

RACE CAR

FOR
INDOOR
USE
ONLY



OWNERS AND SERVICE MANUAL INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.

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FOREWORD

This Manual has been compiled to assist those whose task it is to operate and maintain the **Race Car**. It is essential that all operating and maintenance staff responsible for the safe operation of the simulator completely understand and comply with information herein.

Further advice and field support is available from:

I.C.E. SERVICE DEPARTMENT

716-759-0360

NORMAL BUSINESS HOURS ARE:

MONDAY – FRIDAY, 9:00 AM TO 6:00 PM EST

Warnings:

Operation of the **Race Car** without the proper electrical requirements will void the warranty.

OPERATION OF THIS EQUIPMENT IN A MANNER NOT SPECIFIED BY THE MANUFACTURER MAY RESULT IN THE PROTECTION DEVICES NOT AFFORDING THE LEVEL OF SAFETY NORMALLY PROVIDED.

ONLY TRAINED PERSONNEL ARE ALLOWED TO MAINTAIN THE SYSTEM.

RACE CAR IS A DYNAMIC MOTION SIMULATOR RIDE.

ANYONE WHO IS PREGNANT OR THINK THEY MAY BE, ARE SUBJECT TO MOTION SICKNESS, HAVE BACK OR NECK PROBLEMS, OR UNDER THE INFLUENCE OF ALCOHOL OR DRUGS, HAVE EPILEPSY, HAS A HEART COMPLAINT, OR OTHER MEDICAL CONDITION, OR IS OF A NERVOUS DISPOSITION, SHOULD USE CAUTION WHEN USING THIS RIDE.

SMALL CHILDREN SHOULD BE SUPERVISED BY AN ADULT.

NOTICE

Except as may be otherwise provided by contract, this SERVICE MANUAL, including the drawings and specifications are the property of INNOVATIVE CONCEPTS in ENTERTAINMENT. They are issued in strict confidence and shall not be reproduced, copied or used as a basis for manufacture or sale of any apparatus.

INTRODUCTION

GAME FEATURES

Thank you for purchasing the new **Race Car** from I.C.E. This ride utilizes all the technology of its predecessor. The **Race Car** motion is limited to a “side to side” motion. This unit was designed for children so a smoother motion is necessary.

11 Ga. Cold Rolled Steel was selected for all of the frame components. All steel components have been coated with an epoxy powder coat finish for excellent wear properties.

A fiber glass body with a gel coat finish and clear coat over all the official graphics; this adds a great look and a durable finish.

High quality bearings, with grease fittings, were used in all of the critical pivot areas. Performing scheduled maintenance will keep your **Race Car** running trouble free.

Cost was not the issue when selecting the drive motor, this is the heart and sole of the piece and needed to be “bullet proof”. Leeson and Hampton were the manufacturers selected.

Electronics and sounds are the state of the art in digital technology. Robust design ensures a long trouble free life for your game. The game is very flexible with its programming options to allow it to be tailored to most locations easily.

GAME PLAY

A person may begin his experience after he or she is seated securely inside the car. (THIS RIDE SHOULD NEVER BE RIDDEN WHILE STANDING. ARMS AND LEGS MUST REMAIN IN THE CAR AT ALL TIMES) He or she may begin by inserting the appropriate number of credits.

Then the player must determine which track he or she would like to ride.

If a player does not choose a track within 1 minute, he or she will lose their credits.

As the unit begins to move the player is advised to hold on to handle bar at all times. A PLAYER MUST NEVER TRY TO EXIT OR BOARD THE CAR ONCE THE MOTION HAS STARTED.

NOTE : ALL PERSONS NOT RIDING THE **Race Car** MUST REMAIN A SAFE DISTANCE AWAY.

INSTALLATION

BEFORE YOU BEGIN

WARNING: WHEN INSTALLING THIS GAME, A 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.

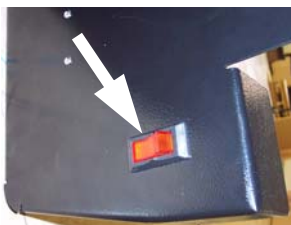
HAVE A QUALIFIED ELECTRICIAN CHECK YOU'RE A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.

