







Service Manual

CAUTION:

- The specifications of this product are subject to change without notice for reasons such as performance.
- The content of this game, its main devices and design are protected under each federal law concerning patent, copyright and other intellectual properties.
- Unauthorized reproduction of this document or any of its contents is strictly forbidden.

Safety Instructions

Safety instructions apply to operators and service personnel. Read these instructions before preparing the video game machine (VGM) for play. Other safety instructions appear throughout this manual.

WARNING: TRANSPORTING THE VIDEO GAME MACHINE (VGM).

The VGM contains glass and fragile electronic devices. Use appropriate care when transporting. Avoid rough handling when moving the VGM.

WARNING: DISCONNECT POWER.

Always turn the power OFF and unplug the VGM before attempting service or adjustments unless otherwise instructed. Installing or repairing components with the power switched ON can damage the components and void warranty.

WARNING: GROUND GAMES.

Avoid electrical shock! Do not plug in the VGM until you have inspected and properly grounded it. Only plug into a grounded, three-wire outlet. Do not use a "cheater" plug, or cut off the ground pin on the line cord.

WARNING: DO NOT INSTALL NEAR WATER JET

This VGM is not suitable for installation in an area where a water jet would be used. Do not use a water jet to clean the machine.

WARNING: AVOID ELECTRICAL SHOCKS.

This VGM does not utilize an isolation transformer. Internal cabinet AC is not isolated from the external AC line.

WARNING: HANDLE FLOURESCENT TUBE AND CRT WITH CARE.

If you drop a fluorescent tube or CRT and it breaks, it will implode! Shattered glass can fly eight feet or more from the implosion.

WARNING: CHECK POWER SELECTOR. LAMP.

Set the 115/230 VAC selector switch on the power supply for the correct line voltage on the installation site. Verify that the fluorescent lamps are rated for the proper line voltage.

WARNING: USE PROPER FUSE.

Avoid electrical shock! Replacement fuses must be identically rated to the original fuse!

WARNING: ATTACH CONNECTORS PROPERLY.

Be sure all connectors mate properly. If connectors do not slip in easily, do not force them. Connectors are often keyed and only connect one way. Check for correct orientation.

WARNING: USE EXTREME CARE WHEN HANDLING PC.

The PC contains sensitive components. Do not handle roughly. Call your distributor before servicing PC internal components. Ask about warranty information as it relates to the PC.

WARNING: IF POWER CORD IS DAMAGED

If the supply cord is damaged it must be replaced by a special cord or assembly available from the manufacturer or service agent.

WARNING: HAZARD TO EPILEPTICS.

A very small portion of the population has a condition that may cause them to experience epileptic seizures or have momentary loss of consciousness when viewing certain kinds of flashing lights or patterns that are present in our daily environment. These persons may experience seizures while watching some kinds of television pictures or playing certain video games. Peoples who have not had any previous seizures may nonetheless have an undetected epileptic condition.

If you or anyone in your family has experienced symptoms linked to an epileptic condition (e.g., seizures or loss of awareness), immediately consult your physician before using any video games.

We recommend that parents observe their children while they play video games. If you or your child experience the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation, or convulsions, DISCONTINUE USE IMMEDIATELY and consult your physician.



PRODUCT SPECIFICATIONS

OPERATING REQUIREMENTS

ELECTRICAL POWER

Domestic 120VAC @ 60 Hz, 5 amps Foreign 240VAC @ 50Hz, 2.5 amps

TEMPERATURE

32° F to 100°F (0°C to 38°C)

HUMIDITY

Not to exceed 95% relative humidity.

27-INCH SITDOWN MODEL MAIN CABINET SHIPPING DIMENSIONS

Height = 77 inches (195.58 cm) Depth = 36 inches (91.44 cm) Width = 34 inches (86.36 cm)

27-INCH SITDOWN MODEL MAIN CABINET SHIPPING WEIGHT

Weight = 465 lbs. (224.53 Kg)

<u>27-INCH SEAT SHIPPING DIMENSIONS</u>

Height = 52 ½ inches (133.35 cm) Depth = 27 inches (68.58 cm) Width = 20 inches (50.8 cm)

27-INCH MODEL SEAT SHIPPING WEIGHT

Weight = 125 lbs. (56.7 Kg)

INSPECTION AND INSTALLATION

WARNING: Use extreme care when moving or servicing the game cabinet. Don't plug in the game until you have read this manual. If the line cord is damaged, it must be replaced by a similar cord available from the manufacturer or service agent.

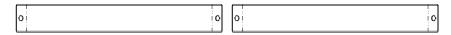
Please check the following after the game has been removed from its shipping crate and placed in a suitable play or service area.

