DINO DASH

Owners And Service Manual
Innovative Concepts In Entertainment Inc.

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INTRODUCTION

Description / Game play:

Players are allowed to choose any of four loveable characters to race. After being given the ready-set-go, players can run either by holding the Run button, or tapping it repeatedly, which makes faster speeds possible.

During the race, four obstacles will be presented. Players may attempt to avoid tripping over the obstacles by pressing their *Jump* button. Successfully clearing an obstacle earns the player a few tickets, and also makes the next obstacle that will be encountered harder, but worth more tickets if cleared.

There is also a ticket on the far side of each obstacle. Landing from the precisely on top of the ticket will earn the player an additional ticket bonus. Hitting these tickets is about as hard as the hardest jump, providing a challenge for the more skilled players. As with the jumps, the amount each such target is worth depends on the player's previous success.

At the end of the race, a sign proclaims the number of tickets that the winner of the race will earn. This number is changing randomly and it's final value is determined by the time that the first dino crosses the finish line. The random value gives players of all levels a chance at the jackpot.

ASSEMBLY

SET UP:
To avoid unnecessary movement of the game, setup the game in its permanent location

The footprint is approximately 33" x 35".

After completely removing all the packaging from the unit, remove the tape over the coin return. These keys are for the cash box door. The rest of the keys and power cord will be inthecashbox.

The next step is to simply plug the unit in and turn the switch on. It is a good idea to clean the game with soapy water.

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Diagnostics

You will find that *Dino Dash* comes with a detailed auditing system that grants a tremendous degree of control over your machine. To enter the service mode, locate the small slide switch on the L'O board and flip it into the 'on position. To exit the service mode, flip this switch back into the 'off position (certain modes, such as the switch test, changing adjustments. and test screens, may need to be also completed in addition to flipping the switch back.)

Navigating
Use the right set of player switches to move within the menus The *Jump* (left) button moves left through a menu, and the *Run* (right) button moves right through a menu. The left set of player switches either descend into the next menu or activate a service function. Both buttons in the left set have exactly the same operation, and are called 'action' buttons in this documentation. Exceptions will be noted. The currently highlighted menu item is shown in white, while the other items are shown in shades of blue.

Menu Overview

Here and throughout the document, text that appears on screen is shown in ALL CAPS, just as it is displayed.

Main menu all other menus descend from this top level.
INFO - system name, build date, and version number, as well as at-a-glance errors and more.
AUDITS - provides viewing and resetting of the system audits.
ADJUSTMENTS provides viewing, changing, and resetting of system adjustments.
BEST SCORES provides viewing and resetting of best scores, either all at once or by track.
CREDITS - provides information and control of current credits.
TESTS provides a number of system testing functions, in several groups:

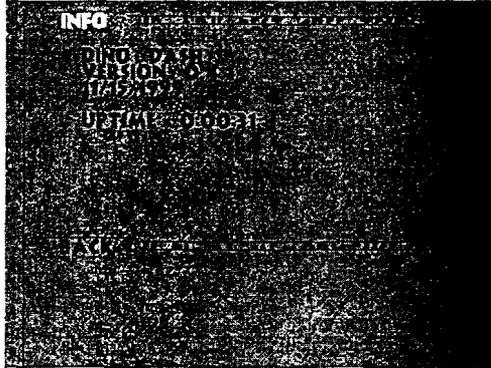VIDEO TESTS - provides an ample assortment of test screens for evaluating the condition of the monitor.
GRAPHIC USES -primarily development function that is of little practical use to operators.
LOADED GRAPHICS - as previous
LOADED PALETTES - as previous.
SOUND TEST - allows sounds to be played on demand to test the speakers etc.
SWITCH TEST - shows

open/closed state of all input switches.
MECHANICAL TEST - allows testing of meters, ticket dispensers. and lamps.

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Detailed Descriptions

Main->INFO

The above notation means 'the INFO item of the main menu' and will be used throughout these descriptions.

While INFO is highlighted, the descending menu will show the unit name, version number, and software creation date. The elapsed time since system startup is displayed as well. Also, if there have been any automatic resets of the audits, adjustments, or best scores due to error since the last entry to service mode, those events will be noted here (each will also be noted on it's own sub-menu of the main menu)

Pressing an action button while INFO is highlighted will descend into the INFO menu. The functions available under INFO are primarily hardware capabilities and of little practical use to operators.