THIS GAME IS DESIGNED TO DISSIPATE STATIC ELECTRICITY THROUGH THE GROUNDING PLANE OF THE GAME. IF THE A.C. GROUND DOES NOT WORK, THE GAME COULD DISCHARGE STATIC ELECTRICITY THROUGH THE GAME CIRCUITRY, WHICH COULD CAUSE DAMAGE.

INSTALLATION

The game comes ready to play with just a few simple things to keep in mind:

1. When installing the game, be sure you use a grounded A.C. outlet. If necessary, have it checked to be sure the ground is good.
2. Make sure the game is level after installation. It is necessary to make sure the game is level so the game will work properly.
3. The plug comes from under the ride, once the ride is plugged in, turn the illuminated switch to the "ON" position. See the figure below.



4. It is advised to test the DBV and coin mechanisms before opening the unit for use.
5. BE SURE THE **Race Car** IS IN AN AREA CLEAR OF ALL OTHER OBSTACLES. I.C.E. RECOMMENDS THAT NOTHING SHOULD BE CLOSER THAN 10 FEET TO THE COASTER.
6. Upon initial start-up the car will "rock" side to side to find "home" position, then it is ready to ride.

TO OPERATE THE RIDE AT VOLTAGES OTHER THAN THOSE IT WAS DESIGNED FOR, PLEASE CONTACT OUR SERVICE DEPARTMENT FOR VOLTAGE CONVERSION INFORMATION.

IF YOU HAVE ANY QUESTIONS OR COMMENTS REGARDING INSTALLATION OR PROPER FUNCTION OF THE RIDE, PLEASE CONTACT OUR SERVICE DEPARTMENT AT:

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

PROGRAMMING OPTIONS

INTRODUCTION

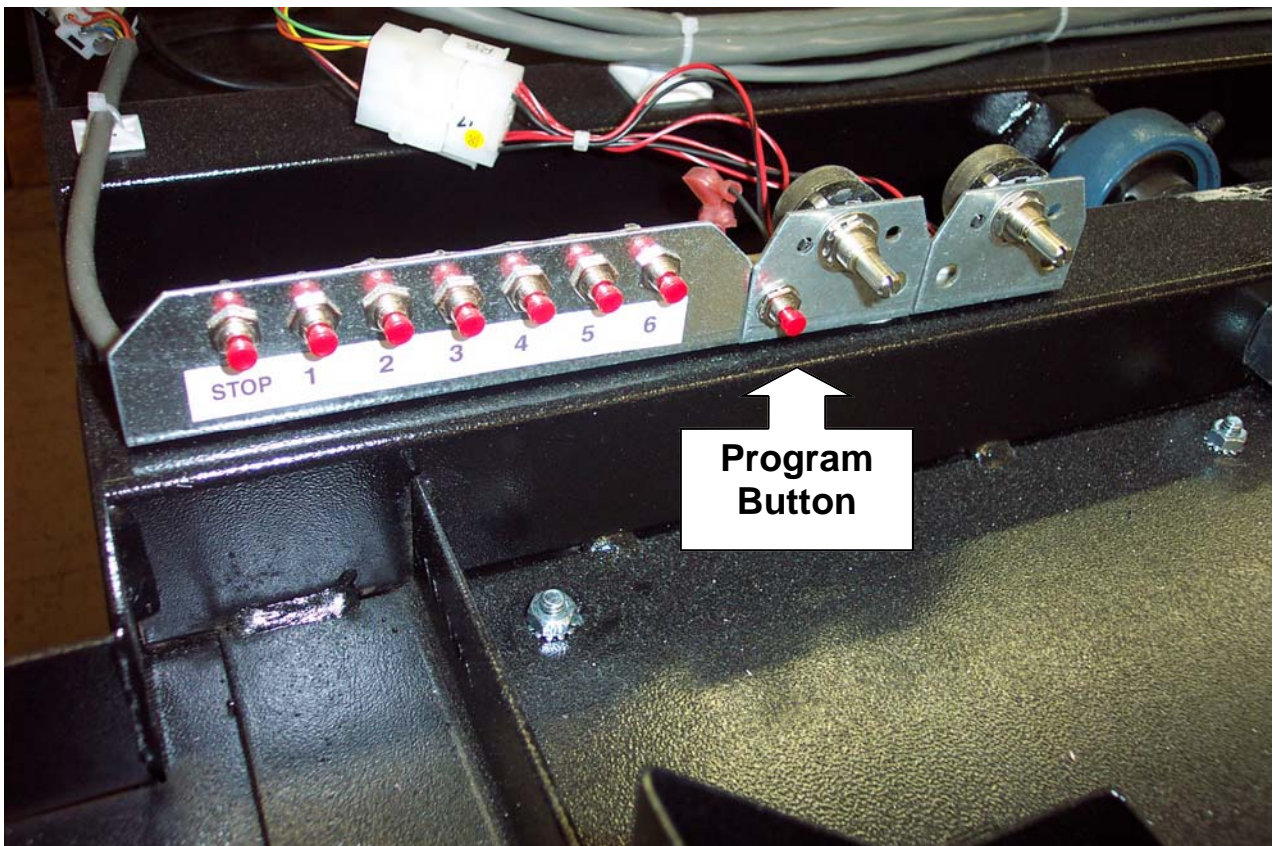
This section will describe in detail each of the programming options and how they work.

