

# Service Manual <br> Innovative Concepts in Entertainment 10123 Main Street <br> Clarence, New York 14031 

## Table Of Contents

SAFETY AND WARNINGS BEFORE YOU BEGIN ..... 3
AC Power Information
Game Setup ..... 4
Marquee Setup ..... 7
Swipe Card Recommended Install Method ..... 12
Programming ..... 17
Game Options ..... 18
Marquee Options ..... 21
LED Functions ..... 24
Testing Functions ..... 25
How to remove the coil bed ..... 26
How to adjust the Sensors ..... 29
How to remove the shaft ..... 30
Shaft breakdown
Warranty ..... 31

## SAFETY AND WARNINGS 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.

NOTE: THIS GAME IS INTENDED FOR INDOOR USE ONLY.
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 YOUR 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.

THE POWER SUPPLY IS NOT VOLTAGE ADJUSTABLE. TO OPERATE THE GAME AT VOLTAGES OTHER THAN THOSE IT WAS DESIGNED FOR. PLEASE CONTACT OUR SERVICE DEPARTMENT FOR VOLTAGE CONVERSION INFORMATION.

## WARNING

DO NOT remove any of the components on the main board (e.g. compact flash and eproms) while the game is powered on. This may cause permanent damage to the parts and the main board. Removing any main board component part while powered on will void the warranty. 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.

THIS GAME IS NOT SUITABLE FOR INSTALLATION IN AN AREA WHERE A WATER JET COULD BE USED.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## AC Power Information

The games main fuse is accessed through the back of the game at the power mod. Above the power cord is a small panel that contains the main fuse.

The value of the fuse for 120 volt users is 7 AMPS at 250 Volt type slow blow.
The value of the fuse for 230 users is 4 AMPS at 250 Volt type slow blow.


## GAME SETUP

## Step 1:

Using a 45 key attached at the front of the game, remove the upper, back door key and put aside. Locate the hardware kit located in the cash box.

Unbox the upper marquee.


Step 2:
Place the marquee assembly on top of the cabinet.
Slide the assembly flush at the front.
Located in the hardware box are two 5/32 Allen wrenches and two 5/32 Allen drill bits. Use either for the next two steps.

Use four AA6220 Bolts and four AA6212 washers to secure the top marquee to the cabinet.


## Step 3:

Use four AA6220 Bolts and four AA6212 washers to secure the top marquee to the cabinet.

Note: the picture shows the back panel removed to clearly show where to install the bolts and washers.


## Step 5:

For games manufactured for use in the USA:
Located in the cashbox is the "AC cord". Plug the matting end into the $A C$ receptacle on the back of the game.

The other end plugs into a 110 V grounded AC outlet. The game is rated at 7 amps .

For games manufactured for use outside of USA:
Located next to the AC receptacle is the serial tag. The tag contains information for the incoming AC voltage and amperage usage. If the $A C$ input is rated differently than your country AC DO NOT APPLY POWER. Contact ICE service for assistance.


## Step 1: Marquee install with two, three, or four cabinets.

Position the cabinets slightly at an angle away from each other as shown below. If four cabinets are to be linked, the outer cabinets stay parallel to the inner cabinet next to it. They are not used in mounting the marquee.


## Step 2:

It is suggested to work from behind the cabinets when placing the marquee up top. With a helper and step ladders lift the marquee assembly up and place it onto of the top of the cabinets.

If you are linking three cabinets, the two outer cabinets are used to mount the marquee. The center cabinet is not used for mounting.

If you are linking four, the two center cabinets are used to mount the marquee.


## Step 3:

Located on the top are predrilled holes with inserts install. Align the marquee to these mounting holes and use four AA6069 $1 / 4-20 \times 2$ " bolts and four AA6057 fender washers to secure the marquee assembly to the cabinets. Keep hardware loose until all bolts are installed, then tighten.


## Step 4:

There are two different type of cables used to link the games together. Included with each game is a cabinet link cable. These cables have the exact connectors on either end. They are used to link the cabinets to each other. The second type of cable is the marquee link cable. This is included with the marquee. Connect the marquee connector to the marquee. The other end of that cable connects to the game on either side.