INFO has these options:
- BACK
- DEBUG INFO
- VIDEO HW INFO
- BLIT SPEEDS
- AUDIO HW INFO
- MEMORY USAGE

Main->INFO->BACK

Pressing an action button while BACK is highlighrcd will return to the main menu.

Main->INFO->DEBUG INFO

Pressing an action while DEBUG INFO is highlighted will switch to a screen showing the debug log. If no errors have occurred, all that will be displayed is several lines of information indicating a successful startup. Press any player switch to return to the normal service mode.

Main->INFO->VIDEO HW NFO

Pressing an action button while VIDEO HW INFO is highlighted will switch to the debug log (as above, see DEBUG INFO) displaying the capabilities of the video hardware.

Main->INFO->BLIT SPEEDS

Pressing an action button while BLIT SPEEDS is highlighted will switch to the debug log (as above, see DEBUG INFO) displaying the results of simple speed tests on the hardware blitter.

Main->INFO->AUDIO HW INFO

Pressing an action button while AUDIO HW INFO is highlighted will switch to the debug log (as above, see DEBUG INFO) displaying the capabilities of the audio hardware.

Main->INFO->MEMORY USEAGE

Pressing an action button while MEMORY USEAGE is highlighted will switch to the debug log (as above, see DEBUG INFO) displaying the peak memory usage of the program. and the current Gee physical memory.

Main->AUDITS

While AUDITS is highlighted, the descending menu will show all system audits, as well as any tickets awarded, but not yet dispensed by the ticket dispensers. The pending tickets will usually be zero unless a ticket dispenser is currently out of tickets, and unlike 'real' audits, they are not saved if power is lost. If the audits have been automatically rest due to error since the last entry to service mode, that n-ill also be noted.

The system audits are:

COINS IN - number of times the coin switch signal has been received.

PAID CREDITS - number of credits granted as a result of the coin switches receiving coins.

OPERATOR CREDITS - number of credits granted via Main->CREDITS->AWARD FREE CREDIT.

ONE PLAYER GAMES - number of times a single player has a played a game.

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TWO PLAYER GAMES ∙ number of times two players have a played a single game. Each two player game increments this audit by one, not two.
PRIZES ∙ number of prizes successfully dispensed from either dispenser.
AVERAGE GAME TIME ∙ average number of seconds during each game spent in the race.

Pressing an action button while AUDITS is highlighted will descend to the AUDITS menu. The AUDITS menu has the following options:

BACK
CLEAR AUDITS
CLEAR PENDING PRIZES

Main->AUDITS->BACK

Pressing an action button while BACK is highlighted will return to the main menu.

Main->AUDITS->CLEAR AUDITS

Pressing an action button while CLEAR AUDITS is highlighted will reset all audits to zero.

Main->AUDITS->CLEAR PENDING PRIZES

Pressing an action button while CLEAR PENDING PRIZES is highlighted will set to zero the pending, un-dispensed prizes for both dispensers. This will rarely be needed, except perhaps if a dispenser malfunction has allowed an excessive number of prizes to build up.

Main->ADJUSTMENTS

While ADJUSTMENTS is highlighted, the descending menu will stow a subset of the system adjustments, since there are more than can lit on the screen at one time. If the adjustments have been automatically reset due to **error since** the last entry to service mode, that will also be noted. If an adjustment is shown in blue. it is disabled because of another adjustment. For instance, while PAYOUT SETTINGS is set to something other than manual, many of the payout adjustments will be disabled because their values are being controlled by the system. If an adjustment has three defaults listed. those are the defaults under LOW. MEDIUM, and HIGH payout settings.

The system adjustments are:
Page One (Misc.):

