INSTRUCTIONS FOR

CIRCUS

HI RISE
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INSTALLATION INSTRUCTIONS

A. UNPACKING CRATED GAME.
   THE GAME COMES COMPLETELY ASSEMBLED. ALL YOU NEED TO DO IS INSTALL THE TICKETS (IF USED), PLUG GAME INTO A PROPERLY GROUNDED 3 CONDUCTOR OUTLET AND IT'S READY FOR PLAY. IT IS SET UP TO PLAY ON 1 COIN AND DISPENSE 1 TICKET PER LEVEL. THESE SETTINGS CAN BE CHANGED VIA A DIP SWITCH, REFER TO YOUR MANUAL FOR OPTIONS.

SETTING THE GAME OPTIONS VIA THE DIP SWITCH
NOTE! TURN OFF POWER BEFORE CHANGING SWITCH POSITION

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th># OF TICKETS PER LEVEL (GREEN THRU WINNER = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>0</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>1</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>2</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3</th>
<th>4</th>
<th># OF PLAYS PER COIN</th>
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<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
<td>1 x SHOWN BE OFF FOR CHR 27 EPROM</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>2</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6</th>
<th></th>
<th>ATTRACT SOUND</th>
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</thead>
<tbody>
<tr>
<td>OFF</td>
<td></td>
<td>NO SOUND IN ATTRACT MODE</td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>SOUND DURING ATTRACT MODE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>8</th>
<th># OF COINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>0</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>1</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>2</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>3</td>
</tr>
</tbody>
</table>
GAME PLAY

AFTER THE PROPER NUMBER OF COINS ARE INSERTED THE PUCK WILL BE RELEASED AND READY TO STRIKE.

GAME SEQUENCE:
A. INSERT COIN
B. SOLENOID ENERGIZES
C. PUCK IS RELEASED
D. ALL TARGET LIGHTS SHOULD BE OUT
H. AFTER THE TARGET IS STRUCK AND THE PUCK MAKES IT BY THE BLUE SENSOR THE FOLLOWING EVENTS OCCUR:
   1. THE SOLENOID DEENERGIZES
   2. THE LAMPS BEGIN TO LIGHT AND REMAIN LIT
   3. THE AUDIO CHANGES PITCH ON THE WAY UP & DOWN
   4. TICKETS ARE DISPENSED AT THE END OF THE GAME

TICKET DISPENSER

1. BASIC ELECTRONIC OPERATION OF TICKET DISPENSER

WHEN THE CONTROL UNIT CALLS FOR A TICKET TO BE ISSUED, THE MOTOR IN THE DISPENSER IS TURNED ON. WHEN A TICKET IS DISPENSED, THE OPTO BEAM BREAKER SENSES A NOTCH IN THE TICKET AND SENDS BACK A SIGNAL TO THE CONTROL UNIT. AT THIS TIME THE TICKET COUNTER IS INCREMENTED. IF NO MORE TICKETS ARE CALLED FOR THE MOTOR IS TURNED OFF.

2. BASIC MECHANICAL OPERATION OF THE TICKET DISPENSER

TICKETS ARE MOVED THROUGH THE TICKET CHUTE BY MEANS OF A POWER DRIVEN ROLLER WHICH IS SPRING LOADED AGAINST AN IDLER ROLLER. THE POWER DRIVEN ROLLER HAS TWO NEOPRENE O RINGS INSTALLED, AND UNDER NORMAL OPERATING CONDITIONS ARE THE ONLY CONTACT WITH THE TICKETS.

3. LOADING OF TICKETS

Tickets are entered in the rear of ticket chute and pushed forward. The power driven roller will be spring loaded against the idler roller and tickets will not pass until the rollers are clear of each other. This is accomplished by use of thumb and index finger. One placed on the block to which the spring is attached, the other on the pivot bracket assembly, then squeeze. Push the tickets through until you see the edge of the ticket. Machine is now ready to operate.

4. TICKET DISPENSER CONTROLLER BOARD

Attached to the ticket machine is a transistor motor controller which provides dynamic braking to ensure accurate and repeatable ticket stopping after issuing any number of tickets. Included as part of the controller is ticket sensing by means of an opto beam breaker sensor. Also included in signal conditioning which provides high electrical noise immunity. The output of the ticket sensing circuitry is the equivalent to a single pole double throw switch.

5. ROLLER TENSION SPRING

The roller tension spring keeps constant tension on the tickets, which insures proper delivery and prevents tickets from being pulled through when the dispenser is idle. To increase tension, loosen screw and move spring forward. Tension is adjusted correctly when the tickets cannot be pulled from the dispenser.

6. TICKET GUIDE SPRING

The ticket guide spring insures that the notches in the tickets pass through the opto beam breaker sensor. To increase tension, loosen screw and move outer spring up. This changes the tension on the inner spring. Tickets should be snug between spring and side plate but not deformed by excess tension. This spring is adjusted at the factory for 1-3/16" wide tickets.
7. TICKET STOP ADJUSTMENT

The ticket stop adjustment allows positioning of tickets while machine is off. The ticket should protrude through slot approximately 1/16". The ticket dispenser PC board is mounted with two screws and two slotted holes. Loosening the screws and moving the board forward will allow the tickets to stop farther out beyond the edge of the slot.