## VERY IMPORTANT: PLEASE READ BEFORE LINKING.

All Games must have in its software "GAME ID" option set to a number other than 0 . The game with its "Game ID" option set to 1 will be player 1. The game with its "Game ID" option set to 2 will be player 2. The "Game ID" option determines the player station the game becomes when linked. The games will link by default when they are credited. If only one station is coined up and no other player joins in, the game will start in solo mode and no other players can join in. Only 1 set of linked games can be going at the same time, so any additional games will directly enter solo mode if any other game is playing. A maximum of 4 games can be linked.

From the back of the game, connect the marquee link harness to the marquee. The other end of the cable connects to the game shown below. Now connect each cabinet you wish to link using the cabinet link cable that was included with the game. Only one cable is needed to link two cabinets.

Locate the AC power cord and attach this to the black box's AC receptacle.


To Finish the setup, you must set the "GAME ID" values so that they match the above picture.
See the next few pages on how to program both the cabinets and the marquee.

## Spot Light Install: 2, 3, or 4 cabinets.

If your marquee is to be mounted on top of three games, you should find 6 LED spot lights.
If you are installing on top of two games, you should find 2 LED spot lights.
If you are installing on top of four games, follow the two cabinet install instructions. You will find only 2 LED spot lights.

They are mounted to the cabinets by using one $8 / 32 \times 1$ " Phillips pan screw (AA6177). See below for correct positions.

## Three Cabinet Install



## Two Cabinet Install



The spot light power wiring for the spot lights are located at each side of the marquee's supports. Cut the tie strap and attach them to the spot lights. The harness length determines which spot light it will plug into. All connections are the same. Two of the harnesses are not used on two cabinet installs.


## Swipe Card Recommended Install Method

## Step 1:

Remove both back door covers and put aside. Unplug the harness that connects the stepper motor, +12 on the displays, and the home switch. This is shown as picture A. Unplug J1 on the NS2033X display driver board. This is shown as picture B. Unplug the two shown as picture C. Unplug 19 from the NS2033X board. This is shown as D. B through D are located on the NS2033X board as shown in the arrow below.


## Step 2:

Remove the four bolts shown with arrows using a $5 / 32$ Allen wrench. Then lift up on the pointer assembly and out. The point assembly hands on two bolt heads.


## Step 3:

Working inside the cabinet at the lower back door, remove the four 5/32 Allen bolts that hold the yellow plastic housing around the coil bed. Be careful not to damage any of the lower harnessing. A plastic shield lifts up and out if you cannot get your tool to the front bolts. The picture to the left shows the location of the Allen bolt. The floor is removed for clarity.

## Step 3:

Lift the yellow plastic housing up and out. Remove the two caps located the back of the drip pan. Clowns removed for clarity.


## Step 4:

Located under the yellow housing is a $3 / 4^{\prime \prime}$ hole that will allow the UCL harness extension to connect to the main UCL harness at the upper coin door. This cable is located in the cash box.

There are two spots on the yellow plastic housing. The right side is for the card reader. The left side is for the decal for labeling the player number of the game when the games are linked.

The option "GAME ID" determines the player number of the game when linked. By default this option's value is 0 .

YOU CANNOT LINK ANY GAMES WITHOUT A MARQUEE.


Universal Card link Connection
See Wiring Insert for wire colors and which connections are used.

Pin 1. +12 v - Supply to Card System $=$ Minimum of 2 A available for the card systems and a Max of 3 A .
Pin 2. Coin 1 - input to the game PCB.
Pin 3. Prize Meter/Ticket Notch 2- is connected to the Ticket Notch line between the game PCB and ticket dispenser. Optional.

Pin 4. Coin Meter 1 - is connected to the coin meter 1 output from the game PCB and can be used by card systems for monitoring purposes.

Pin 5. Ticket Run/Enable 2- is connected to the ticket run line between the game PCB and ticket dispenser. Optional.
Pin 6. Prize Meter/Ticket Notch 1- is connected to the Prize or Ticket Meter output from the game PCB and can be used by card systems for monitoring purposes. Optional.

Pin 7. Coin Inhibit/Enable- is connected to the Coin or Note Inhibit/Enable output from the Game PCB and is used where the game has this feature for disabling any payment. This is normally for states like New Jersey that limit the amount of money that can be inserted at one time.