PLEASE READ THIS SECTION THOROUGHLY BEFORE CALLING OUR SERVICE DEPARTMENT. MOST QUESTIONS REGARDING SET-UP AND OPERATION WILL BE FULLY EXPLAINED HERE.

HOW TO USE THE PROGRAMMING OPTIONS

CREDIT SETUP

- 1) Turn the game on.
- 2) With the coin door open, press the button furthest to the right.
- 3) Bring up the programming screen and set the desired credits using the programming buttons.
- 4) When finished, press the stop button to reset the game. (See photo below)



MAINTENANCE

GENERAL MAINTENANCE

This game has been designed to be as trouble and maintenance free as possible.

With this in mind, only the basics are required to keep the game clean. Below are the main areas to take care of with specific directions.

BASE BELLOWS

The bellows is made from PVC and vinyl and may be cleaned with Windex or soapy water. Over time the bellows may begin to crack or ripe. At this point the bellows **MUST** be replaced.

Car Body

The fiber glass car body may be cleaned with a mild soapy solution, use rubbing alcohol to remove more permanent markings. **DO NOT use lacquer thinner or any other chemical cleaner!!!!** Dry the car off immediately and polish with a furniture polish for a perfect looking finish.

COIN MECHANISMS

The coin mechanisms should be cleaned periodically, as they will accumulate dirt, which will cause the coins to stick.

Remove the coin mech and clean them in a dish detergent solution and a stiff brush. Dry thoroughly and re-install.

DBV

The DBV requires little to no maintenance. An occasional cleaning and blow off with an air nozzle is all that's required.

MONITOR AND GLASS

The monitor glass can be easily removed for the best results. A standard glass cleaner may be used to clean the glass and the monitor.

LUBRICATION

There is very little maintenance to the coaster. The DC drive motor requires no lubrication. After several years with excessive use the brushes may need to be replaced. Once a year or sooner depending on usage, the reducer bearing and pillow blocks will require a minimum of 3 pumps of grease (lithium) as shown in the scheduled maintenance section of this manual.

SCHEDULED MAINTENANCE

MONTHLY MAINTENANCE

In order to keep your **Race Car** running smoothly for many years, you will have to perform maintenance in the following area at least once each month or every 1000 plays. Follow the simple instructions described on this page.