Tickets are available through: National Ticket Co in Shamokin, PA (717) 646-6803. We have found these tickets to be of the best quality for use in Skee ball Redemptive games.
TROUBLESHOOTING GUIDE

CAUTION: HIGH VOLTAGE IS PRESENT IN SOME AREAS OF THE GAME (POWER SUPPLY, FAN SOLENOID, ETC.) UNPLUG LINE CORD BEFORE PERFORMING ANY TROUBLESHOOTING.

A. IMPROPER SCORING
   DEFECTIVE SENSOR OR POSSIBLY A BAD INPUT ON THE CONTROLLER.

C. NO SOUND
   IF NO MUSIC OCCURS DURING THE PLAY OF A GAME, FIRST CHECK THAT VOLUME CONTROL IS TURNED UP. THEN CHECK THAT THE CABLES ARE OK & MAKE SURE THAT THE SPEAKER IS NOT DAMAGED. REPLACE SPEAKER IF NECESSARY. THEN REPLACE THE SOUND BOARD. IF THIS IS NOT THE PROBLEM, THEN RETURN THE UNIT AS PER INSTRUCTIONS.

D. COIN INSERTION DOES NOT RELEASE PUCK
   AFTER INSERTING COIN THE SOLENOID SHOULD ENERGIZE. IF THIS DOES NOT OCCUR, CHECK THE COIN MECH SWITCH FOR PROPER ACTION. THE ACTUATING ARM MAY NEED ADJUSTING OR THE ENTIRE SWITCH MAY NEED REPLACING.

E. COUNTERS DO NOT WORK
   CHECK THE CABLE CONNECTION FROM THE COUNTERS TO THE LOGIC BOARD. REPLACE THE COUNTER WITH A GOOD COUNTER. IF IT STILL DOES NOT WORK, THEN REPLACE THE LOGIC BOARD. RETURN THE UNIT FOR REPAIR AS INSTRUCTED IN THIS TEXT.

F. DISPLAY LAMP DOES NOT LIGHT
   IF ANY LAMP DOES NOT LIGHT, FIRST CHECK TO INSURE THAT THE LAMP IS PROPERLY SEATED IN THE SOCKET. DO NOT REPLACE LAMPS WHILE POWER IS ON. USE ONLY THE PROPER REPLACEMENT BULBS. REMOVE BULB BY THE GLASS PORTION OF THE BULB ONLY. DO NOT PLACE ANY TOOL IN THE SOCKET WHILE THE POWER IS ON. THIS COULD DAMAGE EXPENSIVE CIRCUITRY.

   IF THE LAMP STILL DOES NOT LIGHT, THEN TRY REPLACING THE UCN5833A. THIS IC CONTROLS ALL THE FUNCTIONS ON THE TRIAC BD. ALWAYS POWER DOWN TO REPLACE LAMPS AND IC'S. MAKE ABSOLUTELY SURE THAT THE NEW IC'S ARE INSTALLED PROPERLY. IDENTIFY THE DIRECTION IN WHICH THE NEW IC IS TO BE INSTALLED BEFORE THE SUSPECTED BAD IC IS REMOVED.

NOTE!! PLACE TICKETS IN THE DISPENSER SO THAT THE NOTCH IS IN LINE WITH PHOTO DETECTOR BEFORE DEPRESSING THE KNOCK OFF SWITCH.
WARRANTY REPAIRS

THE WARRANTY ON THE ELECTRONIC UNITS IS FOR A PERIOD OF ONE YEAR, INCLUDING SHIPPING ONE WAY. THE WARRANTY WILL BE VOID IF THE UNIT IS NOT INSTALLED PROPERLY, OR IF IT HAS BEEN TAMPERED WITH. THE RECEPTICLES FOR 3 PRONG PLUGS MUST BE USED, AS THE ELECTRONIC UNITS CALL FOR A POLARIZED CIRCUIT. WHEN RETURNING A UNIT FOR REPAIR, UNDER WARRANTY OR NOT, YOU MUST FIRST CALL AND OBTAIN AN AUTHORIZATION NUMBER. THIS NUMBER MUST BE WRITTEN ON THE OUTSIDE OF THE BOX YOU RETURN YOUR UNIT IN. IF YOU FAIL TO DO THIS, YOUR UNIT WILL BE REFUSED AND SENT BACK TO YOU. AN EXCHANGE PROGRAM IS OFFERED FOR THE FIRST SIX MONTHS YOU HAVE YOUR ALLEY. THIS ALSO MUST BE AUTHORIZED, FOR WE WILL SEND YOU A NEW BOARD IN EXCHANGE FOR THE RETURN OF YOUR OLD BOARD. AFTER SIX MONTHS, YOU MUST SEND YOUR BOARD IN FOR REPAIR. BEFORE CALLING SKEE BALL (215-997-8900), FIRST TRY AND LOCATE THE FAULTY PART, BUT DO NOT ATTEMPT REPAIR. MAKE SURE THAT YOU INCLUDE A NOTE WITH YOUR UNIT DESCRIBING THE PROBLEM IN YOUR OWN WORDS, AND BE SURE TO INCLUDE YOUR NAME AND PHONE NUMBER WHERE YOU CAN BE REACHED.
NOTES

1. ALL RESISTORS ARE 1/4 WATT, UNLESS OTHERWISE NOTE.
2. ON 4 PLAYER ALLEYS R52 MAY BE 5 OHMS OR ELIMINATED.

SKEE-BALL, INC.
212 LIBERTY LANE
CHICAGO, ILL. 60610

SBC-I-B
POWER SUPPLY, 50VDC

DATE: 05/22/80 SHEET 1 OF 4