Pin 8. Ticket Run/Enable 1 - is connected to the ticket run line between the game PCB and ticket dispenser in standard redemption games. This is commonly used for systems using paperless or E-ticket. Not Used if the game doesn't have this output.
Pin 9. Ground- is connected to the common Ground connection, the same ground as the Game PCB.


## Programming Options

Located in the upper coin door is the operator control panel to adjust the games' settings.

Press the "PROG" to enter programming.
The center display panel will show you the option and its value. Press the "SEL" button to scroll through the many options. Press either the "UP" button or "DOWN" button to change the values. When finished, press the "PROG" button to exit.

The game will reboot using the new settings.
Note: When using the game in single player mode, you must set the ID number to 0 . Any other value will indicate to the game it's player position when linked with other games even when it is not.

When linked, ID becomes the player number for that cabinet. Do not set two games with the same ID if linking.


## Programming Options for Version 2.11

Coin 1 / Cost of Game, $0=$ Free.
Description: How many pulses to start a game.

Coin 2 / Number of Coin 1 Pulses this line is worth.
Description: This is referring to the wire labeled Coin 2.
Allows use of a higher value coin. This value is multiplied.

DBV/ Number of Coin 2 Pulses this line is worth.
Description: This is referring to the wire labeled DBV.
This value is multiplied.

Game Time/ Game in Seconds 25
Description: How long the game will play in seconds.
MinTickets/ Minimum tickets to win, not additional tickets. $\quad 0 \quad 0 \quad 001$
Description: It only pays this if you win less than this value.

Game ID / Game ID, 0 = Not Linked, Requires Marquee!
Description: Assigns a player number to the cabinet.

Max Reds / Max Reds Hit Per Game $10 \quad 0$
Description: Clowns stop turning red when you reach this value.

No Pinks / $0=$ Pinks allowed, $1=$ not
Description: Disables the color Pink when lighting clowns.

Game Light On / 0 = General Game light left on, 1 = not 0 Description: Disables the general illumination.
$\begin{array}{llllll}\text { Score Divider / Score to Tickets (Score/Divider) truncated. } & 50 & 10 & 500 & 10\end{array}$
Description: Determines how many tickets to pay player.
$\$ 2 \quad 50$ = Divider Average 55-60 Tickets per play
$\$ 1.50 \quad 70$ = Divider $\quad$ Average 40-45 Tickets per play
$\$ 1 \quad 100$ = Divider $\quad$ Average 25-30 Tickets per Play $\$ .50 \quad 200=$ Divider Average 12-15 Tickets per Play

Attract Time / Attract time in minutes
2
030
Description: How long to wait between attract audio.

Link Time / Link Waiting Time, 0 = off
10
060
Description: Delays start of game when linked.

Ticket Cap / Max Tickets Given per game, 0 = off
Description: Maximum amount of tickets a player can win.
$\begin{array}{llllll}\text { Ticket Split } / 0 \text { = use marquee ranking (link required). } & 0 & 0 & 1 & 1\end{array}$
Description: 1 = use base as score (no link).

Ticket Multiplier / 0-JFF/FREE, 1-Normal, 2-1/2 physical
1
Description: $0=$ No tickets/Free game, 1 = normal, or $2=1 / 2$ tickets out. See description below.

Bonus Score Base / Target Base Score (unlinked) $\quad 4000 \quad 0 \quad 9950-50$
Description: How much to score to win bonus (on power on).

| Ticket Bonus / Bonus Tickets (unlinked) | 500 | 0 | 990 | 10 |
| :--- | :--- | :--- | :--- | :--- |
| Description: How many tickets you win when bonus is won |  |  |  |  |
| except when Ticket Multiplier is set to 0. |  |  |  |  |

Games 2 Dec / Losses/Target Score Drop (unlinked) $\quad 1 \quad 0 \quad 251$
Description: How many games to loose before lowering score.

Score Drop / Score to Drop By upon Score Dec 10
Description: How much to lower the score when decrementing.

