

Service Manual
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## 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.

Components of your Game.


## !!STOP!! - FOUR PEOPLE ARE REQUIRED!! DO NOT ATTEMPT TO LIFT ALONE!!

With three other people to help, raise the main cabinet with skid attached.

## DO NOT REMOVE SKID!



Remove the side panel to access the control arm.
Position the cabinets together as shown. Slide the front half to the back half aligning the two parts of the swing arm together so that the control panel shaft slides to the outside of the game shaft. . Twist the swing arms halves as you move the cabinet parts together.



Attach the control panel cover with 655 Square bit screws.


This marquee is not used if installing any Mega Marquee.

Lift the marquee on top of the cabinet. Attach the cabinet using four $1 / 4-20 \times 11 / 2$ inch Allen bolts. See arrows for location of bolts. Remove the upper access panel and insert the harness through the top access hole. Connect the two harnesses together and replace the access panel cover.


## Two cabinet Side by Side Mega Marquee - Parts included.

Link kit, left and right supports, main screen, upper display sign, and hardware.


Attach the left and right support arms to the marquee monitor using four AA6655 1/420 Allen's, AA6053 lock washers, and AA6070 washers.


Position the cabinets about 3 1/2 inches apart from each other.


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Hardware for marquee will be already installed to cabinet.

Remove the hardware shown and put aside.


Then attach the brackets to the cabinets.
DO NOT TIGHTEN THE BRACKETS AT THIS TIME. Brackets must stay loose for the next step.

## !!STOP!! - FOUR PEOPLE ARE REQUIRED!! DO NOT ATTEMPT TO LIFT ALONE!!

 !!ASSEMBLY IS FRONT HEAVY!!With three other people lift the marquee assembly up into the loose brackets. Then attach using AA6800 1/4-20 Allen and AA6212 washer. Tighten all hardware holding brackets.



Attach the upper display to the main marquee assembly using on each side two 1/4-20 bolts and washers. Then remove the back cover of the main marquee assembly. Attach the network cable to the computer.

Then connect the wiring harness for the upper display.

## FROM THE BACK OF THE CABINETS:

1) Install the Network Switch in the right cabinet.
2) Plug the network cable from the marquee to the switch. The other end plugs into the computer installed in the marquee.
3) Plug a network cable from the left cabinet to the network switch.
4) Plug a network cable form the right cabinet to the network switch.
5) Make sure you setup the network in setup wizard.

Number of Cabinets $=\mathbf{2}$
Cabinet number $=$ In Red


## Three cabinet Side by Side Mega Marquee - Parts included.

Link kit, left and right supports, main screen, upper display sign, and hardware.


Attach the left and right support arms to the marquee monitor using four AA6655 1/420 Allen's, AA6053 lock washers, and AA6070 washers.


Position the cabinets about . 7 inch apart from each other.



Then attach the brackets to the cabinets using the hardware you just took off.
Then attach the brackets onto the Pem studs using the nylon Nuts. Do not tighten the brackets.

## !!STOP!! - FOUR PEOPLE ARE REQUIRED!! DO NOT ATTEMPT TO LIFT ALONE!!

!!ASSEMBLY IS FRONT HEAVY!!

With three other people lift the marquee assembly up into the loose brackets. Then attach using AA6800 1/4-20 Allen and AA6212 washer. Tighten all hardware holding brackets.



Attach the upper display to the main marquee assembly using on each side two 1/4-20 bolts and washers. Then remove the back cover of the main marquee assembly. Attach the network cable to the computer.


## FROM THE BACK OF THE CABINETS:

1) Install the Network Switch in the right cabinet.
2) Plug the network cable from the marquee to the switch. The other end plugs into the computer installed in the marquee.
3) Plug a network cable from the left cabinet to the network switch.
4) Plug a network cable form the right cabinet to the network switch.
5) Make sure you setup the network in setup wizard.

Number of Cabinets $=3$
Cabinet number $=$ In Red


## Spinning Marquee Install

Position one cabinet exactly where you wish it to remain after setup. It might be necessary to loosen the hardware holding the bracket assembly before mounting it to the cabinet. Attach the bracket using eight PC60622 (1/4-20 x $1^{\prime \prime \prime}$ Allen bolts, AA6053 Lock washers and AA6212 flat washers. Make sure the bracket is firmly against the cabinet. Tighten all hardware.


