

KNOCK OUT™ **PUNCH**



OWNERS AND SERVICE MANUAL
INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.



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INTRODUCTION

GAME FEATURES

Thank you for your purchase of the new KNOCK OUT PUNCH™ redemption game from I.C.E.

The game is constructed of a quality 7 ply MDO plywood cabinet. The cabinet is then sealed, painted and decal'd using laminated graphics that resist most common cleaning agents. All metal parts are powder coated for maximum beauty and durability.

The game uses creative lighting techniques to draw game players to it and to enhance game enjoyment. A unique cartoon like Punching Glove on a scissors mechanism gives the game a fun way for Kids to play the game. The mechanism has been extensively tested for durability and reliability. The solenoid coil that drives the mechanism is fan cooled and thermally protected. The coil is also operated on low voltage D.C. power.

The game electronics are at the same time high tech, yet all drive components are chosen for their long history of reliability. Surface mount components and programmable logic arrays keep the board size to a minimum and the reliability to the maximum.

The boxers move along a belt that is powered by a heavy-duty 12-volt gear motor. This motor has been chosen for its long lasting and cool running capabilities. It has a full-length drive shaft for greater reliability.

All electronics are fully operator adjustable and are adjusted via convenient programming buttons located just inside the coin door. The game allows the operator to choose a timed game or a random hit game depending on the operators' location. (Please see the Game Play section below and the programming section for further information).

GAME PLAY

The player inserts their money into the game to begin. Behind the row of boxers are round displays that either will show a count down timer or it will show how many boxers you hit depending on how you configure your game. Once the timer begins to countdown, the player needs to hit as many boxers as possible before time runs out.

The player will be awarded tickets based on how many boxers have been knocked down. The player may also receive "mercy" tickets if they were unable to hit any boxers.

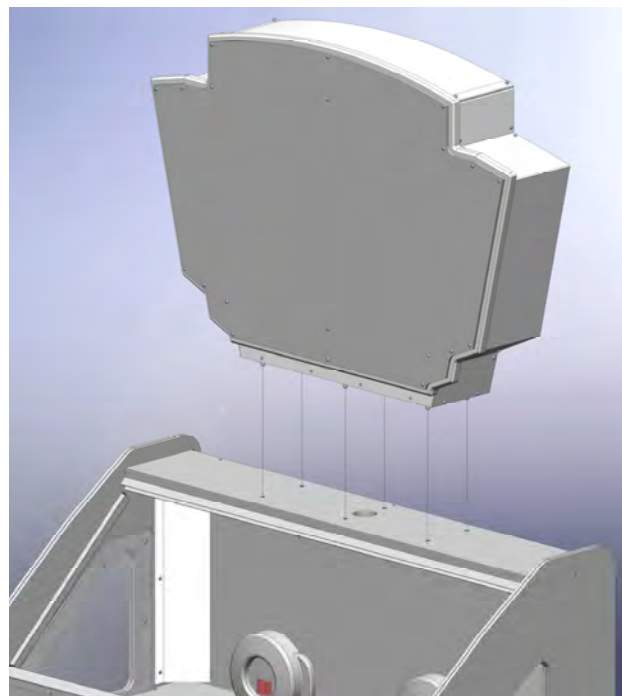
ASSEMBLY

BEFORE YOU BEGIN

WARNING: WHEN INSTALLING THIS GAME, A 3 PRONG GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO SO COULD RESULT IN INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE TO THE ELECTRONICS

DO NOT DEFEAT OR REMOVE THE GROUNDING PRONG ON THE POWER CORD FOR THE SAME REASON AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED GAME COULD VOID YOUR WARRANTY.

HAVE A QUALIFIED ELECTRICIAN CHECK YOU'RE A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.



TOOLS NEEDED

To assemble your game you will need a 7/16" socket or box wrench.

Note: For normal game servicing you will need two different size Allen wrenches which are provided.

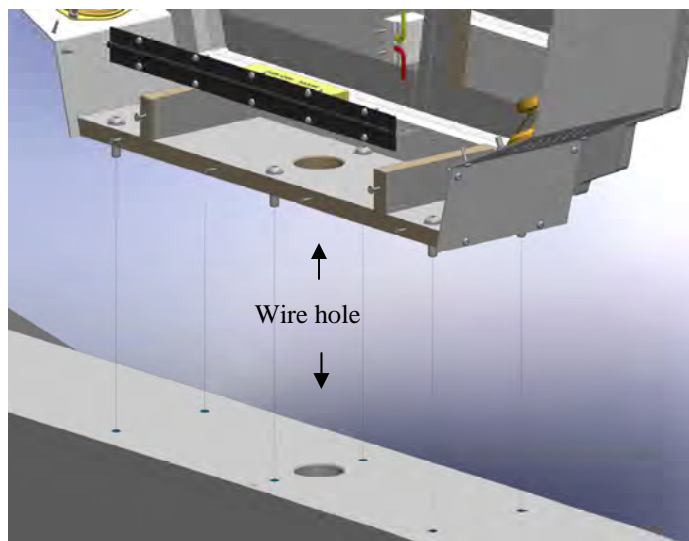
INSTALLATION

1. Remove the cardboard box from the pallet.
2. Cut banding that holds the game to the pallet.

NOTE: BE SURE TO STAND TO THE SIDE WHEN CUTTING THE BANDS, AS THEY ARE UNDER PRESSURE, AND COULD SPRING OUT CAUSING INJURY.

3. Remove all of the shrink-wrap and packaging from the game and marquee.
4. Find the location that the game will be placed in and move into rough position.
5. Position the marquee on top of the game aligning the mounting holes.

6. Secure the marquee to the cabinet with the provided mounting hardware. They are located in the cash box.



7. Open the back door of the marquee being careful not to cause the PLL bulbs to come out and insert both wire harnesses through to the bottom cabinet..
8. Open the back of the cabinet and attach the harnesses to their mating end.
9. Close back door.

ASSEMBLY

SETTING A.C. LINE VOLTAGES

The game comes with 4 available line voltage settings as described below. These settings should be used to provide A.C. power in the correct range to the game without over or under powering it.

POWER RANGE	VOLTAGE SETTING
90-110 V.A.C.	115
110-130 V.A.C.	125
200-220 V.A.C.	230
220-250 V.A.C.	250

The game uses a POWER MODULE to handle all of the A.C. power distribution chores of the game. It incorporates an On-Off switch, primary A.C. game fusing, and power switching capabilities. This allows the game to be used with a wide variety of A.C. voltages by re-strapping the main transformer.

A.C. LINE VOLTAGE ADJUSTMENT

To adjust the game for a different A.C. voltage:

- Unplug the game from the outlet.
- Disconnect the power cord from the power module.
- Using a small flat blade screwdriver, pry the fuse holder from the power module.
- Notice a small window on the fuse holder with an arrow that points to the voltage the game is presently set at.
- Using a small flat blade screwdriver, lift the retaining tab that holds the voltage selector in the fuse holder.
- Rotate the voltage selector until the voltage you want is displayed in the voltage select window.
- Push the voltage selector back into the fuse holder until it snaps into place. NOTE: Do not force the selector into the fuse holder. If it does not go in easily, it is not being installed correctly.

- Snap the fuse holder assembly back into the power module.
- Plug the power cord back into the receptacle in the power module, and into the wall outlet.

NOTE: WHEN CHANGING VOLTAGES FROM THE 115-125 TO 230-250 RANGE, LOWER THE MAIN FUSE AMPERAGE VALUE BY ½.

WHEN CHANGING FROM THE 230-250 TO 115-125 VOLT RANGE, DOUBLE THE MAIN FUSE AMPERAGE VALUE.

Plug the game in, turn the power on and play a couple of game. Pay attention to the sound volume of the game.

ADJUSTING VOLUME

There are two volume control potentiometers on the Main P.C. Board. The top one controls the theme music and the bottom one controls the sound effects such as Duck sounds, etc. Adjust these during game play.

FINAL ASSEMBLY

After the volume is adjusted, proceed to the set up / testing section to prepare the game for your location. When all testing is done, re-install the "Wacky Ducks™ Sign, remove the keys, and roll the game into its final location. Lower the adjustable leg levels to keep the game from moving.

YOUR GAME IS NOW READY TO PLAY. IF YOU HAVE ANY FURTHER QUESTIONS OR COMMENTS REGARDING THE GAME, PLEASE CALL OUR SERVICE DEPARTMENT AT 1-716-859-0360

SET-UP / TESTING

SAFETY PRECAUTIONS

WARNING: WHEN INSTALLING THIS GAME, A 3 PRONG GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO SO COULD RESULT IN INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE TO THE ELECTRONICS

DO NOT DEFEAT OR REMOVE THE GROUNDING PRONG ON THE POWER CORD FOR THE SAME REASON AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED GAME COULD VOID YOUR WARRANTY.

HAVE A QUALIFIED ELECTRICIAN CHECK YOU'RE A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.

REPLACE ALL INCANDESCENT BULBS WITH PROPER ICE SUPPLIED BULBS ONLY.

PROGRAMMING YOUR GAME

This section will give you a detailed explanation of the functions and operating characteristics of each of the programming buttons.

PLEASE READ THIS SECTION CAREFULLY TO AVOID PROBLEMS WITH YOUR GAME.

PLEASE NOTE: THE PROGRAMMING AND TICKET RESET BUTTONS ARE LOCATED INSIDE THE LEFT HAND COIN DOOR. ADDITIONALLY, THERE IS A SINGLE TICKET RESET BUTTON INSIDE THE RIGHT HAND COIN DOOR.

DISPLAY INFORMATION

THE RIGHT HAND ROUND DISPLAY WILL SHOW YOU THE **OPTION** YOU ARE IN. THE LEFT HAND DISPLAY WILL SHOW THE **VALUE OR SETTING** FOR THAT OPTION.

PROGRAMMING BUTTON

Press this button to enter or exit the PROGRAMMING mode. You will notice when you are in the Programming mode, as the displays will change.

SELECT BUTTON

This button is used to change from one option to the next. When this button is pushed, the option number is shown in the display window of the RIGHT HAND round display.