Min Score to Inc on Win / Actual Score or Inc which ever higher
500
$1001000 \quad 10$
Description: Adds this amount if score is less

## HOW TO AWARD A BONUS GAME INSTEAD OF TICKETS OR POINTS:

To activate the free game award you must set "Ticket Bonus" to 0 and set "Ticket Multiplier" to 0 . Then FrEE will be displayed instead of "Tickets" or "Points". When the bonus is won, instead of points or tickets, you get a free game. You cannot win a free game when playing a game won.

Color 1 / Color 1 - Attract Color
Description: See table for options.

Color 2 / Color 2 - Attract Color
Description: See table for options.

Color 3 / Color 3 - Attract Color
Description: See table for options.

Color 4 / Color 4 - Attract Color
Description: See table for options.

Points or Tickets
Description: What to display. $0=$ Tickets, $1=$ Points

Factory Reset / Factory Reset
ATTRACT COLOR TABLE:
1 = Red
5 = Pink
2 = Green
6 = Cyan
3 = Yellow
4 = Blue

## Programming The Marquee

All games must have a different game ID number assigned in options before you can proceed with marquee programming. Only game ID one can control the marquee for programming.

Press the "DOWN" on game ID one to enter programming. All clowns will go red to confirm they are in marquee program mode. All clowns will be off if only in game programming mode. The marquee will show the following screen.


This screen is showing how many game it has detected and their current status. This screen can be used to verify that the cabinets communicating with the marquee. Next to the game ID number is a status light. There are three different colors they can be. Yellow means that the games are connected together and are idle. If you where to coin up all other games connected, their status would change from yellow to green meaning they are current linked and playing a game. If you only start one of the game, the status would turn purple. To exit this mode, press and hold the "SEL" button for 2 seconds. The first option will now be displayed on the screen. Press and hold for 2 seconds the "SEL" button to advance to the next option. Press and hold for 2 seconds the "UP" or "DOWN" button to change the option value. Press "PROG" to exit.


2 SECONDS

## Programming Options for Marquee

To enter marquee programming mode all games must be in attract mode and not be in the middle of a game. Only the game set to "game ID" 1 can program the marquee. Press the "down" button.


Save bonus / $1 \quad 0 \quad 1$
Description: Save the current high score on power loss.

## Color 1 /

Description: See LED color table.

## Color 2 /

Description: See LED color table.

Color 3 /
Description: See LED color table.

## Color 4 /

Description: See LED color table.

## Factory reset /

0
Description: Resets all values to default values.

## Even tickets /

0
$0 \quad 1$ even number.

## Programming Options for Marquee

Option and Description
2 player first place tickets/ For 2 player games.
Description: Pays this amount in tickets regardless of score.

2 player second place tickets/ For 2 player games.
Description: Pays this amount in tickets regardless of score.

3 player first place tickets/ For 3 player games.
Description: Pays this amount in tickets regardless of score.
3 player second place tickets/ For 3 player games.
Description: Pays this amount in tickets regardless of score.

3 player third place tickets/ For 3 player games.
Description: Pays this amount in tickets regardless of score.

4 player first place tickets / For 4 player games.
Description: Pays this amount in tickets regardless of score.

4 player second place tickets / / For 4 player games.
Description: Pays this amount in tickets regardless of score.
4 player third place tickets / / For 4 player games.
Description: Pays this amount in tickets regardless of score.

4 player fourth place tickets / / For 4 player games.
Description: Pays this amount in tickets regardless of score.

Score or tickets / 0 = score or 1 = rank.
1
30

20
199001

Description: How does the game dispense winning tickets.
Game and Marquee must be set the same.
Bonus is paid regardless of setting.

Tickets or Points Text $/$ Set to $0=$ "TICKETS", $1=$ "POINTS". $0 \quad 0 \quad 1$
Play for Fun / If set to 1, Linked games will give a free game $0 \quad 0 \quad 1$ instead of tickets.

NOTE: Game will still display player's ranked tickets unless "score or tickets" is set to 0 . NOTE: A marquee is required to allow linking, no marquee - no linking.

## LED functions



D4- (Brain board), indicates the board is powered and operating.

D2 -(Brain board) - flashes as the board access the compact flash card

## Testing:

When power is applied to the game, the game will perform a clown test. If any clown lights "Red", you need to note which clown it is and check the sensor associated with it. If a clown lights green it is good. After the clown test, the game will go into attract mode and all clowns will not stay these colors.