VOLUME (default: 5, range 0(OFF)-10) ∙ controls the software volume for all sound and music.
ATTRACT SOUNDS (default: OFF, range OFF, ON) ∙ if OFF the game will not make any noise when no one is playing it. If ON, it will regularly play a piece of music and play random sounds to grab player's attention.
SCORE RESET DAYS (default O(OFF), range 0(OFF)-60) - if this many days have transpired since the last automated score reset, all of the best scores will be reset to factory defaults.
SCORE RESET PLAYS (default O(OFF), range O(OFF)-1000 in steps of 100) ∙ if this many games (ONE PLAYER GAMES + TWO PLAYER GAMES) have been played since the last automatic score reset, all of the best scores will be reset to factory defaults.
PLAY WHILE PRIZES OUT? (default YES, range NO: YES) ∙ whether the game will exit from the payout screen while one of the dispensers is empty. If YES, it will exit after several seconds and allow more games to be played, but players will not be able to receive prizes from the empty dispenser until the prizes are refilled, and the appropriate dispenser reset snitch is pressed. At that time, all prizes that have been awarded since the dispenser ran out will be dispensed.
JUMP SPACING (default MEDIUM, range SHORT. MEDIUM. LONG)
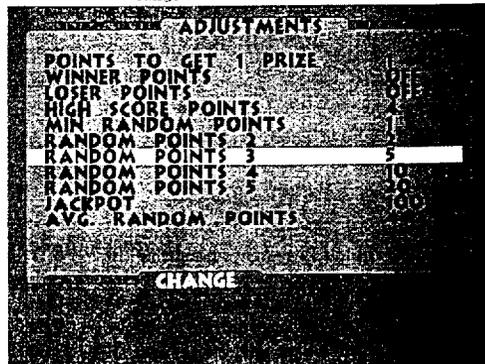
amount of space placed before each

jump on the track. If SHORT is one unit, then MEDIUM is two units, and LONG is three units.

JUMP NUMBER (default 4, range 1-4) - number of jump chances in each track. If there are fewer than four, the player will never get a chance at the hardest jumps.

PAYOUT SETTINGS (default MEDIUM, range MANUAL, LOW, MEDIUM, HIGH, NEW JERSEY) - In MANUAL, all settings are available for operator control for fine tuning. LOW, MEDIUM, and HIGH allow for easy setting of common payout levels. NEW JERSEY payout enables the IMMEDIATE PRIZES adjustment (which must them be set by the operator) and disables all other payouts.

Page Two (Credits):

CS1 CONS N (default 1, range 1-10) - number of coins received in coin switch one needed to trigger CS 1 CREDITS and CS 1 METER CLICKS.

CS1 CREDITS (default 1, range 1-10) - number of credits granted each time coin switch one is triggered by receiving CS 1 COINS IN number of coins.

CS1 METER CLICKS (default 1, range 1-10) -number of times the coin meter is advanced each time coin switch one is triggered by receiving CS 1 COINS IN number of coins.

CS2 CONS N, CS2 CREDITS, CS2 METER CLICKS - as with coin switch one, but for the second coin switch.

CREDITS NEEDED (default 1, range 1-10) number of credits need for each player to play a game. In most cases you can adjust this value and ignore the coin switch settings.

MAXIMUM CREDITS (default 30. range 2.100) if credits are received in excess of this number, they will be ignored.

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Page Three (Payout):

IMMEDIATE PRIZES (default 0, range O-100) ▪ Number of prizes that are. dispensed as soon as a coin in is inserted, to support New Jersey style payout. As the only available crutch for determining where to dispense the prizes, a coin inserted in coin switch one triggers prizes from dispenser one, and switch two to dispenser two. (Unlike the other prize adjustments, this one is independent of 'points.')

POINTS TO GET 1 PRIZE (default 1, range O(OFF)-100) -Number of points a player must get to receive each prize.

WINNER POINTS (default O(OFF). range O(OFF)- 100) ▪ Number of points (see POINTS TO GET 1 PRIZE above) awarded to a player for crossing the finish line first. This allows for a fixed amount awarded to the winner. By default, the random points are awarded to the winner of a race instead.

LOSER POINTS (default O(OFF). range O(OFF)-100) -Number of points (see POINTS TO GET 1 PRIZE above) awarded to a player for crossing the finish line second (last).

HIGH SCORE **POINTS** (default I, 2, 4, range O(OFF)-100) -Number of points (see POINTS TO GET 1 PRIZE above) awarded to a player for getting a time good enough for the current track's :op-ten table.

MIN RANDOM POINTS (default 0, 1, 1, range O-100) ▪ Generally works as RANDOM POINTS x below, expect that no probability calculations are done; instead, any time one of the other random payout levels (or the jackpot) is not awarded, MIN RANDOM POINTS is awarded. Therefore. it should probably not be anything besides zero or one.

RANDOM POINTS x [2-5] (defaults 2. 5, 10, 20, range 0-100) -These. together with MIN RANDOM POINTS and JACKPOT, define the payout levels for the random points. The chance of paying out each level is based on the amount of that value and AVG RANDOM POINTS, so that a setting of 20 will be paid approximately once for every ten 2s that ace paid, and so on.