ADVANCE

This button is used to change the value within the option. When this button is pushed, the value will be shown in the LEFT HAND round display.

TICKET RESET BUTTON

When the game runs out of tickets, it keeps track of how many are owed. When more tickets are inserted, the game will attempt to dispense all of the tickets that are still owed. If the operator does not wish to dispense these tickets when reloading, press the "Ticket Reset" button BEFORE replacing the tickets. The tickets Reset buttons are located inside the coin doors.

OPTION MODES FOR V3.22

MODE 0 (GAME COST)

This option determines how many coins are necessary to start a game. The range for this game is 1-10. The default value for this mode is "2"

SET-UP / TESTING

MODE 1 (GAME LENGTH)

This mode determines how long the game lasts in SECONDS. The range for this value is 1-60. The default value for this game is "15"

MODE 2 (COIN OR CREDIT COUNTER)

This mode determines if the coin counter will count coins or credits. (Example: If it takes 3 coins to start a game, then 3 coins would equal 1 credit). Setting a "0" equals coins. Setting a "1" equals credits. The default value for this option is "0".

MODE 3 (TIME BETWEEN HITS)

This mode determines how long the game will make the player wait between hits of the punching glove. The number shown X 100 milliseconds equals the actual time. (Example: 10 X 100 milliseconds equal 1 second). The range for this option is 10-50 (1 to 5 seconds). The default value for this option is "10"

MODE 4 (BOXERS PER XX TICKET DISPENSE)

This option determines how many boxers must be knocked down each time XX tickets can be dispensed. (See OPTION 5 for value of XX) The range for this option is 1-9. The default value for this option is "1".

FOR EXAMPLE, if the value set in OPTION 4 is "2" and the value set in OPTION 5 is "3", the game would dispense 3 tickets for every 2 boxers knocked down.

MODE 5 (VALUE OF XX)

This option determines the number of tickets to dispense each time a dispense order is given by OPTION MODE 4. The range for this option is 1-9. The default value for this option is "1".

MODE 6 (JUST FOR PLAYING TICKETS)

This mode determines the amount of "Mercy" tickets paid to the customer on the event that they do not win any tickets during normal game play. The range for this option is 0-99. The default value for this option is "3"

NOTE: THIS OPTION FUNCTIONS IN THE TIMED GAME MODE ONLY.

MODE 7 (ATTRACT TIME)

This mode determines the period of time between attract modes. The numbers in this option represent minutes. The range for this option is 0-90. Setting a "0" equals turning the attract mode OFF. The default value for this option is "3"

MODE 8 (ATTRACT MODE TYPE)

This option determines which type of attract mode is set.

- 0= Mode Disabled
- 1= Audio only
- 2= Motion only
- 3= both motion and audio

The default value for this option is "3"

SET-UP / TESTING

MODE 9 (DISPLAY TYPE)

This option determines what information the round displays will show during game play. The display can show either a count down timer or how many boxers the player has hit.

0= Count Down Timer displayed
1= How many boxers you hit

The default value for this option is "0"

MODE 10 (FACTORY RESET)

This mode has the capability to reset all options to the factory default values. The range for this option is 0-1. Setting a "1" will reset all values. The default value for this option is "0" (no reset)

GAME TESTING

After you have completed the set-up of your game, INSTALL TICKETS into the game, and play a few games to make sure everything is working properly. Check the following:

- Check the ticket dispenser to be sure the proper amount of tickets is given.
- Check to be sure the boxer belt is tracking properly. If not, check the mechanical repair section for adjustment procedures.
- Be sure all external fasteners like those of the cover glass and puncher housings are installed and tight.

QUICK TROUBLESHOOTING

<p>GAME WILL NOT START</p>	<p>NO A.C. POWER POWER MODULE SET INCORRECTLY FUSE BAD IN POWER MODULE FUSE BAD ON MAIN P.C. BOARD NO CREDITS BAD COIN MICRO SWITCH BAD TRANSFORMER BAD GAME HARNESSING BAD MAIN P.C. BOARD</p>	<p>CHECK POWER AT A.C. RECEPTACLE CHECK VOLTAGE SETTING CHECK OR REPLACE FUSE CHECK OR REPLACE FUSE INSERT PROPER AMOUNT OF COINS CHECK OR REPLACE MICRO SWITCH CHECK TRANSFORMER VOLTAGES CHECK W / METER & REPAIR IF NEEDED REPAIR OR REPLACE MAIN P.C. BOARD</p>
<p>BOXERS WILL NOT MOVE</p>	<p>BAD DRIVE MOTOR BAD DRIVE TRANSISTOR NO CREDITS IN GAME BAD FUSE ON MAIN P.C. BOARD BELT BINDING</p>	<p>REPLACE DRIVE MOTOR REPAIR OR REPLACE MAIN P.C. BOARD ADD CREDITS TO GAME CHECK OR REPLACE FUSE SEE MANUAL FOR BELT ADJUSTMENT</p>
<p>TICKETS WILL NOT DISPENSE</p>	<p>BAD TICKET DISPENSER BAD GAME HARNESSING NO TICKETS IN GAME GAME PROGRAMMED IMPROPERLY</p>	<p>CHECK FOR JAMS OR REPLACE CHECK W / METER & REPAIR IF NEEDED ADD TICKETS TO GAME RE-PROGRAM TICKET DISPENSE OPTION</p>
<p>ROUND DISPLAYS DON'T WORK OR WORK INCORRECTLY. EYE LIGHTS DON'T FLASH</p>	<p>BAD ROUND DISPLAY BAD HARNESSING BAD LIGHT BULB</p>	<p>REPAIR OR REPLACE P.C. BOARD CHECK W / METER & REPAIR IF NEEDED REPLACE BULB</p>
<p>NO SCORE WHEN BOXERS ARE KNOCKED OVER</p>	<p>BAD BOXERS DISPLAY BAD MICRO SWITCH MICRO SWITCH WIRE BENT WRONG BAD HARNESSING</p>	<p>REPAIR OR REPLACE P.C. BOARD REPLACE MICRO SWITCH REBEND WIRE FOR OPTIMUM CONTACT CHECK W / METER & REPAIR IF NEEDED</p>
<p>NO FLORESCENT LIGHTING</p>	<p>BAD FLORESCENT BULB BAD LIGHT BALLAST BAD WIRING</p>	<p>REPLACE BULB REPLACE BALLAST CHECK W / METER & REPAIR IF NEEDED</p>
<p>NO SOUND OR SOUND LOW</p>	<p>BAD SPEAKER BAD WIRING VOLUME SET TOO LOW</p>	<p>REPLACE SPEAKER CHECK W / METER & REPAIR IF NEEDED ADJUST VOLUME (SEE MANUAL)</p>
<p>PUNCHING GLOVE DOESN'T WORK OR WORKS SLOWLY</p>	<p>BAD DRIVE TRANSISTOR BAD THERMAL SWITCH BAD COOLING FAN BAD PUSH BUTTON SWITCH BAD HARNESSING</p>	<p>REPAIR OR REPLACE MAIN P.C. BOARD TEST OR REPLACE SWITCH REPLACE FAN CHECK OR REPLACE SWITCH CHECK W / METER & REPAIR IF NEEDED</p>

GAME REPAIR

OPERATIONAL BACKGROUND

The KNOCK OUT PUNCH™ game has been designed to be as easy as possible to repair.

The boxer belt can be easily adjusted while in the game, yet can be removed easily from the game if replacement should ever become necessary.

The punching mechanisms have been designed for easy access by simply removing the access covers.

TROUBLESHOOTING PHILOSOPHY

To find problems with the game, always first check what should be obvious. See that the game is plugged in, and that all of the fuses on the game are good. This includes the fuse that is located INSIDE the power module.

Next, check to see that all of the connectors are firmly seated and that none of the wires have been pulled out of them.

When trying to find out if specific components are bad or not, try swapping them with components from another player station to see if the problem moves with the component, or stays where it was. This will help you to know if you have a problem with a specific component, or maybe a problem with either the wiring or the Main P.C. Board.

Use extreme caution when using probes or voltmeters if the game is powered up. If doing continuity checks, it is important to disconnect the harnessing at both ends, as attached they may yield erroneous results.

If a P.C. Board is suspected as the cause of a problem, check to see that all of the components on the board are firmly attached. Pay special attention to any socket device.

If light bulbs are suspected, swap them with one that is known to work to narrow the problem down to either a bulb or P.C. Board.

MECHANICAL REPAIR

PUNCHING GLOVE ASSEMBLY OVERVIEW

The punching glove system is designed for high reliability and safety. The assembly can be designed with simplicity in mind, as the solenoid is driven for maximum pull in strength.

The solenoid is driven by approximately 35 DC volts. This voltage may be higher or lower depending on your A.C. voltage at the wall.

The solenoid is fan cooled to allow for higher voltages that will in turn provide the higher pull in strength.

Since fan cooling is necessary under a high game play mode, the solenoid is protected by a bi-metal thermal switch that is strapped directly to the solenoid bobbin. This switch assures that if the fan fails, the solenoid power will be shut down before the coil could be damaged.

The thermal switch is run "IN LINE" with the solenoid power. This simple arrangement is very reliable and easy to troubleshoot.

TESTING THE COIL

TESTING FOR POWER - Disconnect the coil from the connectors. Using a voltmeter, measure that voltage is present during game play if the punch button is pressed. There should be a voltage of 30+ volts D.C. If you do not see this much voltage, but do see some, your meter is probably too slow to see the voltage, as it is only on for approximately 100 milliseconds. If you don't see any voltage at all, the solenoid driver F.E.T. on the main P.C. Board could be bad. It could also be that the push button is not sending a signal to the main P.C. Board.

If you see voltage to the coil, but the mechanism won't fire, check that the thermal switch is working correctly. When the thermal switch is cool, disconnect the wires from its leads and do a continuity test across the switch terminals. You should see continuity. If you don't, the switch needs to be replaced.