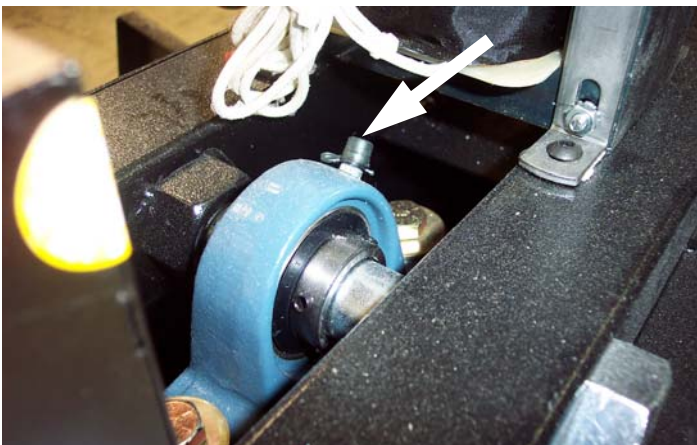
MAKE SURE THE GAME IS UNPLUGGED BEFORE BEGINNING ANY OF THESE PROCEDURES.

To access the areas for maintenance, the Bellows must be lowered. To remove the Bellows, remove the 6 bolts that secure the Bellows to the frame.

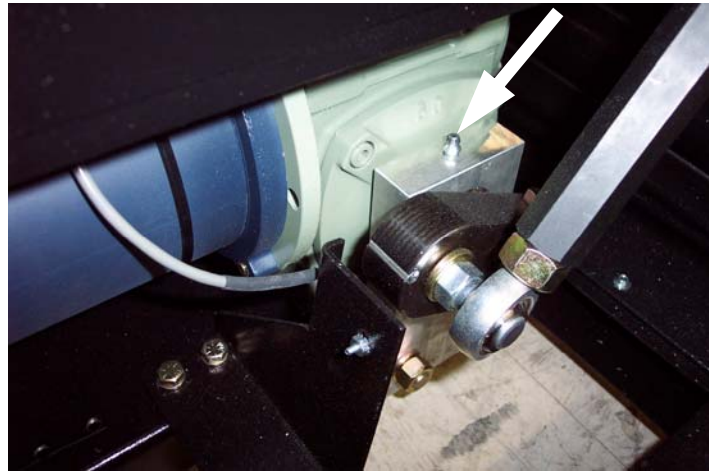
GREASE BEARING BLOCKS

Locate the 2 Bearing Blocks, 1 at the front and 1 at the rear of the ride. Remove the protective cap from the grease fitting.

Using a multipurpose grease, apply 3 pumps to the Bearing Block. Repeat for other Bearing Block. See photos below.



Locate the Bearing Block attached to the Gearbox. Using a multipurpose grease, apply 3 pumps to the Bearing Block. See photo below.

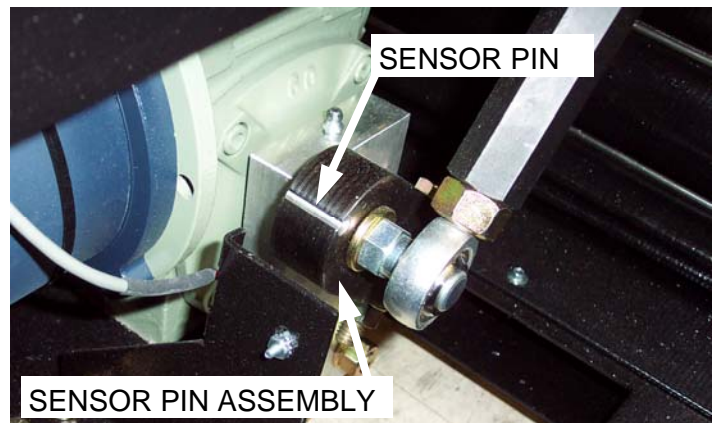


CLEAN PIN ASSEMBLY

To access the Sensor Pin, tilt the ride by turning the Motor Wheel until the Pin Assembly is visible. (Preferably the "12 o'clock" position)

Clean the Pin Assembly with rubbing alcohol. (DO NOT USE SOAP & WATER)