JACKPOT (default 100, range 0(OFF)-1000 in steps of 10) ▪ This should be highest random payout available. It otherwise functions the same as RANDOM POINTS x, except that it goes in steps of ten, and setting it zero disables the random payout feature. The jackpot is also shown in bright text when the sign at the end of the race is showing possible values.

AVG RANDOM POINTS (default 2, 4, 4, range O(OFF)-100) ▪ This controls the average payout for the random points. It will often pay out lower, offset by the occasional jackpot or other high payout. Since the random point bonus is only paid to the winner of a race, the overall average payout from random points should actually be about half this, but it can be adjusted if it is found that most players are either winning or losing.

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Page Four (More Payout)

JUMP x POINTS (defaults (1, 1, 1, 2),
(1, I, 2, 3), (1, 2, 3, 4), range 0 -100) •
During the game, the player is presented
with up to four obstacles. Clearing an
obstacle earns the player points (which
become prizes). Each successful jump
awards the points and presents the
player with a more difficult obstacle at
his next jump. Since there are four
obstacles and four types of obstacles,
only a player who make all four jumps
will be able to add JUMP 4 POINTS to
his score. If a player misses a jump and
mps. he will be presented with the same
obstacle again and again until either he
makes it or the game ends A very poor
player who cannot clear jump class 1
will earn no points/prizes from jumps.
A player who can clear jump classes 1,
2, and 3 but not 4 will earn (in medium
settings) 1- 1 + 2 points, or 4 total from
jumps.

TARGET SIZE (default 80%, 100%,
120%, range O%(OFF)-200% in steps of
5%) • On the far side of each jump is a
target, in the form of a large ticket.
Landing precisely in the target area will
award the player the number of points
shown on the target. The default
difficulty of hitting the target is
approximately equal to that of clearing
the class 4 obstacle, but because there
are four chances per race, hitting one or
two targets is not unusual. but hitting all
four is nearly impossible. This
adjustment controls the size of (and
therefore difficulty of hitting) each
target. For ease of use it is listed as a
percentage of the default size. At 50%
it is half as small as the default size, at
200% it is twice as big. Due to the
amount of space covered by a player
during a program cycle, sizes below
about 25% may be completely
impossible to hit. A setting of 0%
disables the target feature.

1ST-4TH TARGET POINTS (defaults
(1, 1, 2, 10), (1, 2, 5, 20), (1, 2, 5, 20),
range 0- 100) These control the
payouts of each target. The first target
that a player hits is worth 1ST TARGET
POINTS, the second is worth 2ND
TARGET POINTS, and so on. Setting

4TH TARGET POINTS to 0(OFF) will
also disable the target feature.

Pressing an action button while
ADJUSTMENTS is highlighted will descend
into the ADJUSTMENTS menu. The
ADJUSTMENTS menu has the following
options:
> BACK
> NEXT PAGE
> CHANGE
> RESET ADJUSTMENTS

Main->ADJUSTMENTS->BACK

Pressing an action button while BACK
is highlighted will return you to the main menu.

Main->ADJUSTMENTS->NEXT PAGE

Pressing an action button will cycle
through the adjustment pages. It changes from
Page One to Two, Two to Three, Three to Four,
and Four back to One.

Main->ADJUSTMENTS->CHANGE

Pressing an action button while
CHANGE is highlighted will put you into the
adjustment change mode. A highlight box will
appear on the current adjustment, and the
controls will function differently. Pressing an
action button will move you down one to the next
adjustment. Pressing an action button while on
the last adjustment will return you to the normal
ADJUSTMENT menu. with CHANGE
highlighted. Pressing the *Jump* button on the
right-hand control set while in change
adjustments mode will decrease the current
adjustment by one, and pressing the *Run* button
on the right-hand control set while in change
adjustments mode will increase the current
adjustment by one.

Main->ADJUSTMENTS->RESET ADJUSTMENTS

Pressing an action button while RESET
ADJUSTMENTS is highlighted will reset all
adjustme
nts to
their
factory
defaults.