GAME REPAIR

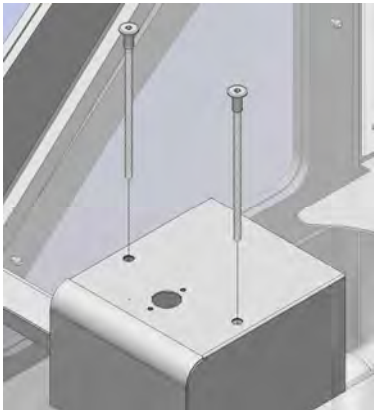
If you see that the thermal switch is good, check to see that the coil and the diode on the coil are good.

Disconnect the coil and unsolder 1 side of the diode. Do a resistance check to see that there is infinite resistance in one direction. If there is no resistance in either direction the diode is bad. If the diode is bad, there is also a chance that the drive transistor and / or fuse could be bad as well.

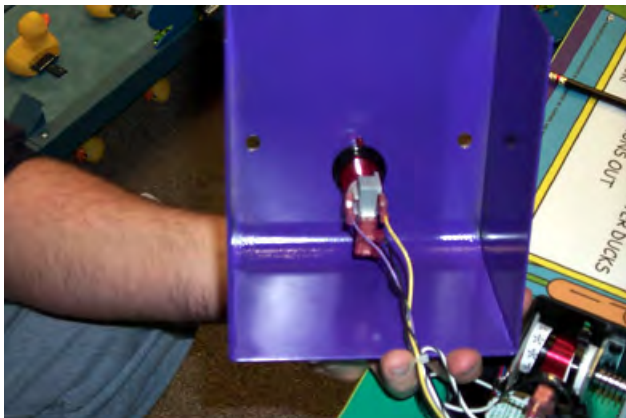
If the diode tests good, check to see the resistance of the coil. It should measure approximately 3.8 ohms. This resistance will vary some depending on the temperature of the coil. If the resistance is significantly more or less, the coil should be replaced.

COIL REPLACEMENT

1. Remove the 2 bolts that hold the punching assembly cover in place.



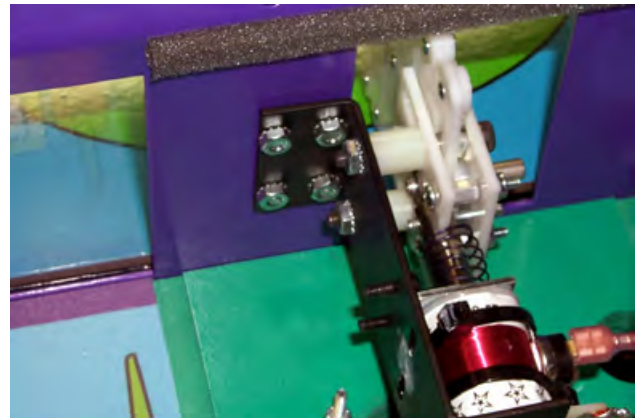
2. Disconnect the micro switch assembly from the push button and remove the cover.



3. Remove the 2 square drive screws that hold the cardboard fan shroud in place.



4. Remove the wires that attach to the solenoid.
5. Remove the 4 screws that hold the assembly into the cabinet. NOTE: IF THERE ARE SPACERS TO ADJUST THE SOLENOID ANGLE BETWEEN THE PUNCHER BRACKET AND CABINET, BE SURE TO USE THEM IN THE SAME PLACE WHEN REASSEMBLING THE GAME.



6. Remove the hex nuts that secure the 2 long shoulder bolts to the puncher mounting bracket. Unscrew the two shoulder bolts from the puncher mounting bracket. The puncher assembly should now be able to be removed.
7. Remove the 2 screws that hold the coil retaining bracket to the puncher bracket. The solenoid may now be removed.
8. Assemble in the reverse order.

NOTE: WHEN RE-ASSEMBLING THE PUNCHER ASSEMBLY, BE SURE TO USE LOCK-TITE ON THE SHOULDER BOLT THREADS AND RETAINING NUTS.

GAME REPAIR

BOXER BELT ASSEMBLY ADJUSTMENT AND REPAIR

There are two different adjustments that should be occasionally performed on the belt assembly.

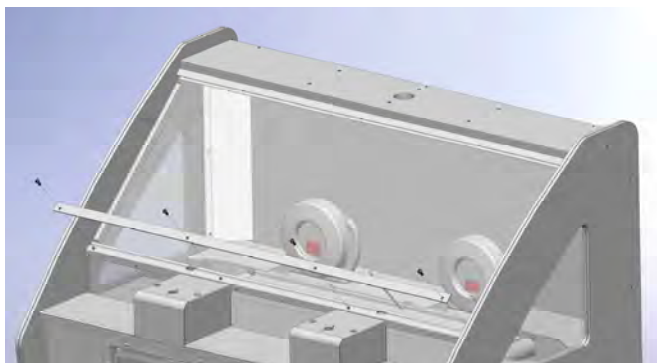
The first is an adjustment to get the proper amount of tension to the boxer belt. This is important to prevent the boxers from hanging too low on the bottom of the belt, and to help insure proper tracking.

The second type of adjustment is to set the tracking accurately to the center of the belt board.

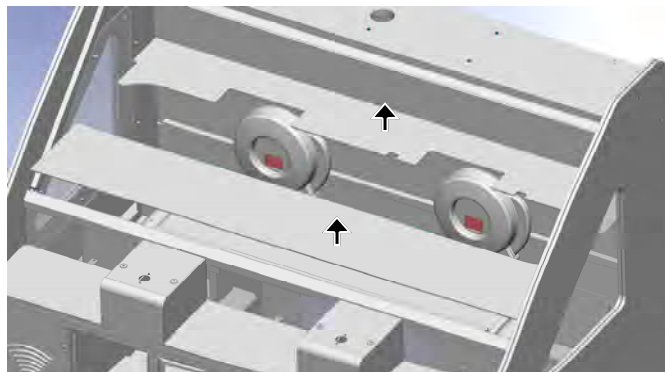
NOTE: BOTH OF THE ABOVE ADJUSTMENTS ARE NECESSARY WHEN THE BELT NO LONGER RUNS CENTERED ON THE BELT BOARD OR WHEN REPAIRS TO THE DUCK BELT ASSEMBLY ARE PERFORMED.

MOTOR REPAIR

1. Turn off A.C power
2. Remove cover glass by removing the 4 Allen screws that hold the glass retainer.

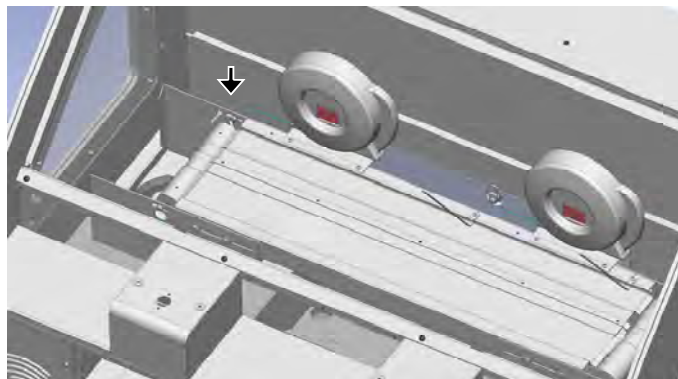


3. Remove the covers that are held in place with Velcro by lifting straight up and out.

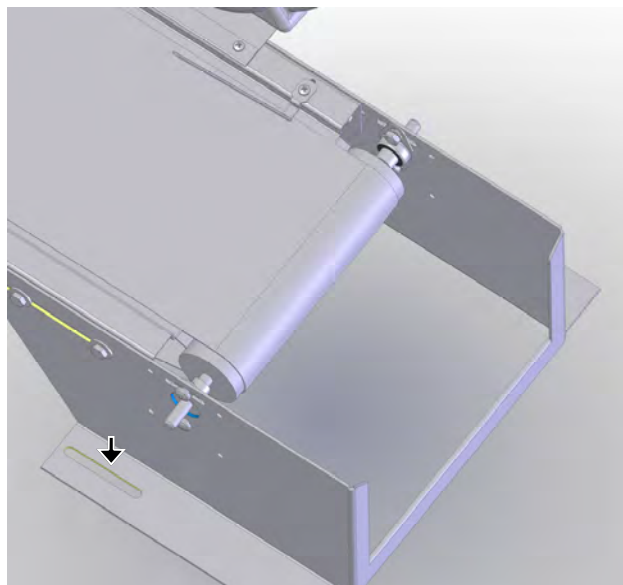


4. Remove the wires that are connected to the D.C. motor. They are located on the left side of the game, shown below with the arrow.

NOTE: MARK THE WIRES TO BE SURE THE MOTOR DOES NOT RUN BACKWARDS WHEN THE GAME IS POWERED BACK ON. IF THE BELT RUNS BACKWARDS THE BELT COULD BE SEVERELY DAMAGED.



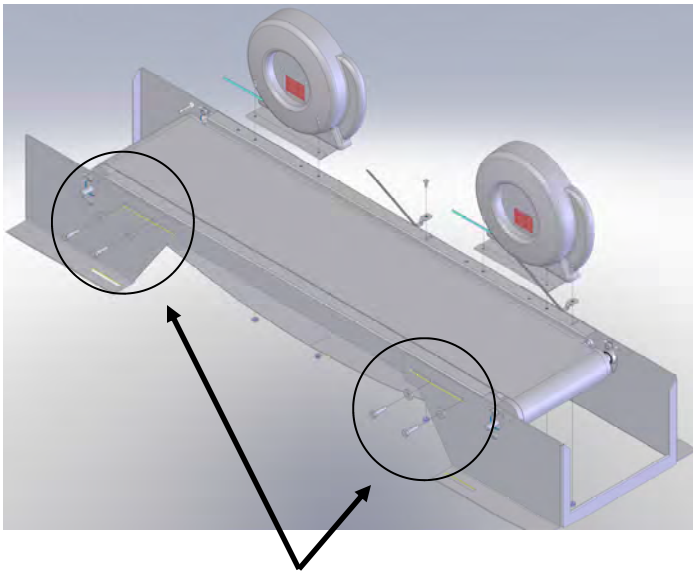
5. Remove the 4 bolts that hold the belt assembly into the game. Remove the belt assembly from the game. BE CAREFUL NOT TO SCRATCH THE GAME WHEN REMOVING THE ASSEMBLY. One corner is shown below.