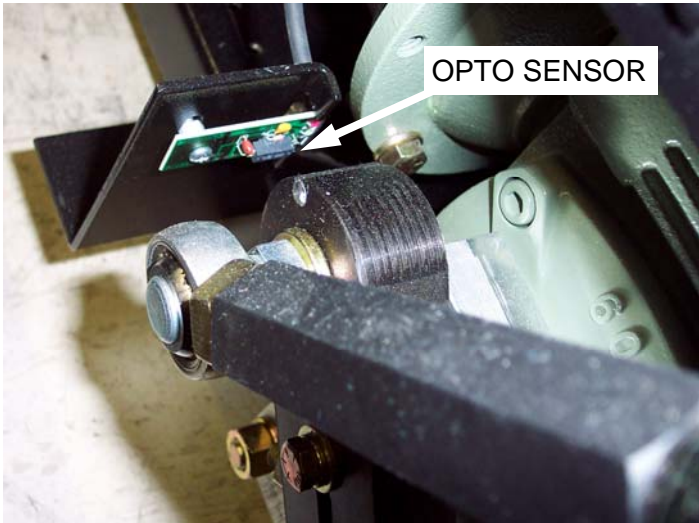
If rust or dirt appear on the Pin Assembly, this may cause the game to malfunction. Use a Black Permanent Ink Marker to paint Pin Assembly. **DO NOT PAINT THE PIN.** The pin must stand out as silver from the assembly, which should be black.



SCHEDULED MAINTENANCE

Wipe Off Opto Sensors

With a clean cloth, gently wipe off the Opto Sensors very carefully, as shown below. (The Opto Sensor is located to the left of the Sensor Pin Assembly.)



Return the ride to it's original position by turning the Motor Wheel in the opposite direction until the ride is level.

Once all maintenance is complete be sure to re-attach the bellows to its original position before turning the ride on.

QUICK TROUBLESHOOTING

GAME WILL NOT TAKE OR ADD MONEY CORRECTLY:

- Micro switch not working or returning properly. Check and repair or replace as necessary.
- Bad Harnessing or connector. Check w/ohm meter and repair as necessary.
- Game programming set incorrectly. Check programming option and re-program if necessary.
- Bad Main P.C. Board. Check and repair or replace as necessary.

RACE CAR WILL NOT MOVE / COASTER MOTION IS NOT IN SYNC WITH VIDEO:

- Home sensor is not adjusted to proper distance or faulty. Adjust or replace
- Motor sensor is not adjusted to proper distance or faulty. Adjust or replace
- Motor reflector is not spinning.
- Motion is turned off. Turn circuit breaker on (side of black box)
- Faulty wiring or connections. Check with meter.
- Striped gearbox. Replace
- Bad motor or brushes. Replace

RACE CAR HAS NO VIDEO:

- Loose connection. Check connections
- Game is not turned on or plugged in.

GAME REPAIR

WARNING: ALWAYS REMOVE POWER TO THE GAME BEFORE ATTEMPTING ANY SERVICE, UNLESS NEEDED FOR SPECIFIC TESTING.

FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

OPERATIONAL BACKGROUND

The **Race Car** game has been manufactured with modular design in mind. Almost everything in the game can be EASILY removed for servicing. This makes it much easier for the repairman as he / she can work in a quieter less distracting environment away from the Game Room floor.

Coin and low ticket sensing are done with conventional micro switches. In all areas of critical importance, optical sensors were developed specifically, and optimized for their particular application.

All P.C. Boards are made of premium quality board material and use time proven components to assure you of the most reliable designs possible.

We have put forth our best efforts and tested this game extensively to assure the best possible performance under the widest variety of operating conditions. We are ALWAYS however interested in our customers input for product improvement. If you have any questions or comments please feel free to contact our service department.

I.C.E. SERVICE DEPARTMENT

716-759-0360

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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. 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 socketed devices.

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.

GAME REPAIR

MECHANICAL REPAIR

MOTOR / HOME SENSOR REPLACEMENT

The Motor / Home Sensor is located at the rear of the car, just behind the “passenger” seat. To replace the Sensor, perform the following:

- 1) Unplug the car before any internal work is done.
- 2) Remove the two 5/32 Allen screws and the Kick Guard from along the bottom of the car on the “passenger” side.
- 3) Remove the Bellows by removing the two hex head screws located on the underside of the **Race Car** frame on the “passenger” side and the three hex head screws from the underside of the frame on the front of the **Race Car**
- 4) A number 2 Phillips screw driver will be needed to remove the sensor. (Note: take extra care removing this screw because it is thread locked) Do not lose the spacer (s) that is used for positioning the Sensor Board.
- 5) Cut any zip ties that attach the Sensor Harness.
- 6) Unplug the Sensor Harness from the from the gray harness.
- 7) Plug the new Sensor Harness and attach to the motor.
- 8) Be sure that the small spacer is between the Sensor and the motor for proper spacing from the Sensor Wheel.
- 9) Reassemble in reverse order.