Make sure that the game cabinet is level. Adjust the casters as needed.

- 1. Check the AC line cord for any visible signs of damage to the plug or line cord insulation.
- 2. Check for possible shipping damage to the following:
 - Player interfaces: steering wheel, buttons and pedal.
 - Seat assembly.
 - Monitor glass.
 - Cabinet backdoor.
 - Cabinet coin door.
 - Cabinet and seat decals.
- 3. Remove the coin door key from the coin return chute.

- 4. Open the top coin door and locate the key for the backdoor and the cashbox.
- 5. Locate hardware kit:

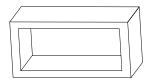
[2] Marquee Support Brackets



[2] Base Connect Boards



[1] Seat Base Extension



[4] 1/4-20 x 1/2" Black Hex Head Bolts (Shorter)

[8] 1/4-20 x 1 1/4" Hex Head Bolts (Longer)

[12] 1/4" Flat Washers

[1] Crossover Network Cable

- 6. Remove the backdoor from the cabinet and visually inspect the electronic components.
- 7. Verify that all connectors are secure and that the bottom of the cabinet is free of loose objects, which may have possibly come loose during shipping.

CAUTION: Access to back of the games should be limited to service personnel only! Allow minimum clearance between back of game and wall structure for cable and ventilation while preventing non-authorized access. Maximum clearance should be 6 inches (15 cm), in accordance with local code or whichever is less.

Connecting Dollar Bill Acceptor

Nicktoons Nitro is designed to utilize dollar bill acceptor:

MEI Model Number: AE2451U3

Voltage: 115v AC

Part Number: 250004166

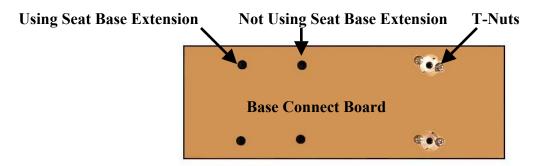
Note: If you are installing a dollar bill validator, you must also switch out the coin box for one that is

smaller

Seat Assembly Procedure

WARNING: The cabinet is top heavy. Install only on level surface. Use the leg levelers to make sure the cabinet and seat are stable. Do not push against plastic parts during movement.

- 1. Roll the cabinet and seat to the intended location and lower the leg levelers until both are equal height and stable.
- 2. Locate the [2] Base Connect Boards, [1] Seat Base Extension, [8] ¼-20 x 1 ¼" Hex Head Bolts (Longer) and [8] ¼" Flat Washers included. The Seat Base Extension is used to move the seat base back to allow for more room. See step 7 for information on connecting it.
- 3. **If you ARE using the Seat Base Extension to move the seat back**, you will mount the Base Connect Boards using the set of mounting holes furthest from the T-Nuts, making the boards longer.
- 4. If you ARE NOT using the Seat Base Extension, you will mount the Base Connect Boards using the set of mounting holes toward the middle, making the boards shorter.



- 5. Facing the cabinet, fasten the board to the inside RIGHT of the CABINET with bolts until finger tight; some movement is required in the mounting boards to align holes with seat pedestal assembly. Use the appropriate mounting holes on the board and **make sure the screws holding the T-Nut in place are facing IN.**
- 6. Facing the seat base, fasten the board to the inside RIGHT of the SEAT BASE with bolts until finger tight; some movement is required in the mounting boards to align holes with seat base assembly. Use the appropriate mounting holes on the board and **make sure the screws holding the T-Nut in place are facing IN.**



- 7. If you are using the Seat Base Extension, place it over the cabinet Base Connect Board and pull the wiring harness through. When you push the cabinets together, both base connect boards should pass through the center. If you are not using the seat base extension, skip to step 8.
- 8. Roll the seat base near the cabinet and align the ends of the boards with the openings in the cabinet and seat base. Slide the seat base forward so each board enters the other opening, leaving enough space to attach the wiring harness. Mate each cable connector and press firmly to seat the contacts. Ensure no wires are pinched during the seat base attachment.
- 9. Fasten in place with the ½-20 x 1 ½" hex head bolts (Longer) and ½" flat washers provided.
- 10. Adjust all levelers until both cabinet and seat are flush and parallel with each other. Inspect for pinched wires before firmly tightening the remaining fasteners to attach the two pieces as one.

Setting Up Marquee

- 1. After connecting the seat pedestal and lowering leg levelers, move the marquee into the upright position.
- 2. Locate the two marquee support brackets. Use the four 1/4-20 x 1/2" black hex head bolts (Shorter) to mount the brackets to the cabinet and back of the marquee.





Power Up Procedure

- 1. Plug the game line cord into an appropriately wired and fused AC receptacle.
- 2. