER  
subtest 4: displayed as: "to 4" TICKET\_COUNTER  
subtest 5: displayed as: "to 5" TMOTOR  
subtest 6: displayed as: "to 6" BELL

Test 2: Inputs

t\_02

subtest 1: displayed as: "ti1x" STOP BUTTON  
subtest 2: displayed as: "ti2x" PULL-HANDLE  
subtest 3: displayed as: "ti3x" TICKET MECH NOTCH  
subtest 4: displayed as: "ti4x" COINUP SWITCH 1  
subtest 5: displayed as: "ti5x" COINUP SWITCH 2

Test 3: Sounds

t\_03

Use the **AUX** buttons to move through the sounds  
Use **Reset/Menu** to replay a sound.  
There are 19 different sounds to test.  
Not all 19 are used during game-play.

Press **AUX1** and **AUX2** together to exit

## 2 - Accounting ( Pressing **Reset/Menu** will place the game in Accounting mode )

Instructions for reading and/or clearing the CC software counters (aka Accounting.)

1. Press **Reset/Menu** to begin the options routine.
2. Display will show 0. Press **Reset/Menu** to select option 0.
3. Press an AUX button until the display shows 2.
4. Press **Reset/Menu** to select sub-option 2 (aka Accounting)
5. Currently there are five counts:

Ct 1 reports number of games played

Ct 2 reports number of games ended on the left or right BONUS bulb

Ct 3 reports number of games ended on the top or bottom BONUS bulb

Ct 4 reports number of total physical (not virtual) tickets issued

Ct 5 reports the average number of tickets issued per game played

(Ct 5 equals Ct 4 divided by Ct 1)

Ct 1 (games played) will now be horizontally scrolling on the display.

To help with understanding the number,  
the following format is used for all Cts during scrolling:

XX-XX-XX (for example, 01-23-45 means the number 12,345)

6. To see another Ct scroll by, press an AUX button.
7. When finished, press both AUX buttons together, once.
8. Display will show 'clr'.
9. To clear ALL five software counts and exit Accounting,  
press RESET then both AUX buttons together \*or\*

To exit Accounting without changing the counts,  
press both AUX buttons together, twice.

In either case, the display will briefly show 'donE'.

## Option Ranges, Step (increment) values, and Default values

Crazy Curves Rev 14+:

status	number	description	range	step	default
	Option 00:	Exit, Diagnostics, Accounting	0..2	1	0 (exit)
	Option 01:	Load All Defaults	0..1	1	0 (no)
	Option 02:	Coins Required	1..20	1	4
	Option 03:	Payout Table	1..6	1	1
	Option 04:	Call attendant to give tickets	0..9500	500	0 (all tickets paid)
	Option 05:	Tickets given if none won in game play	1..10	1	2 tickets
	Option 06:	Value of ticket / coupon	1..4	1	1
	Option 07:	Tickets alarm enable	0..1	1	0 (no)
	Option 08:	Left/Right bonus window percent open	5..50	5 or 10	20 percent
	Option 09:	Top/Bottom bonus window percent open	5..50	5 or 10	20 percent
	Option 10:	No pull timeout	0..30	5	5 seconds
	Option 11:	No play timeout	0,20..90	5	20 seconds
	Option 12:	End of game time	1..10sed	1	4 seconds
na	Option 13:	Sound volume (use the volume control on the audio amp inside the game's base)			
	Option 14:	Activate attract sound period	0..9min	1	2 minutes
	Option 15:	Jackpot bell duration	0..9sec	1	8 seconds
future	Option 16:	Discount game	0..40	1	0 (disabled)
	Option 17:	Min Bonus	0..MaxBonus	100	1000
	Option 18:	Bonus Step	1..5	1	1
	Option 19:	Max Bonus	MinBonus..9900	100	9999
	Option 20:	MoneyMech 1 Credits	1,4	3	1
	Option 21:	MoneyMech 2 Credits	1,4	3	1 (DBA would be 4)

### Option 1: Load defaults

0 - Exit change nothing ( Press **AUX1** and **AUX2** Together)

1- Load Defaults ( Pressing **Reset/Menu** while the 1 is showing on the display will flash and set all options to the original factory settings )

### Option 2: Number of coins to start a game

**Range:** 1 - 20

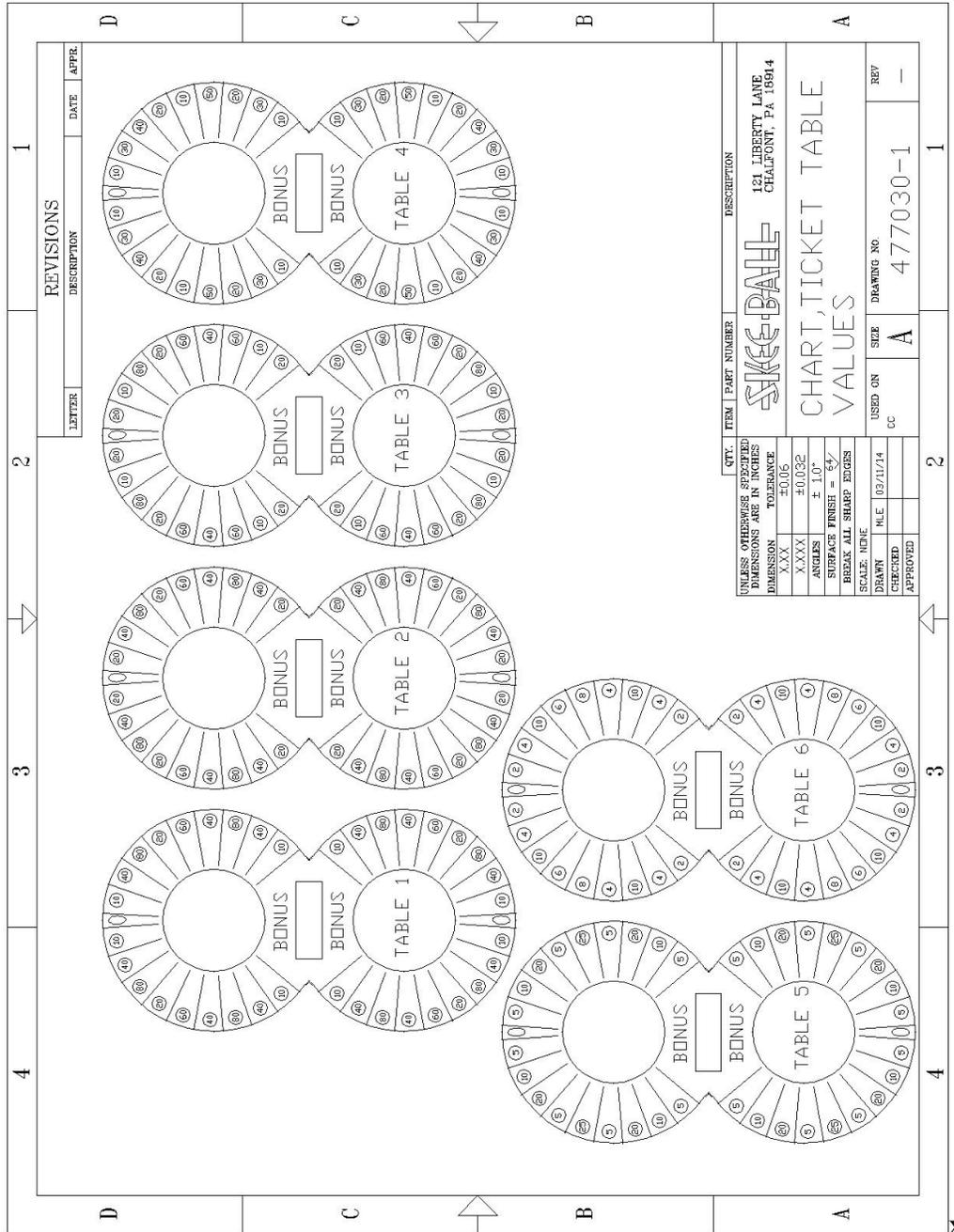
Using the **AUX** buttons, increment or decrement the value to the desired number of coins required to start a game. Then press **Reset/Menu**. The value on the display will flash to let you know it has been saved. Pressing **AUX1** and **AUX2** Together will move back to the Option Selection.

### Option 3: Change Payout Table.

Range: 1 – 6 (see attached payout table diagrams)

Using the AUX buttons, increment or decrement the value to the desired payout table number. Then press Reset/Menu. The value on the display will flash to let you know it has been saved. Pressing AUX1 and AUX2 Together will move back to the Option Selection.

#### Payout Tables:



## Option 4: Call attendant to give tickets

This option sets the MAXIMUM number of tickets to be dispensed by the machine. Any tickets amounts equal to or greater than the number set are not dispensed by the machine. The tickets owed will be displayed on the 7-Seg display Followed by “CALL 4 HELP”

To clear and resume normal play, the responding attendant should pay the customer the number of tickets shown on the display and then press the STOP button.

**Range:** 0 – 9500

0 means 'No call'. All tickets are paid out by the game's ticket dispenser.

Step value: 500 tickets

## Option 5: Tickets given if none won in game play

This is the number of tickets to be dispensed if a player doesn't press the STOP or walks away from the game.

**Range** 0 - 10 tickets

## Option 6: Value of ticket/coupon

This is the number of tickets represented by the coupon/ticket given by the game.

Example: if set to 2, and 20 tickets are won, then 10 will be given by the ticket mechanism

**Range** 1 - 4 tickets

## Option 7: Tickets Alarm Enable

**Range** 0 - Disabled

1 - Enabled (halt play until tickets are reloaded)

## Option 8: Left / Right Jackpot Window Percentage Open

This option makes it harder or easier to win the left or right Jackpot.

The more the window is open, the easier it is to land on the Jackpot.

**Available values:** 5, 10, 20, 30, 40, or 50 percent open

## Option 9: Top / Bottom Jackpot Window Percentage Open

This option makes it easier or harder to win the top or bottom Jackpot.

The more the window is open, the easier it is to land on the Jackpot.

**Available values:** 5, 10, 20, 30, 40, or 50 percent open

## Option 10: No pull timeout

Time before game will automatically start, if player has not started it already.

If set to 0, game will start immediately on coin up.

**Range** 0 – 30 seconds (5 second steps)

**Option 11: No play timeout**

Time before the game will automatically stop, if the player has not already stopped it.  
If set to 0, automatic game stop is disabled.  
**Range** 0, 20 – 90 seconds (5 second steps)

**Option 12: End of Game time**

Time the game holds the winning score before proceeding.  
**Range** 1 - 10 seconds

**Option 13: Sound Volume**

To set the game's audio volume, use the volume control on the audio amp which is located in the game's base.

**Option 14: Activate Attract Sound**

Sets time delay between attract cycles.  
**Range** 0 – 9 minutes

**Option 15: Jackpot Bell duration in seconds**

Sets time in seconds that the jackpot bell sounds.  
0 is disabled.  
**Range** 0 – 9 seconds

**Option 16: Discount Game. This option is currently not supported.**

Press *AUX1* and *AUX2* at the same time to exit.

**Option 17: Minimum Bonus (Jackpot)**

Sets the value to which the Jackpot is reset following a Jackpot win.  
**Range** 0 – MaxBonus (step value 100)

**Option 18: Bonus Step**

Sets the Jackpot increment value. The Jackpot is incremented for each game played.  
**Range** 0 – 5

**Option 19: Maximum Bonus (Jackpot)**

Sets the value beyond which the Jackpot cannot be incremented.  
**Range** MinBonus – 9000 (step value 100)

**Option 20: MoneyMech 1 Credits**

Sets the value in credits represented by each pulse of the Money Mechanism #1.  
**Available values:** 1 or 4

## Option 21: MoneyMech 2 Credits

Sets the value in credits represented by each pulse of the Money Mechanism #2.

**Available values:** 1 or 4

## Cleaning and Routine Maintenance

### 1. Polycarbonate Panels:

Skee-Ball, Inc. recommends using only “Kleenmaster Brilliantize” which can be purchased through Skee-Ball as Part Number 800600-1.

### 2. Electronics Board:

Skee-Ball, Inc. recommends using canned air to blow any dirt off the surface of the Electronics board.

### 3. Laminated Surfaces:

Skee-Ball, Inc. recommends “Kleenmaster Brilliantize”.