6. Place the assembly on a suitable work surface.

GAME REPAIR

7. Loosen the 4 adjusting bolts on BOTH ends of the assembly to loosen up the duck belt.



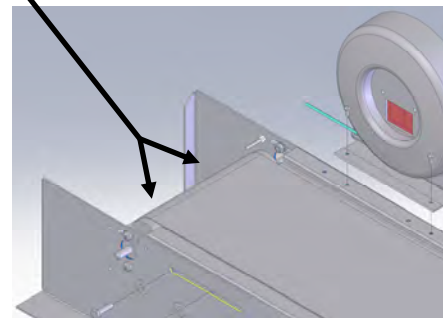
LOOSEN THESE SCREWS
(BOTH SIDES)

8. On the DRIVE MOTOR SIDE of the assembly, pull the belt to the side and loosen the 2 Allen set screws that hold the drive roller to the motor shaft.
9. Loosen the Allen set screws that holds the small roller bearing to the motor shaft.
10. Remove the 4 screws and nuts that hold the motor to the assembly.
11. RE-ASSEMBLE IN THE REVERSE ORDER.
12. NOTE: TIGHTEN THE SCREWS THAT HOLD THE MOTOR TO THE ASSEMBLY JUST TIGHT ENOUGH TO JUST SQUEEZE THE GASKET MATERIAL. OVER TIGHTENING COULD CAUSE SHAFT MIS-ALIGNMENT AND / OR EXCESSIVE MOTOR NOISE.
13. FOLLOW THE BOXER BELT ADJUSTMENT PROCEDURES AT THE END OF THIS SECTION.

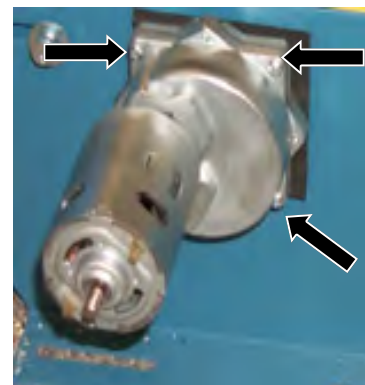
BELT REPLACEMENT

1. Turn off A.C power.
2. Remove cover glass by removing the 4 Allen screws that hold the glass retainer as shown previously.

3. Remove the covers that are held in place with Velcro as shown previously.
4. Remove the wires that are connected to the D.C. motor as shown previously. NOTE: MARK THE WIRES TO BE SURE THE MOTOR DOES NOT RUN BACKWARDS WHEN THE GAME IS POWERED BACK ON. IF THE BELT RUNS BACKWARDS THE BELT COULD BE SEVERELY DAMAGED.
5. Remove the 4 bolts that hold the belt assembly into the game as shown previously.
6. Remove the belt assembly from the game. BE CAREFUL NOT TO SCRATCH THE GAME WHEN REMOVING THE ASSEMBLY. Place the assembly on a suitable work surface.
7. Loosen the 4 adjusting bolts on BOTH ends of the assembly to loosen up the duck belt as shown previously.
8. On the DRIVE MOTOR SIDE of the assembly, pull the belt to the side and loosen the 2 Allen set screws that hold the drive roller to the motor shaft.



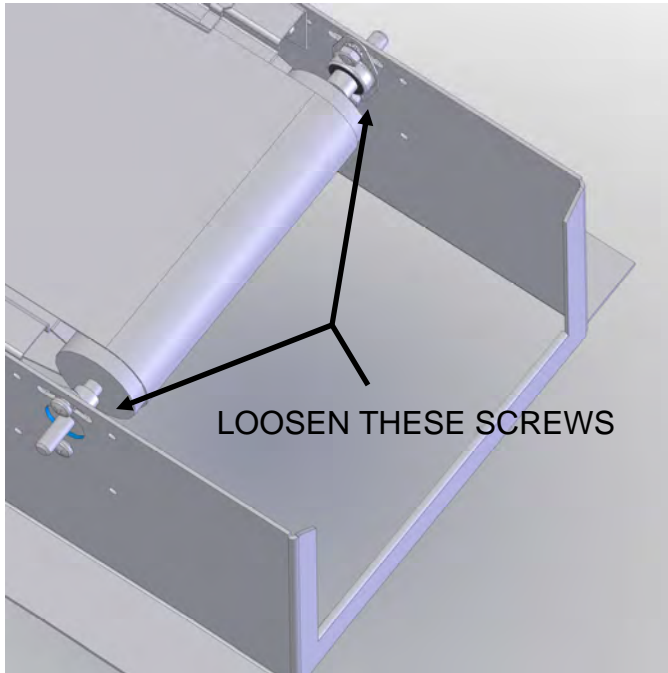
9. Loosen the Allen set screw that holds the small roller bearing to the motor shaft.
10. Remove the 4 screws and nuts that hold the motor to the assembly. Three are shown below.



GAME REPAIR

MOTOR MOUNTING SCREWS

11. On the IDLER ROLLER side of the assembly, pull the belt to the side and loosen the 2 Allen set screws that hold the drive roller to the motor shaft.
12. Loosen the Allen setscrews that hold the idler roller shaft and slide the shaft out.



13. Remove the 4 adjusting bolts on both ends of the assembly, separate the end brackets and remove the belt.
14. RE-ASSEMBLE IN THE REVERSE ORDER.
15. NOTE: TIGHTEN THE SCREWS THAT HOLD THE MOTOR TO THE ASSEMBLY JUST TIGHT ENOUGH TO JUST SQUEEZE THE GASKET MATERIAL. OVER TIGHTENING COULD CAUSE SHAFT MIS-ALIGNMENT AND / OR EXCESSIVE MOTOR NOISE.
16. FOLLOW THE DUCK BELT ADJUSTMENT PROCEDURES AT THE END OF THIS SECTION.

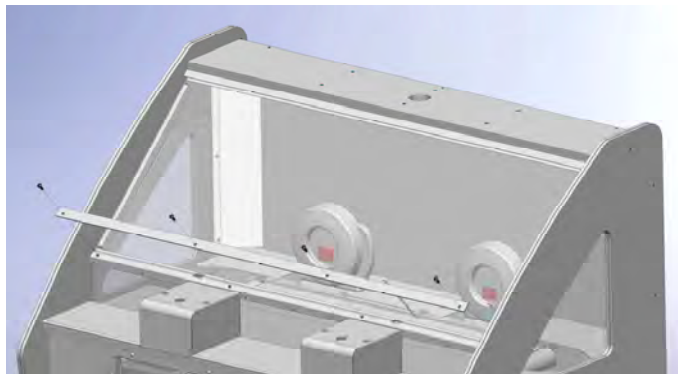
BOXER BELT ADJUSTMENT

1. **PRELIMINARY ADJUSTMENT** - Loosen the 4 bolts that hold the boxer belt assembly to the cabinet. They should be loose enough that the entire unit can be slid back and forth easily.
2. Loosen the eight bolts that are used to tighten the belt. There are 4 bolts on each end.
3. Loosen the bolts that secure the roller bearings to the assembly, and re-tighten them at the mid-point of their adjustment slots.
4. Tighten the bolts on the idler roller end of the assembly about 1/2" from the innermost position.
5. Pull on the motor end of the assembly to remove slack from the belt.
6. NOTE: WHEN THE BELT SLACK IS ADJUSTED PROPERLY THERE WILL BE NO MORE THAN 2 INCHES OF DROOP ON THE BOTTOM SIDE OF THE BELT.
7. If there is more than 2 inches, retighten the belt.
8. **FINAL ADJUSTMENT** - Start a game and notice how the belt track.
9. If the belt tracks to one particular side, loosen the bolts that adjust the roller bearings and move the roller in or out for proper tracking. This can be done during a game when the belt is moving, if done carefully.
10. It may be necessary to adjust both ends once or twice to get the optimum tracking.
11. NOTICE: DO NOT LET THE BELT DRAG ACROSS THE DUCK-UP RAMPS. THIS COULD CAUSE DAMAGE OR FRAYING OF THE BELT MATERIAL OR COULD DAMAGE THE SEWN BELT SEAM

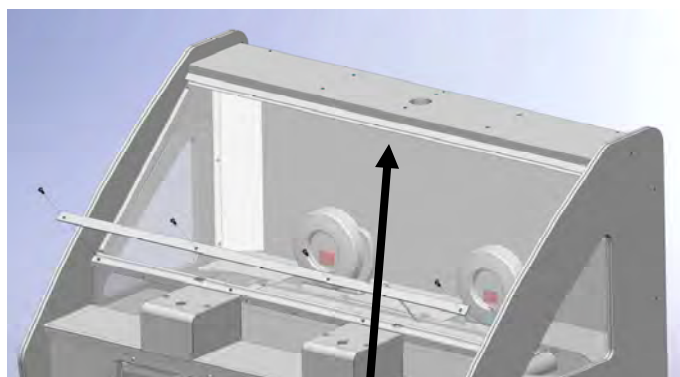
GAME REPAIR

BULB REPLACEMENT (Cabinet)

1. Remove cover glass by removing the 4 Allen screws that hold the glass retainer.

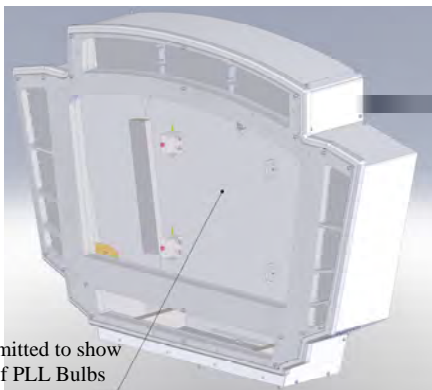


2. Access the bulb from underneath as shown below.



BULB REPLACEMENT (Marquee)

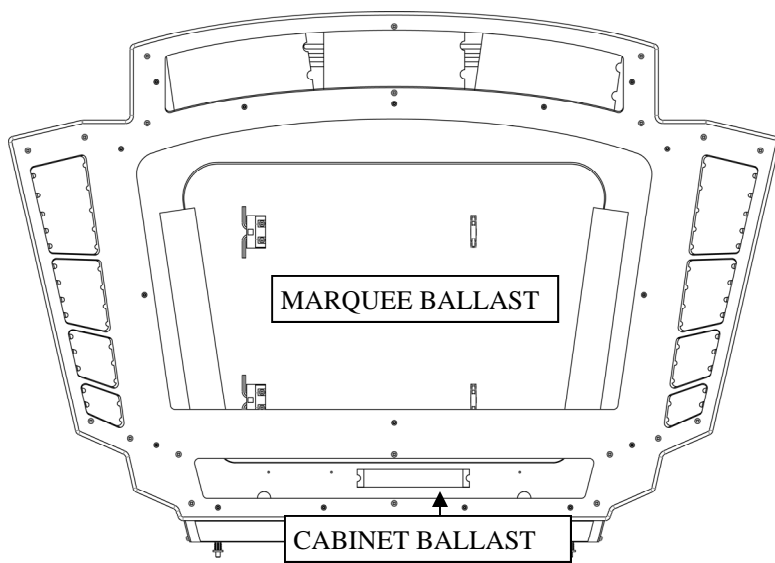
1. Open the back door of the marquee.
2. Located on the door are two PLL bulbs.