Main-
>BEST

10
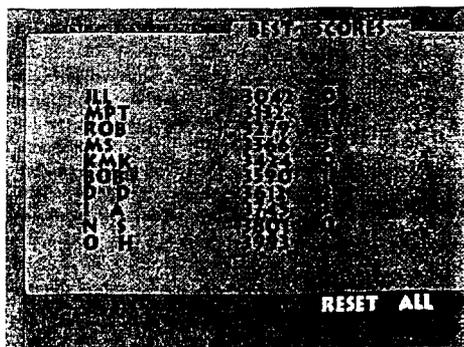
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SCORES

While BEST SCORES is highlighted, the descending menu will show a set of the best scores. If the best scores have been automatically reset do to error since the last service, that will also be shown.

Pressing an action button while BEST SCORES is highlighted will descend into the BEST SCORES menu. The BEST SCORES menu has the following options:

    BACK
    NEXT SET
    CLEAR SHOWN
    RESET SHOWS
    CLEAR ALL
    RESET ALL

Main->BEST SCORES->BACK

Pressing an action button while BACK is highlighted will return you to the main menu.

Main->BEST SCORES->NEXT SET

Pressing an action button while NEXT SET is highlighted will change the currently displayed set ofscores, where each set is the ten best times for one possible track.

Main->BEST SCORES->CLEAR SHOWN

Pressing an action button while CLEAR SHOWN is highlighted will clear ths name fields and reset the scores to zero in the ten scores currently displayed.

Main->BEST SCORES->RESET SHOWY

Pressing an action button while RESET SHOWN is highlighted will reset the scores currently displayed to factory defaults.

Main->BEST SCORES->CLEAR ALL

Pressing an action button while CLEAR ALL is highlighted will clear the name fields and reset the scores to zero in all scores stored in the system.

Main->BEST SCORES->RESET ALL

Pressing an action button while RESET ALL is highlighted will reset all scores stored on the system to factory defaults.
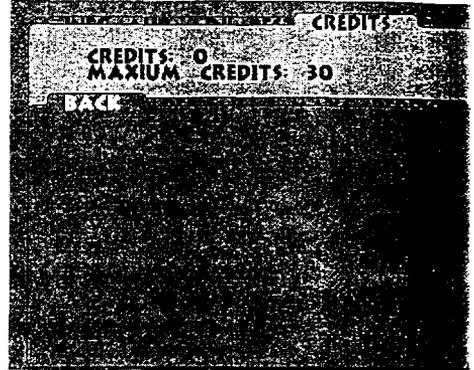
Main->CREDITS

While CREDITS is highlighted, the descending menu will show the current number of unused credits, as well as the value of the MAXIUM CREDITS adjustment.

Pressing an action button while CREDITS is highlighted will descend into the CREDITS menu. The CREDITS menu has thr following options:

    BACK
    AWARD FREE CREDIT
    DEDUCT CREDIT
    + MAX CREDITS
    - MAX CREDITS

Main->CREDITS->BACK

Pressing an action button while BACK ii highlighted will return you to the main menu.

Main->CREDITS->AWARD FREE CREDIT
Main->CREDITS->DEDUCT CREDIT

Pressing an action while one of these menu items is highlighted will increase or decrease the current unused credits.
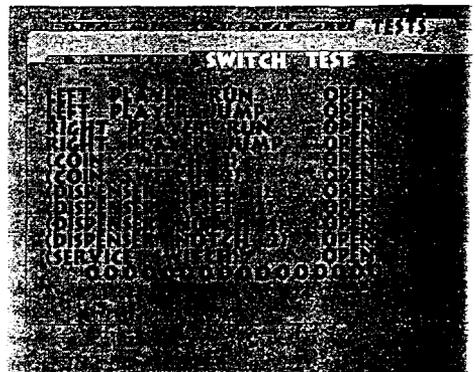
Main->CREDITS->+ MAX CREDITS
Main->CREDITS->- MAX CREDITS

Pressing an action while one of these menu items is highlighted will increase or decrease the MAXIUM CREDITS adjustment.

Main->TESTS

While TESTS is highlighted, the descending menu will show available test categories.

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Pressing an action button while TESTS is highlighted will descend into the TESTS menu. The TESTS menu has the following options:

> BACK
> VIDEO TESTS
> LOADED GRAPHICS
> SOUND TEST
> SWITCH TEST
> MECHANICAL TESTS

Main->TESTS->BACK

Pressing an action button while BACK is highlighted will return you to the main menu.

Main->TESTS->VIDEO TESTS

While VIDEO TESTS is highlighted. the descending menu will list the screens which may be put up.