NOTE: DO NOT INSTALL UNTIL THE CABINET HAS THE FRONT CONTROL PANEL INSTALLED.


With a person on each ladder, on each side of the cabinet, have the marquee lifted up to them from the back of the cabinet. Insert the shaft of the marquee into the bracket assembly.


Open the upper, middle, and lower access doors of the cabinet. Insert the AC harness and Network cord through the top access hole from the spinning marquee. Then continue to run them to the bottom of the cabinet.

The AC cord has a matting end to connect to a AC outlet.
The Network cable plugs into the network Switch located in the front of the cabinet. If no switch is found, install a network 4 port switch. Both game cabinet plug into the switch along with the marquee. See below.


## Installing the network:



Install the Network Switch in the cabinet you used to mount the spinning marquee on.
Plug the network cable from the marquee to the switch.
Plug a network cable from the left cabinet to the network switch.
Plug a network cable form the right cabinet to the network switch.
Make sure you setup the network in setup wizard.
Number of Cabinets $=2$
Cabinet with marquee = cabinet number 1
Cabinet without marquee = cabinet number 2
Marquee needs no settings. It has been setup at the factory as a marquee.
NOTE: Leave the bottom, back doors off of both cabinets. The network cable can go from one cabinet easily to the other cabinet to connect the network cable to the network switch.

Lift the small lighted sign onto the marquee assembly.
Secure using four AA6281 (1/2-20 x 1.5" Allen Bolts) and AA6212 ( $1 / 4 \times 3 / 4$ flat washers). Attach the two pin wire harness.


Attach the bracket to the other cabinet using eight PC60622 (1/4-20 X $1^{\prime \prime}$ ) Allen head bolts, AA6053 (1/4 lock washer), and AA6212 (1/4 x 3/4 flat black washer). Tighten all hardware. Ensure bracket is leveled.


NOTE: Make sure bracket is leveled or sign might stop spinning.



# Double check and make sure the Swing arm moves freely and will not bind (stick to the left!!) 

## BIND CHECK!

If the swing arm is binding, push on the back cabinet. While pushing on the cabinet, move the swing arm. If the binding is gone, you need to adjust the leg levelers.


## Swing Arm Adjustment:

1) Turn the back cabinet's feet all the way up (clockwise).
2) Turn the both sets of cabinet feet all the way up (clockwise) on the front cabinet.
3) Starting with the feet all the way in, turn counter-clockwise one complete turn on the front set of feet on the back cabinet.
4) Test for binding. If still binding repeat step 3 . If all the way up, remove the lower back door. Loosen the top bolt of the bracket connecting the horizontal bar to the verti-cal bar. See picture at the side.
5) Adjust the front cabinet feet to stabilize the cabinet from shifting.


Adjust both 1 complete turn at a time.


## MAIN MENU

| Wheel of Fortune Linked | Unit ID: |
| :--- | :--- |
| Main Menu |  |
| Exit |  |
| Setup Wizard |  |
| Adjustments |  |
| Audits |  |
| Resets |  |
| System Information |  |
| Tests |  |
| Utilities |  |
| Exit Test Menu |  |
| Serial No. |  |

Upon receiving your game it is recommended to preform the "Setup Wizard" to ensure your game is properly configured.


Press the DIAG button to begin the Setup Wizard.


Press the DIAG button to set number of cabinets.


If you purchased a Mega Marquee with your games you will need to setup a network. Each cabinet must be assigned a different cabinet number and you must define how many cabinets you are linking together. First use the $+/$ - volume controls to change the number of cabinets you are linking together. Then press the "DIAG" button to select the cabinet number. You must start with 1 and count up.

If no cabinets are going to be linked, then press DIAG twice.

# CAMBRATE HANDHE 

Follow the on screen instructions to callorate your hancle positions.

Press DIAG to begin.
Drete TEST to retert the sotup wisard.
Setyp Wizard Pregrest
Set Cabingt Callbrate
Mumber Mando
Calibrate

Press the DIAG button to set number of cabinets.