**IF YOU HAVE ANY QUESTIONS OR
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SERVICE DEPARTMENT AT:**

716-759-0360

MON. THRU FRI. 9:00AM - 6:00PM EST

PARTS LISTING

MECHANICAL PARTS

NC4001	BELLOWS (LOWER SKIRTING)
CK1066	TIE ROD END
CK2008A	GEARBOX (HAMPTON)

ELECTRONIC / ELECTRICAL

CK2039HX	PCBA OPTO HOME SENSOR ASSEMBLY
CK2039FX	PCBA OPTO FAN SENSOR ASSEMBLY
CK2008X	LEESON MOTOR ASSEMBLY
CK1038NCX	MAIN PCB BOX
CK2002X	TRANSFORMER
8522	15 AMP ILLUMINATED CIRCUIT BREAKER
CK2012	12 VDC POWER SUPPLY
MON15LCD	LCD Monitor 15"
TS2005	BUTTON, LARGE SQUARE 54-0004-31
CK1030X	PROGRAMMING BUTTONS
CK9001	SERVICE MANUAL

DECALS AND GRAPHICS

NC7200	Graphics Package
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WARRANTY

I.C.E warrants all components in the **Race Car** game to be free of defects in materials and workmanship for a period of 90 days from the date of purchase. Furthermore, all MAIN P.C. BOARDS are warranted for 180 days.

This warranty does not cover items damaged due to normal wear and tear, subjected to abuse, improperly assembled by the end user, modified, repaired, or operated in a fashion other than that described in the service manual.

If your **Race Car** game fails to conform to the above-mentioned warranty, I.C.E.'s sole responsibility shall be at its discretion to repair or replace any defective component with a new or remanufactured component of equal to or greater O.E.M. specification.

I.C.E. will assume no liability whatsoever, for costs associated with labor to replace defective parts, or travel time associated therein.

I.C.E.'s obligation will be to ship free of charge, replacement parts by domestic U.P.S. Ground, U.S. mail, or other comparable shipping means. Any express mail or overnight shipping expense is at the cost of the purchaser.

Products will be covered under warranty only when:

- The serial number of the game with the defective parts is given.
- The serial number of the defective part, if applicable, is given.
- Defective parts are returned to I.C.E., shipping pre-paid, in a timely fashion, if requested by I.C.E.
- A copy of the sales receipt is available as proof of purchase upon request of I.C.E.

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



WARRANTY

ICE Inc warrants that all of its products will be free from defects in material and workmanship.

When placing a warranty request, please be prepared to provide the following information:

- Serial Number of Game or Bill of Sale
- Machine Type
- A Detailed Description of the Equipment Fault Symptoms

ICE product, including Cromptons, Sam's Billiards, Uniana and Bell Fruit is warranted as follows:

- 180 days on the Main PCB and Computers
- 180 days on Motors
- 90 days on all other components (i.e. DBV's, Ticket Dispensers, etc)
- 30 days on repaired items
- 3 years on all Crane Harnessing
- 9 Months on Printers

ICE Inc shall not be obligated to furnish a warranty request under the following conditions:

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

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

All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications. ICE Inc will cover all domestic UPS ground, or comparable shipping means, freight costs during the warranty period. Expedited shipments are available for an additional charge.

Defective parts are returned to ICE Inc, at the customer's expense, in a timely fashion.

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

I.C.E. Parts/Service Dept.
Innovative Concepts in Entertainment
10123 Main St.
Clarence, NY 14031
Phone #: (716) - 759 - 0360
Fax #: (716) - 759 - 0884