Pressing an action button while VIDEO TESTS is highlighted will descend into the VIDEO TESTS menu. Each item on the VIDEO TESTS menu is a static screen designed to test one or more aspects of the monitor. Press the an action button while the desired test is highlighted to switch to that screen, and then press any player switch to return to the VIDEO TESTS menu. Tlle VIDEO TESTS menu has the following options:

> BACK - not a screen; returns you to the TESTS menu.
> **RED** - a solid red screen.
> **GREEN a solid green** screen.
> BLUE - a solid blue screen.
> **GRADIENT** - shows gradients of several basic colors.
> **COLOR SPACE** shows all possible colors that may be displayed by the system.
> **ALIGNMENT** shows a pattern of lines and dots for checking monitor alignment.

Main->TESTS->GRAPHIC USES
Main->TESTS->LOADED GRAPHICS
Main->TESTS->LOADED PALETTES

These features arc largely of use for development and debugging. << and >> are short for previous and next.

Main->TESTS->SOUND TEST

While SOUND TEST is highlighted, the descending menu will show the available options.

Pressing an action button while SOUND TEST is highlighted will descend into the SOUND TEST menu. The SOUND TEST menu has the following options:

> BACK
> PLAY
> NEXT
> STOP

Main->TESTS->SOUND TEST->BACK

Pressing an action button while BACK is highlighted will return you to the TESTS menu.

Main->TESTS->SOUND TEST->PLAY

Pressing an action button while PLAY is highlighted will play the current sound effect.

Main->TESTS->SOUND TEST->NEXT

Pressing an action button while NEXT is highlighted will advance to the next sound effect and then play it.

Main ->TESTS->SOUND TEST->STOP

Pressing an action button while STOP is highlighted will stop the current sound effect from playing.

Main->TESTS->SWITCH TEST

While SWITCH TEST is highlighted, the descending menu will show all input switches and their current state. Each switch has it's OPEN'CLOSED displayed, and after successfully executing the switch test, PASSED will be displayed for each switch that was seen in both the OPEN and the CLOSED states. At the bottom of the switch test box are the raw bits coming out of the I/O board.

Pressing an action button while SWITCH TEST is highlighted will execute the switch test mode. The highlight will descend to the switch test box, and any previous PASSED flags will be cleared. Pressing and then releasing a switch will cause a PASSED to appear by that switch, as it has now been seen in both the OPEN and CLOSED states. You must pass all player switches (those displayed without parentheses around them in the switch list) to exit the switch test and return to the TESTS menu.

PROGRAMMING

Main->TESTS->MECHANICAL TESTS

While MECHANICAL TESTS is highlighted, the descending menu will show the current input/output state of all prize dispensers and meters. Each will show a DRIVE signal if it is active, and the prize dispensers will also show a NOTCH signal (though it may be too quick to appear graphically.) In addition, the DISPENSER EMPTY state of the prize dispensers is shown.

Pressing an action button while MECHANICAL TESTS is highlighted will descend into the MECHANICAL TESTS menu. Most functions will simply test the associated device; COIN METER will increment the coin meter by one, and so on. The MECHANICAL TESTS menu has the following options:

BACK - returns you to the TESTS menu.

COIN METER

DISPENSER METER

DISPENSER 1

DISPENSER 2

LAMPS - turns all lamps on until the LAMPS item is un-highlighted

CLEAR PENDING PRIZES - sets to zero the pending prizes for both dispensers.

PARTS LISTING

MECHANICAL PARTS:

DD3006   Marquee housing rock
DD3007   Marquee letters
DD3027   Cover glass
MZ2005   Button 4" round
5001   Coin door over/under
5008   Ticket door

ELECTRONIC PARTS:

DD8277   Hard drive
DD8283   Fluorescent 24" HO bulb
DD8284x   Ballast
MON29v   Monitor 29" VGA
HD2364   Fan
HH5005   Ticket dispenser Entropy

GRAPHICS & DECALS

DD7001   Decal side panel right
DD7002   Decal side panel left
DD7003   Front panel
DD7005   Decal button set
DD7013   Decal control panel
DD7027   Decal marquee
DD9001   Service manual

WARRANTY

I.C.E warrants all components in the Dino Dash™ game to be free of defects in materials and workmanship for a period of ninety days from the date of purchase.

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 Dino Dash™ game fails to conform to the above-mentioned warranty, I.C.E.'s sole responsibility shall be at its option 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 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.