### 4. Optical Sensors (if equipped):

Skee-Ball, Inc. recommends using canned air to blow any dirt off of the surface of the sensors on a weekly basis.

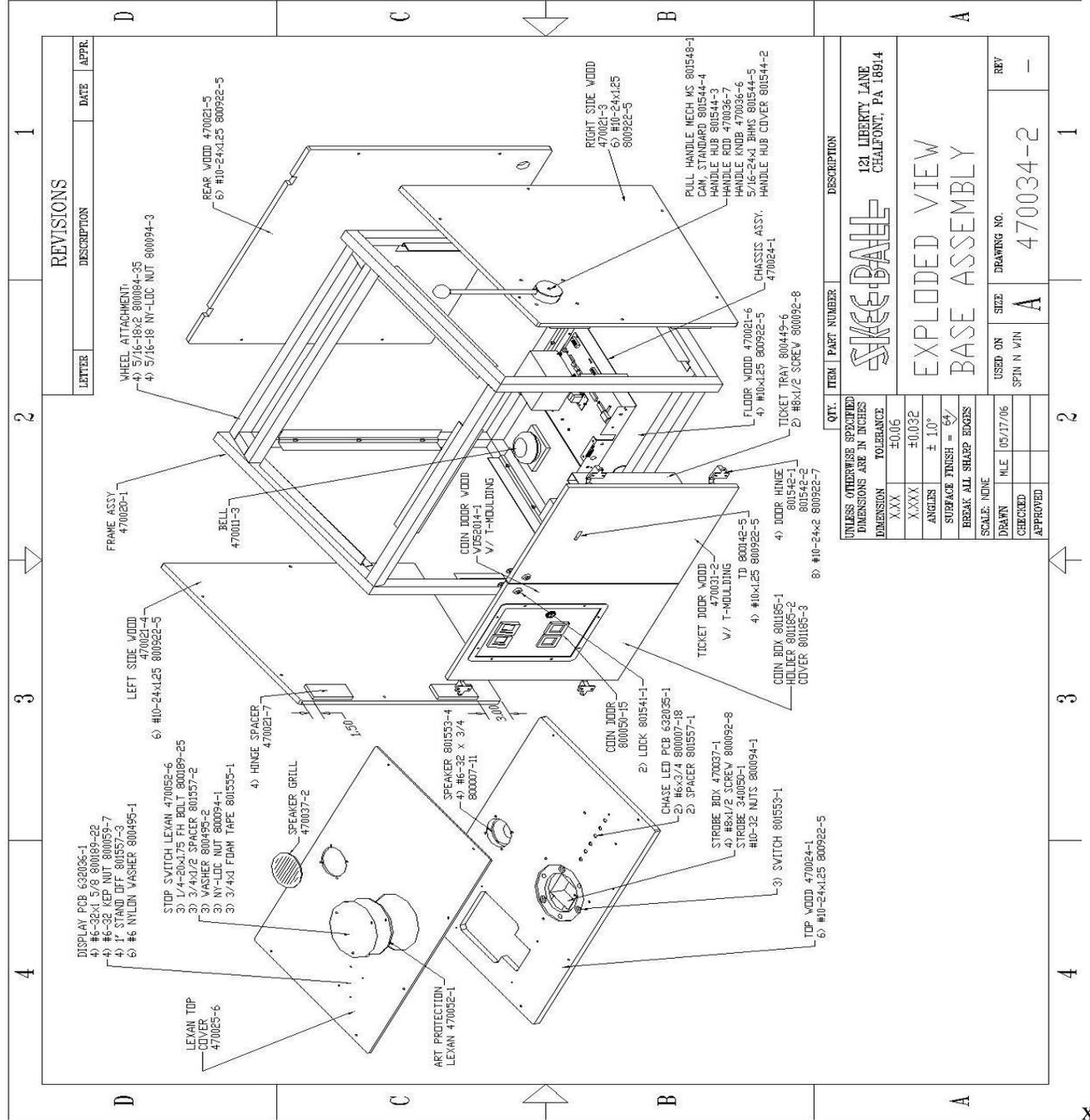
### 5. Hinges

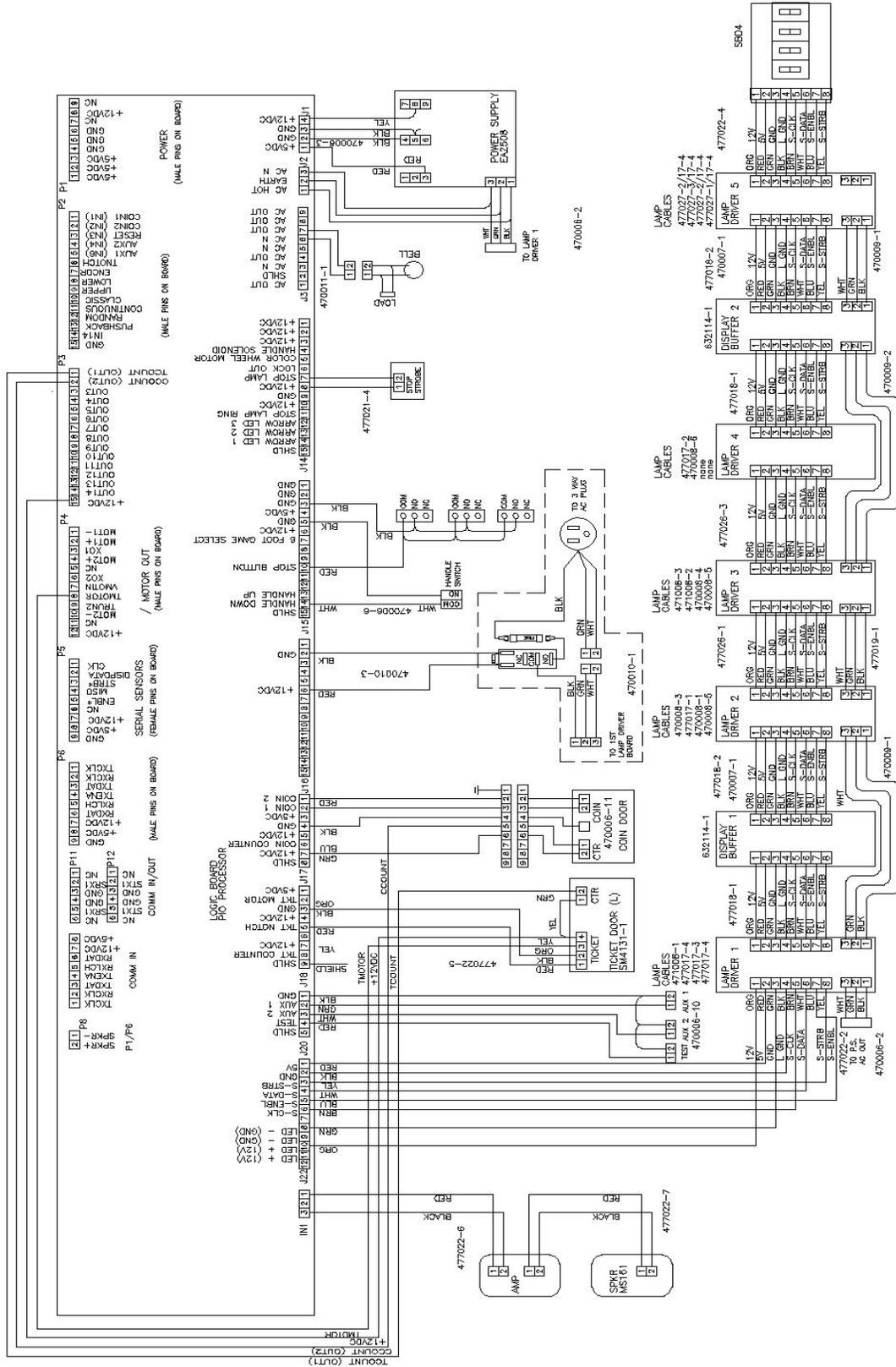
Monthly, lightly spray the door hinges with a light lubricant.