Door is omitted to show location of PLL Bulbs

BALLAST REPLACEMENT

1. Open back door of marquee.
2. Located at the top is the ballast "WORKHORSE 5" to power the marquee bulbs.
3. Located at the bottom of the marquee is the ballast "WORKHORSE 3" for the cabinet bulb.

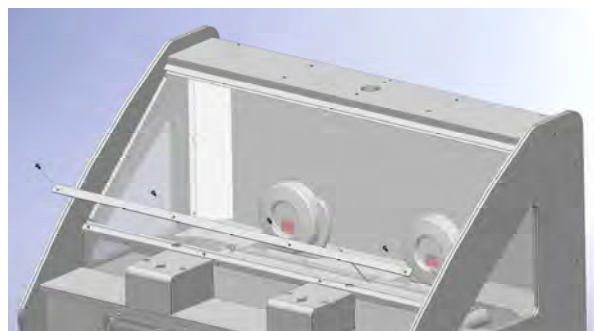


MAIN P.C. BOARD

1. Turn off all A.C. power and remove the power cord from the A.C. receptacle.
2. Remove the back door of the cabinet.
3. Remove all of the P.C. Board connectors, noting where each one connects onto the board.
4. Remove the 4 hex fasteners that connect the board to the cabinet.
5. Re-assemble in reverse order.

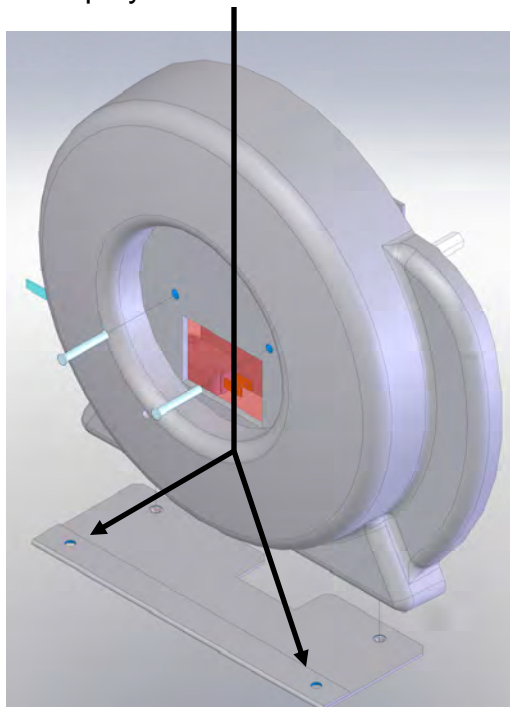
ROUND DISPLAY BOARD

1. Turn off all A.C. power and remove the power cord from the A.C. receptacle.
2. Remove front glass as shown below.

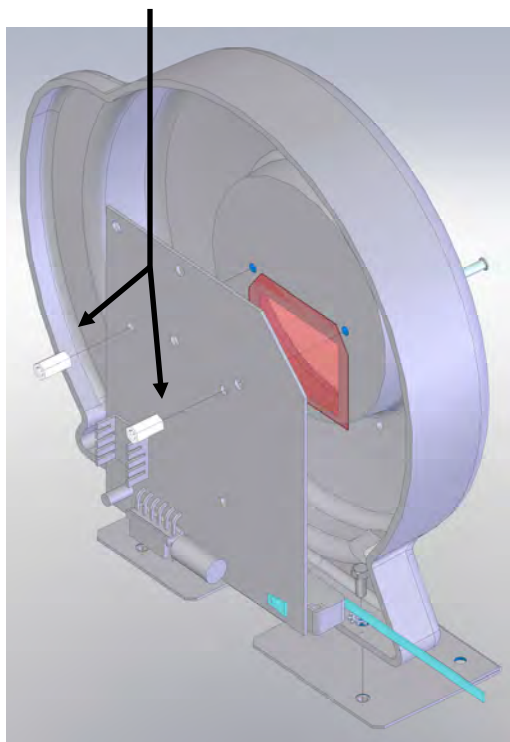


GAME REPAIR

2. Remove the two mounting bolts that hold the round display to the cabinet.



3. Unplug 6 pin harness
4. Remove the two plastic standoffs.



5. Assembly in reverse order.

MAINTENANCE

Maintenance is easy, as the game requires very little service under normal use. For your customers to get the greatest enjoyment from the game, please perform the following periodically:

- Clean the cabinet with soapy water or a commercial cleaner such as Fantastik™ or Formula 409™. Do not use any chemicals such as alcohol, benzene, or paint thinners that could damage the finish. Finish cleaning the cabinet by applying a good quality spray furniture polish.
- Clean the glass with a good quality glass cleaner.
- Adjust the Duck Belt to assure proper tracking and operation.
- Clean the coin mechs with a soapy water solution to remove dirt and grime.
- Clean the push buttons if they become sticky in use.
- Clean dirt and grime from the punching mechanisms if they become sluggish.

NOTE: DO NOT USE ANY LUBRICANT ON THE PUNCHING MECHANISMS, AS THIS WILL ONLY ATTRACT DIRT, WHICH WILL BIND, AND SLOW THE UNITS. If the punching mechanisms still respond sluggishly after cleaning, check you're A.C. line voltage to be sure it matches the way your game is set.