To identify that an issue was detected with the clowns, the arrow board will go to the second highest setting, which should be easily identifiable from a distance. Power cycle the game to see which clown or clowns are bad or preform a test below.
In order to enter the "Test modes", the game must be in attract mode with no one playing. Pressing the select button will enter the test mode. Press the "UP" button to cycle through the 7 available tests. The test number will be displayed on the back display. When it displays the test number you wish to preform, press the "SELECT" button. Pressing the "PROG" button will exit the test, unless you are in Test 5 which requires a power cycle once you finish with the test.

## Test 1

"Clown Fire" - this test will raise each clown up to see if it sees the sensor. At start, the clown will be Blue. The solenoid fires and if the sensor changes state, the clown turns green. If the sensor doesn't change state, the clown goes Red. However, this does not determine if the sensor is properly set, only that it has not changed from +5 VDC to 0 VDC back to +5 VDC.

## Test 2

"RGB Test" - Each clown will change color from blue to green and then to red. This is used to test the RGB LEDS of the clowns, side RGB LEDs and also the top RGB LEDs.

## Test 3

"Link info" - This test will show graphically at the back which stations can be linked.

## Test 4

"Arrow Test" - This test will move the arrow to far right position, lighting the pie lights along the way.

## Test 5

"Clown Raise" - Exiting this test requires a power cycle. All the clowns will turn RED. First wiggle each clown in place. All clowns should stay red. If any change color, then see "how to adjust sensors" to correct this fault. Doing one clown at a time, pull the clown toward you and lift up keeping pressure forward. The clown should turn green when the plunger is no longer blocking the sensor below. If the clown flickers see "how to adjust sensors" to correct this fault. Now push back on the same clown head and lift up. Again, the clown should light green. If the clown flickers see "how to adjust sensors". Once the sensor has been blocked and unblocked, the clown LED will go off. If you lift the clown up, it will light green again. Do this for each clown.

## Test 6

"Beacon" - Lights briefly to confirm that the beacon light is operational.

## Test 7

"Segment Test" - This test will light each segment of the each display at the top of the game.

## How to remove the coil bed

## Step 1:

Remove both back door covers and put aside. Unplug the harness that connects the stepper motor, +12 on the displays, and the home switch. This is shown as picture A. Unplug J1 on the NS2033X display driver board. This is shown as picture B. Unplug the two shown as picture C. Unplug 19 from the NS2033X board. This is shown as D. B through D are located on the NS2033X board as shown in the arrow below.


## Step 2:

Remove the four bolts shown with arrows using a $5 / 32$ Allen wrench. Then lift up on the pointer assembly and out. The point assembly hands on two bolt heads.


## Step 3:

Working inside the cabinet at the lower back door, remove the four 5/32 Allen bolts that hold the yellow plastic housing around the coil bed. Be careful not to damage any of the lower harnessing. A plastic shield lifts up and out if you cannot get your tool to the front bolts. The picture to the left shows the location of the Allen bolt. The floor is removed for clarity.


## Step 3:

Lift the yellow plastic housing up and out. Remove the two caps located at the back of the drip pan. Clowns removed for clarity.

## Step 4:

Remove the six 5/32 Allen head bolts. Before lifting the bed out of the game. Disconnect all LED wiring to the clown heads.
From underneath and at the lower back door, twist counterclockwise the 50 pin connector and disconnect.


## How to adjust Sensors

The sensors boards are attached to the lower coil brackets. The mount holes are slotted which allows you to adjust the distance away from the shaft. The sensor should be mounted straight up and down, and furthest away from the shaft. If the sensor is not working, clean the reflective properties of the shaft. If still not working, replace the sensor.



## How to remove the shaft

The shaft is held to the coil bed by an Allen key which is tied to the lower coil bracket. Remove the Allen key and unscrew the AA6250 bolt at the bottom.



## 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.

## Innovative Concepts in Entertainment 10123 Main St.

Clarence, NY 14031
Phone \#: (716) - 759-0360
Fax \#: (716) - 759-0884

## www.icegame.com