Clutch DISENGAGED
Vol+ to engage
Vol - to release

Right (Clutch off):0
Left (Clutch off): 0
Right (Clutch on): 0
Red Zone Start (Clutch on): 0
Red Zone End (Clutch on): 0

Level Calibration


Slide the handle on the control panel all the way to the right and press the "DIAG" Button.


Clutch DISENGAGED
Vol+ to engage
Vol - to release

Right (Clutch off):161
Left (Clutch off): 0
Right (Clutch on): 165
Red Zone Start (Clutch on): 0
Red Zone End (Clutch on): 0

## Level Calibration



Slide the handle on the control panel $25 \%$ of the way to the left and press the "DIAG" Button.

Clutch DISENGAGED
Vol+ to engage
Vol - to release

Right (Clutch off):161
Left (Clutch off): 0
Right (Clutch on): 165
Red Zone Start (Clutch on): 554
Red Zone End (Clutch on): 0

Level Calibration


## Press DIAG to Accept

Press Test to Abort

Slide the handle on the control panel $50 \%$ of the way to the right and press the "DIAG" Button.

Clutch DISENGAGED
Vol+ to engage
Vol - to release

Right (Clutch off):161
Left (Clutch off): 0
Right (Clutch on): 165
Red Zone Start (Clutch on): 554
Red Zone End (Clutch on): 1106

## Level Calibration

Slide handle completely to the left.


Press DIAG to Accept
Press Test to Abort

Slide the handle on the control panel completely to the left and press the "DIAG" Button.

Clutch DISENGAGED
Vol+ to engage
Vol - to release

Right (Clutch off):161
Left (Clutch off): 1406
Right (Clutch on): 165
Red Zone Start (Clutch on): 554
Red Zone End (Clutch on): 1106

Level Calibration


Slide the handle on the control panel completely from right to left in order to spin the Wheel.


Press the DIAG button to calibrate the wheel.


Verify that the wheel shown on the screen exactly matches where the wheel really is. Use the Volume + and Volume - buttons to adjust until it is exact.
Press the DIAG button to save and spin the wheel.


Verify that when the wheel is spun it exactly matches the real wheel to the screen. If in correct, press Test to go back to the previous adjustment menu.

If you are satisfied with the results press the DIAG button to save and exit this calibration menu.


Press the DIAG button to exit wizard.
The game is assembled but still needs the following options set in.

Under Adjustments: Coin, Player Cost, Redemption Award

## Adjustments

Wheel of Fortune Linked
Adjustments
Back
Coin Adjustments
Linking Adjustments
Player Cost Adjustments
Redemption Award Adjustments
Date/Time Adjustments
Debug Adjustments
Gamen Adjustments
Eameplay / Mega Win Adjustments
Serial No.

Under Coin adjustment you can set the type of currency you are using. This can be Swipes to tokens or money. Then define the value for each coin slot and also the DBV pulse. If using swipes, you can define the value of the swipe.

Under Player Cost Adjustments you set the game cost of the game or put it in free play mode.

Under Redemption Award Adjustments you can set the type of award you will be giving (tickets or coupons) and the value of your ticket.

Under Sound Adjustments you can set the game volume different from attract. You can also select how attract audio works.

Under Gameplay Adjustments (you have to scroll down to access this menu) you can define the wheel type. This should already be setup at the factory but would be necessary to change if adjusting the wheel values.

Under Gameplay / Mega Win Adjustments (you have to scroll down to access this menu) you can change the jackpot increment, minimum and maximum values.

## Available Playfield Wheels



18 Average Tickets paid. Software setting: Wheel ".5"


55 Average Tickets paid. Software setting: Wheel "1.5"


120 Average Tickets paid.
Software setting: Wheel " 3 "


35 Average Tickets paid. Software setting: Wheel " 1 "


## Incorrect Payouts Guide

If you are experiencing incorrect payouts during play you need to check the "Wheel Test" screen. Open the upper coin door and press the "DIAG" button. Then move the cursor down by pressing the "DOWN" button to "TESTS" and press the "DIAG" button again. Move the cursor down by pressing the "DOWN" button to "Input Tests" and press the "DIAG" button again.
Wheel of Fortune Linked
Main Menu
Exit
Setup Wizard
Adjustments
Audits
Resets
System Information
Tests
Utilities
Exit Test Menu
Wheel of Fortune Linked
Tests
Back
Input Tests
Video Tests
Coin and Ticket Meter Test
Lamp Test
Ticket Dispenser Test
Sound Tests
Serial No.