IF YOU HAVE ANY QUESTIONS REGARDING THE PROGRAMMING OPTIONS, PLEASE CONTACT OUR SERVICE DEPARTMENT

PHONE: 1-716-759-0360
FAX: 1-716-759-0884
E-MAIL: service@icegame.com

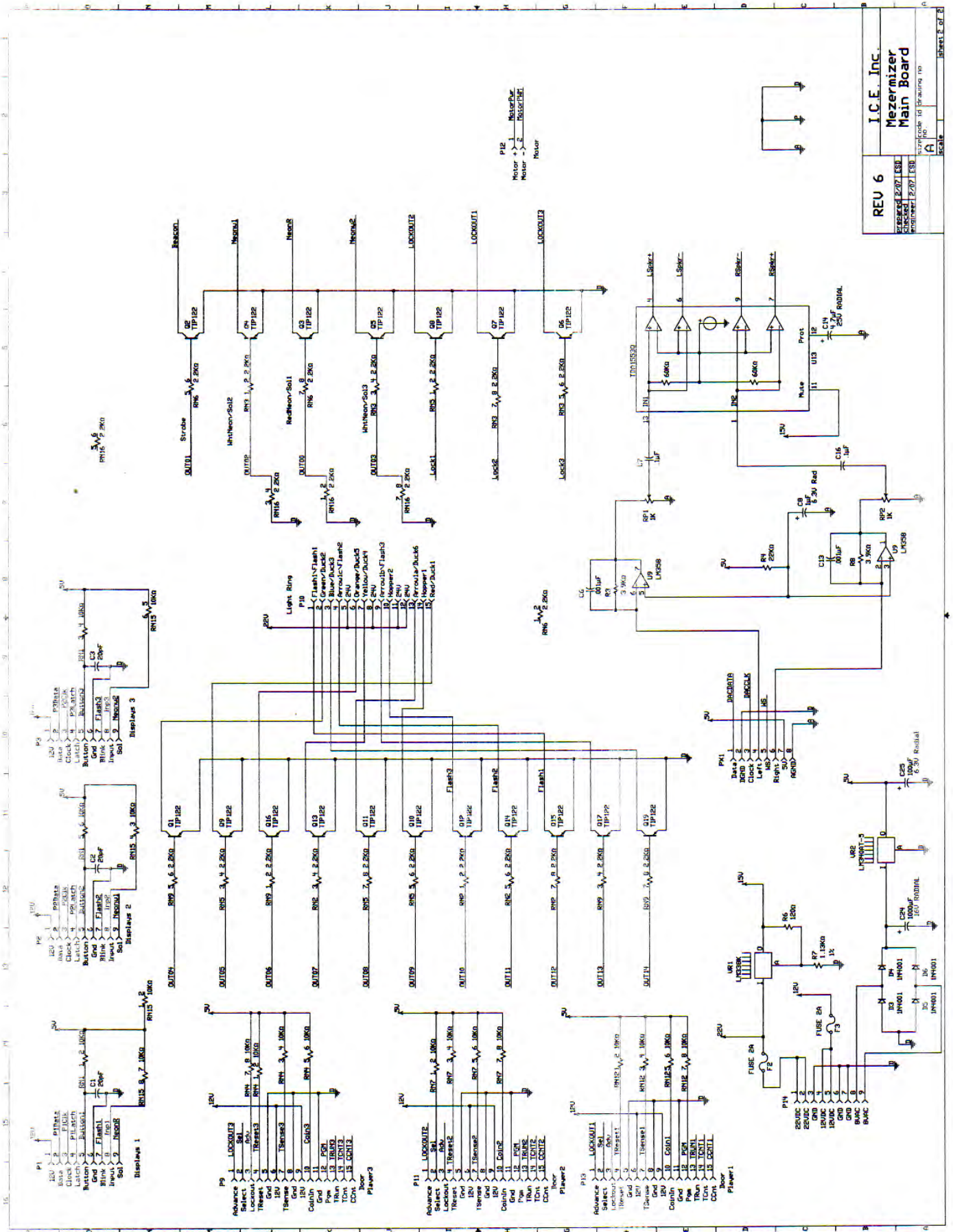
PARTS LISTING

MECHANICAL PARTS

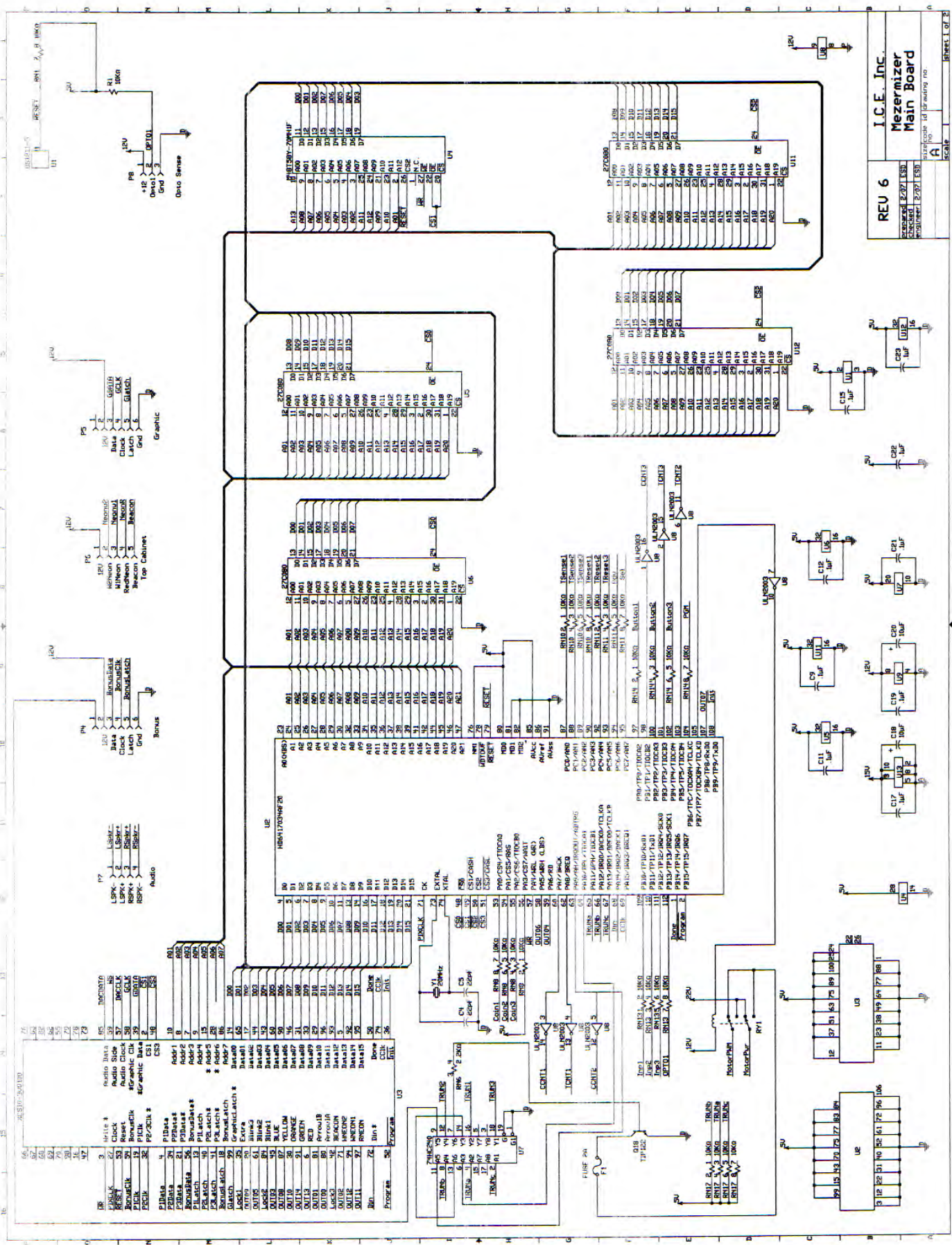
FP1019	LEVELER FOOT
HD1052	SWIVEL CASTER
WA5001	TRIPLE COIN DOOR
WK1001-P700	CONTROL BOX
WK1114	RAMP (BOXER LIFT)
WK1020-P802	PUNCH ASSEMBLY BRACKET
WK1022	SPRING PLUNGER LINK
WK1025	COIL RETAINER BRACKET
WK1026	HINGE WASHER, SQUARE
WK1050	BEARING, CONVEYOR ROLLER
WK1115	HINGE, BOXER TARGET UPPER
WK1116	HINGE, BOXER TARGET LOWER
WK4111	BOXER COLOR
WK4112	BOXER BLONDE
WK4113	BOXER ITALIAN
WK1052	PLUNGER SPRING
WK3005X	CONVEYOR ROLLER W / GRIT
WK3010	PLUNGER LINK BLOCK 1 ½ SQ.
WK3011	PLUNGER LINK #1
WK3012	PLUNGER LINK #2
WK3013	PLUNGER LINK #3
WK3014	PLUNGER LINK #4
WK3015	PLUNGER LINK, END
WK3016	PUNCHING GLOVE
WK1112X	CONVEYOR BELT ASSEMBLY
WK9001	SERVICE MANUAL

ELECTRICAL / ELECTRONIC PARTS

E00211	LOW TICKET SWITCH
2005	LIGHT BULB, #906
2026	THERMAL SWITCH
2364X	FAN ASSEMBLY
HH5005	TICKET DISPENSER
PC20224	12-VOLT COUNTER
PC20238	BULB SOCKET, TWIST
WK2001X	POWER SUPPLY
WK2002X	TRANSFORMER
WK2007X	POWER MODULE
WK2008	DRIVE MOTOR
WK2009	COIL, INCLUDES SLEEVE
WK2232X	DISPLAY P.C. BOARD ASSEMBLY
WK2234X	MAIN PCB
WK8284X	BALLAST ASSEMBLY
WK3011X	PUNCH ASY W/O SOLENOID
WK1020X	PUNCH ASY W/SOLENOID
WK1001BX	CONTROL BOX BOLT
HR2005	BUTTON
WK3005RX	CONVEYOR ROLLER (RIGHT)
WK3027	FRONT GLASS 20 7/16 x 49 3/8
8312	FLOOR BULB
E00049	LED (On display PCB WK2232x)
AL8384	BALLAST
CS8449X	BALLAST
E00418FRX	WHITE 3 LED TAPE ASY
E00418WKX	WHITE 12 LED TAPE ASY
E00439FRX	RED 3 LED TAPE ASY
E00439WKX	RED 24 LED TAPE ASY



REV 6
I.C.E. Inc.
Mezerizer
Main Board
 DATE: 02/27/ESB
 PART: 02/27/ESB
 Scale: 1:1
 Sheet 2 of 2



REV 6
 I.C.E. Inc.
 Mezerizer
 Main Board

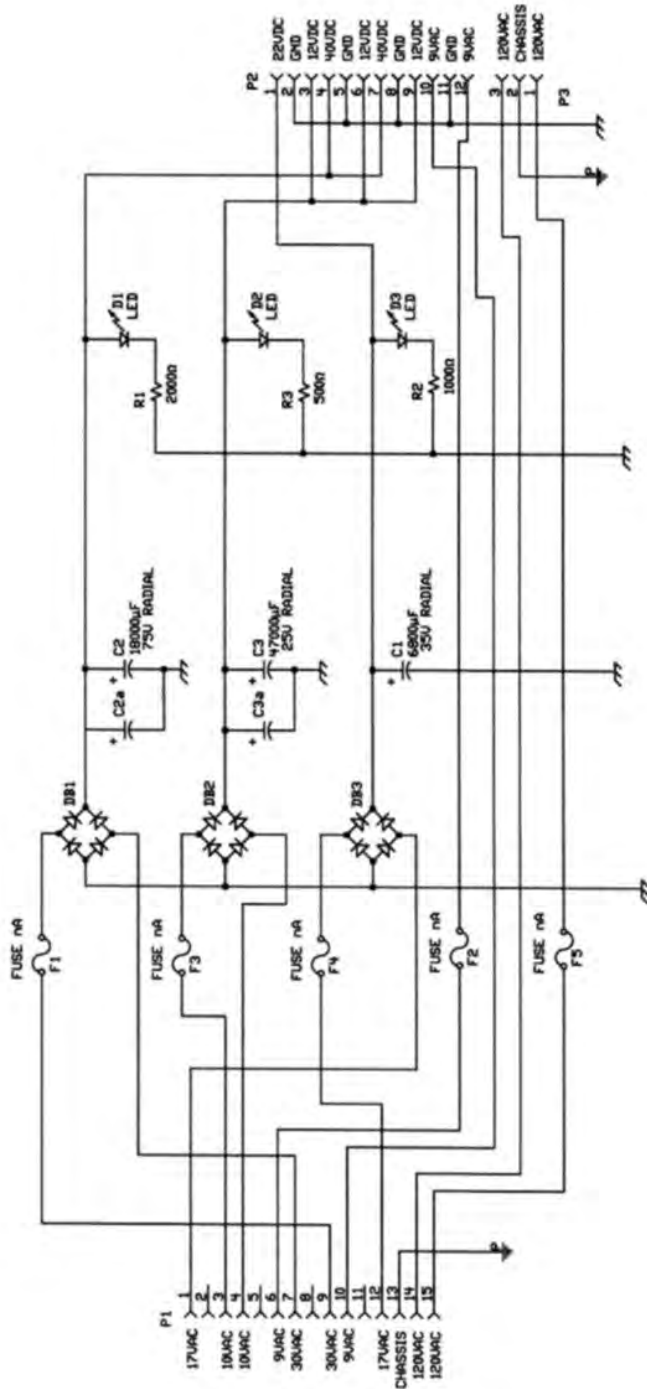
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 SCALE: A