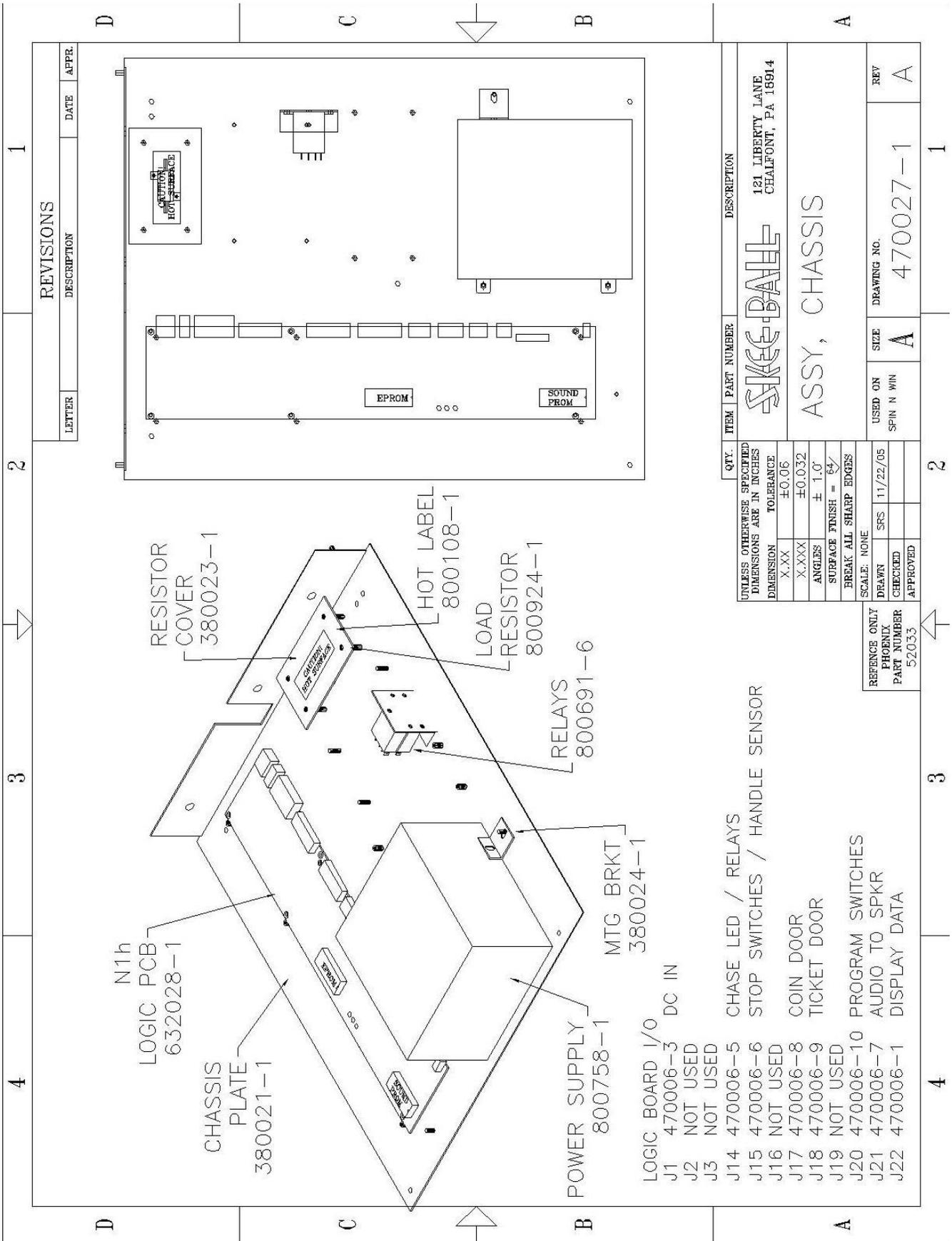
### 6. Painted Surfaces:

Skee-Ball, Inc. recommends using Windex <sup>TM</sup> or any other mild, non-abrasive household cleaner.

# REFERENCE DRAWINGS









## Troubleshooting Guide

The purpose of this guide is to help you pinpoint a problem area and eliminate the undue process of parts swapping, expedite shipping charges and other hassles associated with a breakdown due to unknown causes. In order to successfully follow this guide, it is imperative the individual understands the overall play of the game and its test functions.

Reading the Game Play portion of the Assembly /Operating Manual will enable one to better understand how and when certain functions relating to hardware (physical printed circuit board an components thereof) and software (the program which actually commands the hardware) interact.