## Incorrect Payouts Guide

Now press the "DOWN" switch to move the cursor to "Wheel Test" and press "DIAG".

| Wheel of Fortune Linked | Unit ID: |
| :--- | :--- |
| Input Tests |  |
| Back |  |
| Wheel Test |  |
| Switch Tests |  |
| ?Test Reading the Wheel Encoder. |  |

Looking to the right of the screen you will see statistics of the wheel. When the game is first powered on, this information will be blank. Press the "TEST" button to initiate a spin engaging the clutch. Each time the wheel is spun the "Last max:" value will be shown along with "Avg Max:". Each spin should result in the "Last max:" value being 2000 plus or minus 10. The "Avg Max:" value will be the average of spins so each spin you test this will give you a better picture of what the sensors are doing.

Starting from the R pie (home) the game should count 2000 positions until the next home. If the average is below 2000 by more than 10 the wheel encoder holes are being missed. If the count is above 2000 by 10 or more than the home sensor is being missed. From peg to peg the game will count 20 positions. A total of 100 pegs are on the wheel for a total of 2000 positions.

## Notes:

1) The "Home Switch:" indicator will never change from 0 .
2) The wheel animations should match the real wheel.
3) The more you spin the more accurate the information.
4) The wheel animation will reset to the $R$ pie every time the home hole is seen by the home sensor.


Three sensors determine the position of the wheel. The encoder reads each hole on the outside of the encoder disc. Each hole returns 4 bits of data to the game. There are 500 holes in the disc for a total of 2000 positions. The home sensor sees the home hole on the encoder wheel. The Clicker sensor reads the position of the pegs. If the animation lags the real wheel while spinning, the encoder sensor is not seeing all the outer holes. The disc and encoder sensor alignment needs to be verified.

When the wheel is turned, the encoder sensor sees the outer holes of the disc. This will increase the "Wheel pos:" value until the home hole is seen. When the home hole is seen the "Wheel pos:" will reset to 0 . When the home sensor is not being seen the value for "Wheel pos:" will continue to increase.

When the clicker sensor is malfunctioning, the wheel position will be close, so the colors will match but if the clicker is between two points by a peg, the software will most likely assume the wrong position. Each wheel pie is a letter position to the wheel. The pies have either 4 or 5 positions. Each position is between two pegs. The pie order starts at the bankrupt for spelling but the home hole is at the pie R.

Remove the two bolts on each side of the monitor.

The monitor can now be opened to access the sensors.


Starting from bankrupt position, M has 2 positions, E has $5, \mathrm{G}$ has 5 , A has $5, \mathrm{~W}$ has $5, \mathrm{I}$ has $4, \mathrm{~N}$ has $5, \mathrm{~W}$ has $5, \mathrm{H}$ has $5, \mathrm{E}$ has 5 , E has $4, \mathrm{~L}$ has $2, \mathrm{O}$ has $5, \mathrm{~F}$ has $5, \mathrm{~F}$ has $5, \mathrm{O}$ has $5, \mathrm{R}$ has $4, \mathrm{~T}$ has $5, \mathrm{U}$ has $5, \mathrm{~N}$ has $5, \mathrm{E}$ has 5. That spells "Mega Win Wheel of Fortune". Bankrupt (B1x2) and loose a turn (L1×2) have 1 position but on each side of a letter.


The wheel test screen will show "Spin Result" position. Using the above position list, you can verify that each spin test preformed shows the correct pie position. Wheel slot (RAW) value doesn't always match "Spin Result" and can be safely ignored.

The "clicker Pos:" value will be at 0 when the click is between two pegs and change to 1 when on a peg. Using the above information, you can determine which if any of the sensors are malfunctioning.

## Mega Wheel of Fortune Part Diagrams












## 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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