DATE: 2-27-83
 DRAWING NO: 2-27-ES3
 SCALE: A

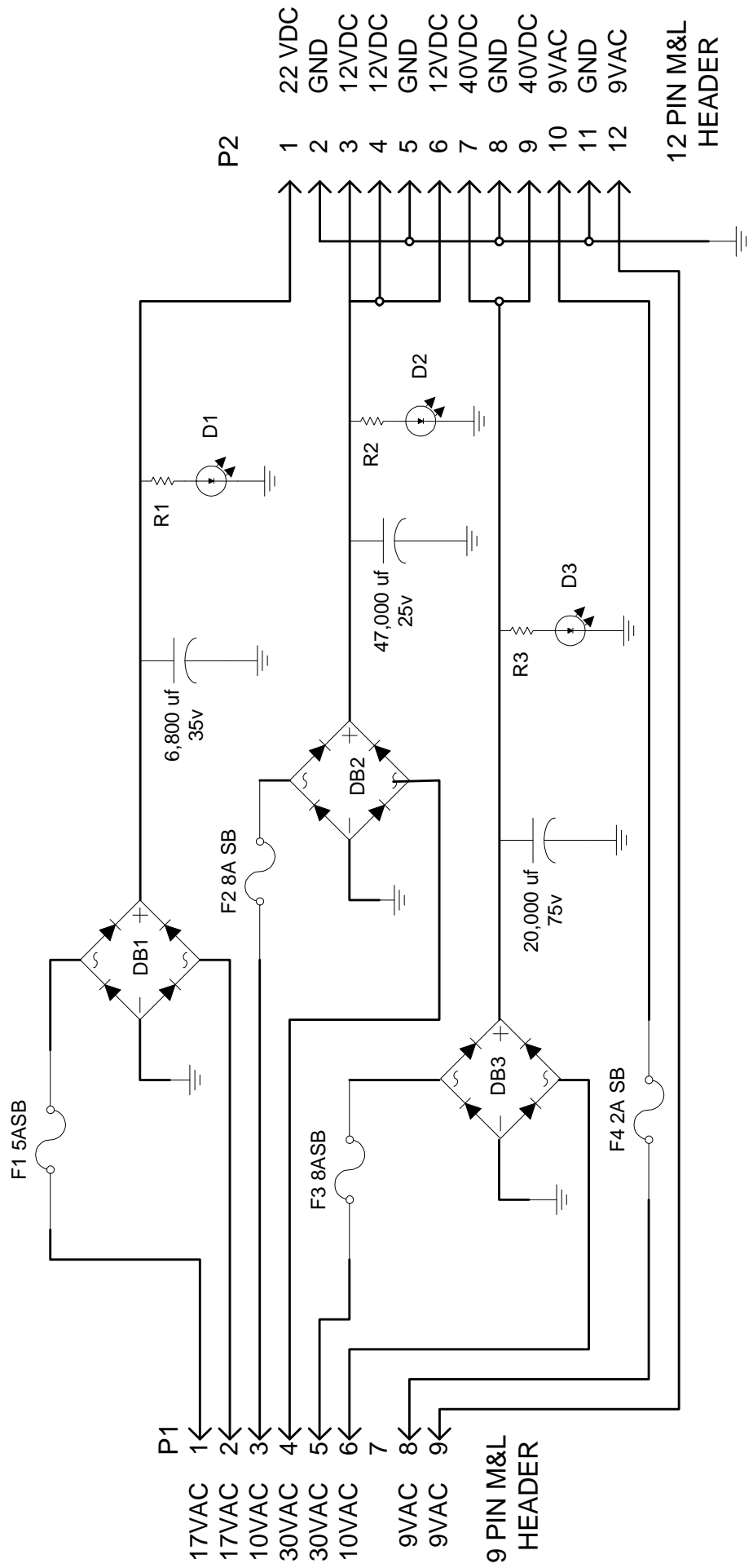
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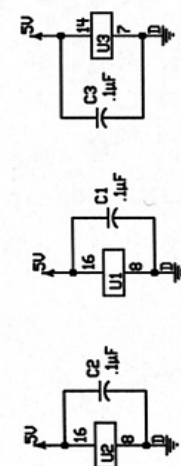
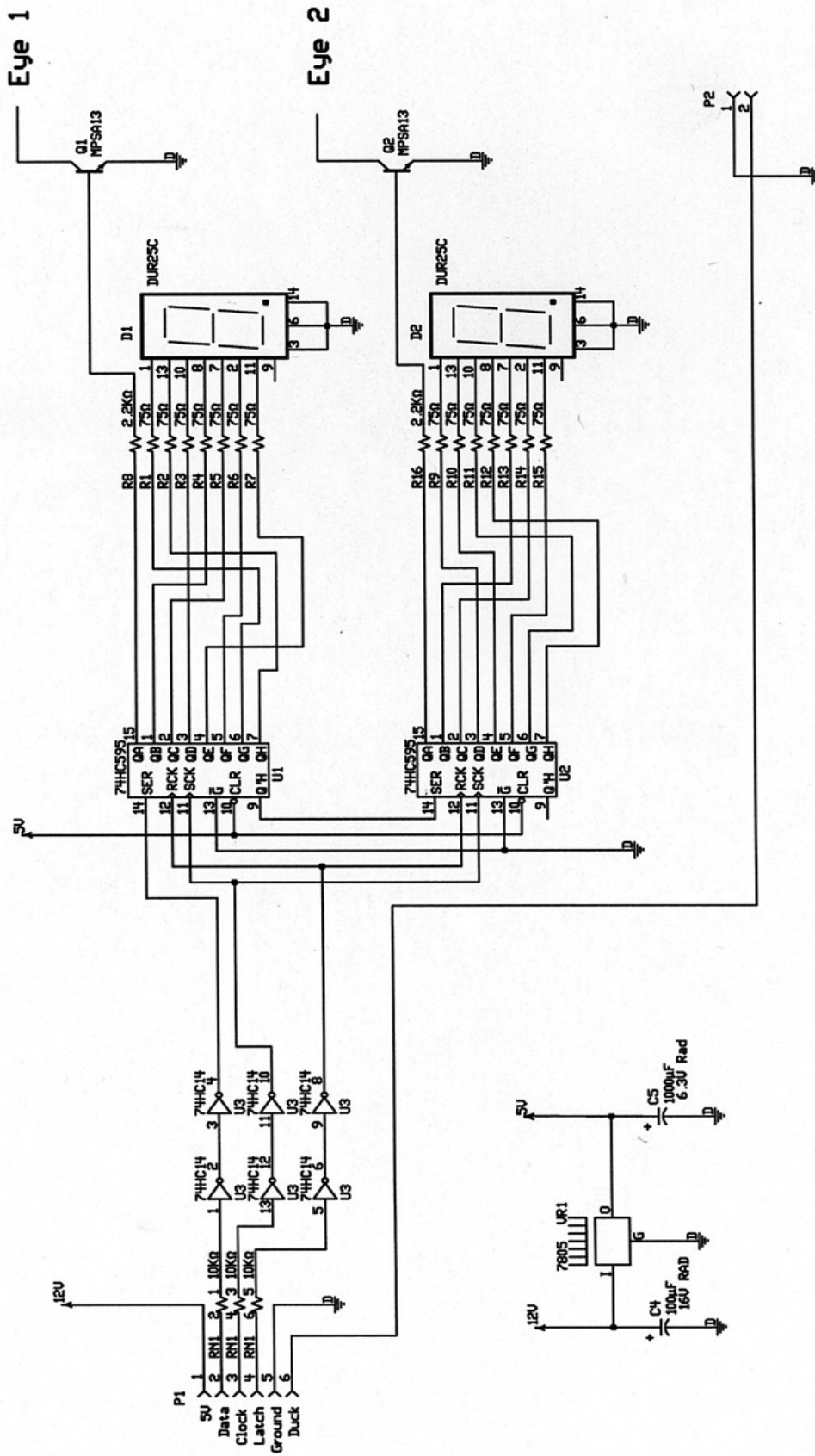
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 DRAWING NO: 2-27-ES3
 SCALE: A

DATE: 2-27-83
 DRAWING NO: 2-27-ES3
 SCALE: A



REV 1		I.C.E. Inc.	
DATE	ESD 1/20	Wacky Ducks	
DESIGNED	ESD 1/20	Power Supply	
SIZE	code id	drawing no	
A		WK2001B	
SCALE		Sheet 1 of 1	