Reading the test portion of the Assembly/Operating Manual will enable one to pinpoint the problem area quickly.

Listed below are general descriptions of the principal problems and suggested point to troubleshoot.

<b>PROBLEM</b>	<b>PROBABLE SOLUTION</b>
One half of the light circle or Marquee lights not working	- Check data cables to and from lamp driver boards - Check AC power cables
When game is turned on the bell continues to ring, lights are flashing and tickets continue to run	- Replace logic board
Single light out	- Check bulb - Check SCR PCBA – bad SCR chip
2 to 8 lights out in a row	- Check cable to lights - Check SCR PCBA
Up to 32 lights out in a row	- Check SCR PCBA - Check cables to SCR PCBA - Check buffer PCBA
Over 32 lights out	- Check power data cables to SCR PCBA
All lights out	- Check fuse - Check cables from PIO to SCR PCBA1
No display	- Check cables to display - Check display PCBA

## Warranty

Skee-Ball, Inc. warrants to the original purchaser that the product will be free of defects in workmanship and materials. The main processor and display boards are warranted for one year from date of purchase. All other components are warranted for 90 days from the date of purchase.

If your equipment fails to conform to the above-mentioned warranty, Skee-Ball, Inc.'s sole liability shall be, at its option, to repair or replace any defective component with a new or re-manufactured component of equal to or greater O.E.M. specifications.

Skee-Ball, Inc. will assume no liability whatsoever, for costs associated with labor to replace defective parts, or travel time associated therein.

**Limitation on Liability** – Skee-Ball's liability for damages hereunder, including but not limited to, liability for patent infringement or breach of warranty, shall not exceed the total of all charges and fees paid by the purchaser hereunder, exclusive of any taxes or other charges, (other than income taxes) which Skee-Ball was required to pay to third parties as the result of the receipt of such amounts. The purchaser expressly agrees, in the event of any breach of this agreement by Skee-Ball that purchaser's exclusive remedy hereunder shall be the right to limitation on the amount of damages set forth above.

**IN NO EVENT WILL Skee-Ball BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOST PROFITS, EVEN IF Skee-Ball HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.**

In no case, whether on account of any act or failure to act by Skee-Ball or others, shall Skee-Ball be liable to purchaser for Skee-Ball's or another manufacturer's negligence in design, manufacture, delivery or installation of the equipment.

No action, regardless of its form, whether in contract, in tort (including negligence), or otherwise, arising out of, or as a result of, this agreement, shall be commenced by purchaser more than one year after the occurrence of the act or event giving rise to such action.

This warranty is contingent upon proper and normal use of the product and does not cover equipment which has been modified without Skee-Ball, Inc.'s written consent, which has been subject to unusual physical stress, incorrect assembly, hook-up, other misuse, neglect, improper electrical current, failures caused by natural disasters such as fire, flood and lightning or as a result of any unauthorized repairs or alterations.

**THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## Further information

Should your product need servicing, please have the following information ready prior to contacting Skee-Ball, Inc.

Model # of the Unit  
Serial # of the Unit  
Serial # of the Part (ie – Main Processor Board) if applicable

Most of this information can be found on the tag attached usually to rear of the product.

When returning a unit for repair, call prior to returning your product to obtain an Return Material Authorization Number (RMA#). Failure to obtain an RMA# can lead to parts being delayed in repair / shipping or return without repairs being completed. Write the RMA# on the outside of the package. Include the following information inside of the packaging:

Name, address, phone & fax number including area code  
Product Serial & Model Numbers  
RMA#  
Contact Name

If possible, symptoms and / or problems being experienced.

Postage, insurance and / or shipping costs incurred while presenting your unit for repairs (in or out of warranty) is the responsibility of the consumer. Skee-Ball, Inc. will ship warranty repaired / replaced items back to the consumer free of charge via UPS Ground, U.S. Mail or other comparable shipping means. Any Express Mail or Overnight Shipping expenses are at cost to the consumer.

Skee-Ball, Inc. can be contacted at:

Skee-Ball, Inc.  
121 Liberty Lane  
Chalfont, PA 18914

[penn@skeeball.com](mailto:penn@skeeball.com)

(215) 997-8900 - Voice  
(215) 997-8982 – Fax

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