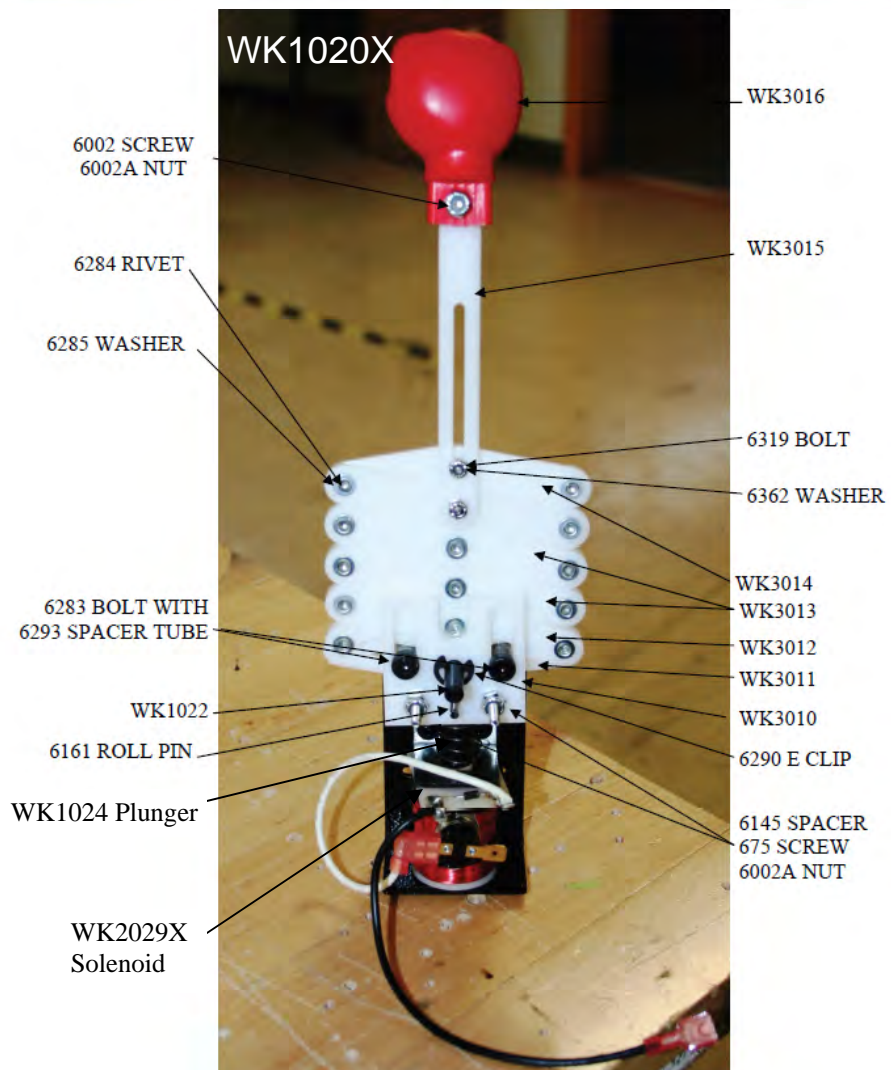
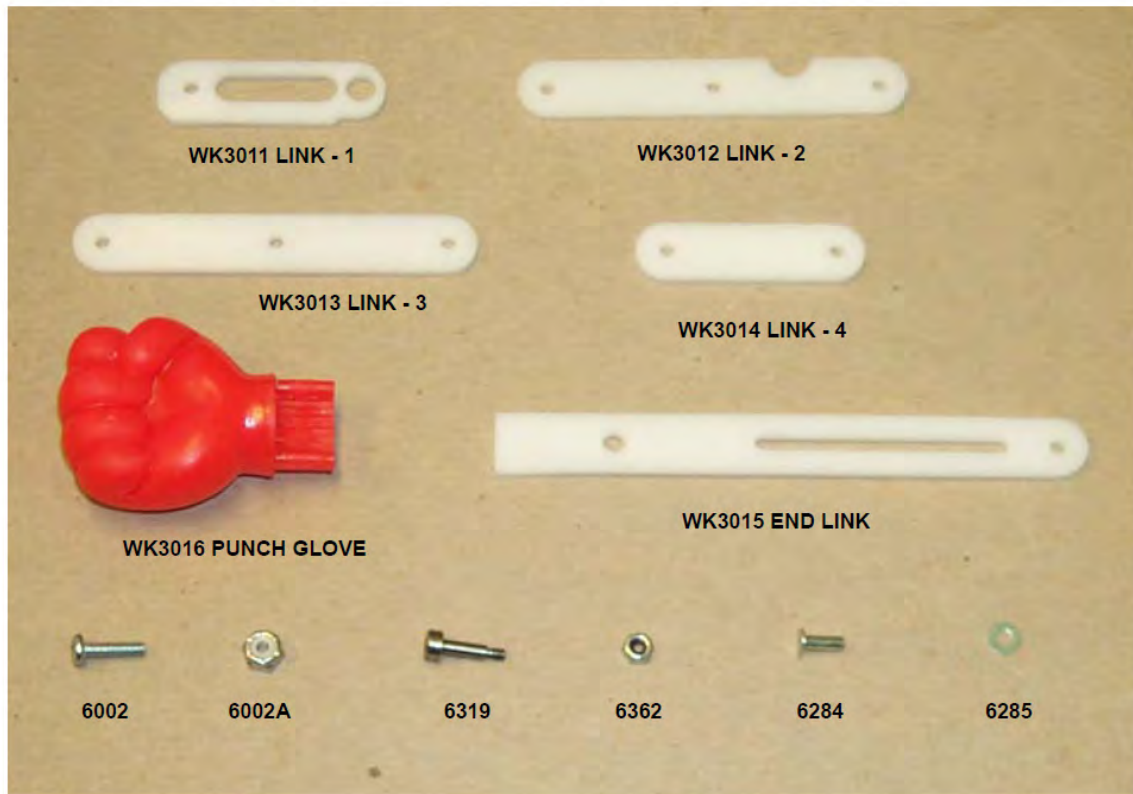




Rev 1		I.C.E. Inc.	
Prepared	3/00	ESD	
Checked			
Engineer	3/00	ESD	

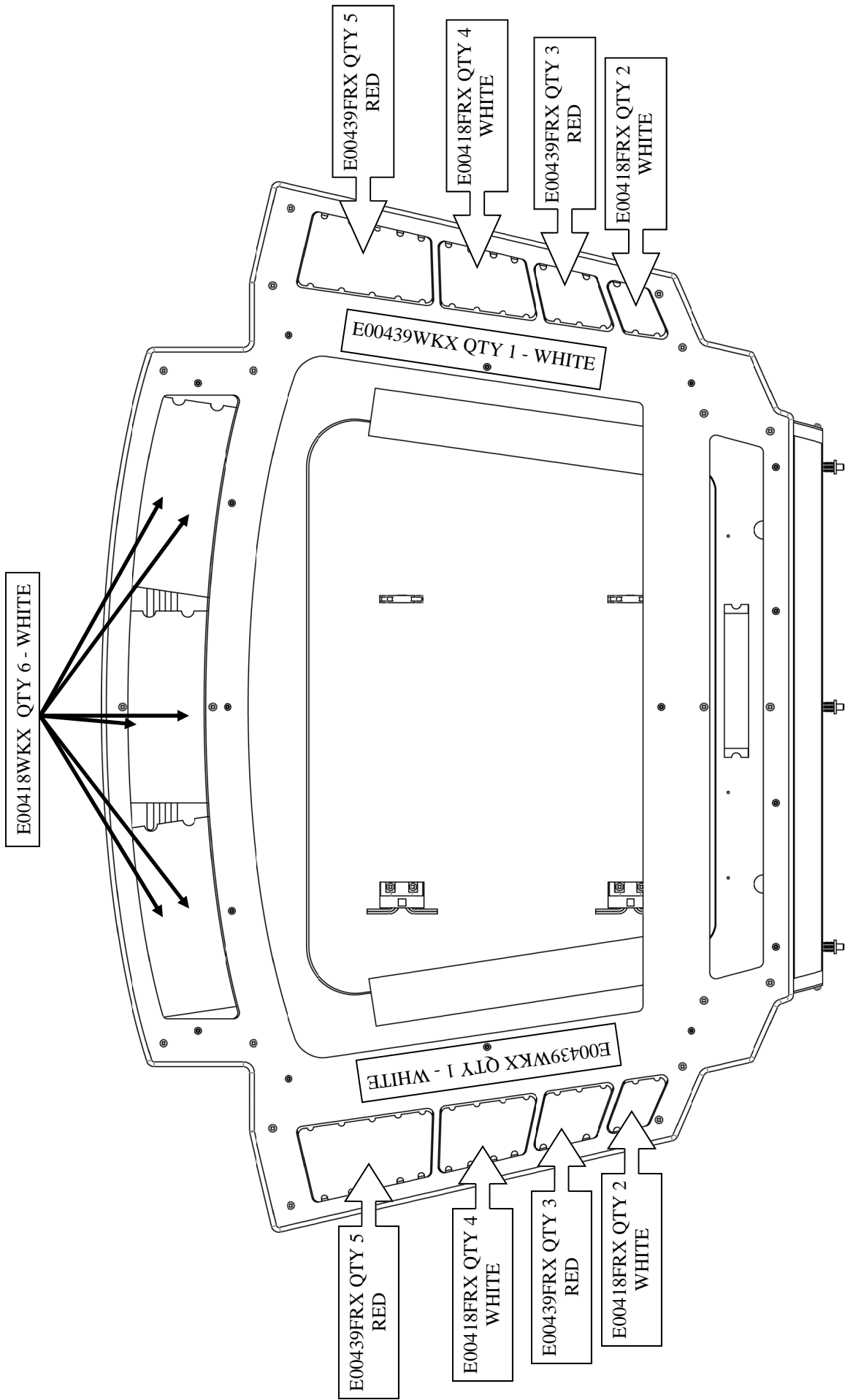
Wacky Ducks
Frog Board

WACKY DUCKS - PUNCHER SPARE PARTS





LED PART NUMBERS AND QUANTITY





WARRANTY POLICY

I.C.E. Inc warrants all components in new machines to be free of defects in materials and workmanship for the period listed below:

- 180 days on Main PCB's, Computers & Motors
- 1 year on all LCD monitor panels
- 90 days on all other electronic and mechanical components
- 30 days on all I.C.E. repairs and parts purchases

I.C.E. Inc shall not be obligated to furnish a warranty request under the following conditions:

- Equipment or parts have failed through normal wear and tear
- Equipment has been subjected to unwarranted stress, abuse or neglect
- Equipment has been damaged as a result of arbitrary repair/modification

Products will only be covered under warranty by obtaining an I.C.E. authorized RMA #. To obtain an RMA # please provide I.C.E. tech support with the game serial # or original I.C.E. invoice # and a detailed description of the failure or fault symptoms.

I.C.E. Inc will assume no liability whatsoever for costs associated with labor or travel time to replace defective parts. All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications.

I.C.E. Inc will cover domestic UPS ground, or comparable shipping costs during the warranty period. International or expedited shipments are available for an additional charge. To obtain credit defective parts must be returned to I.C.E. Inc, at the customer's expense, within 30 days. After 30 days a 15% re-stocking fee will apply to all returns.

ICE distributors are independent, privately owned and operated. In their judgment, they may sell parts and/or accessories other than those manufactured by I.C.E. Inc. We cannot be responsible for the quality, suitability or safety of any non-I.C.E. part or modification (including labor) that is performed by such a distributor.

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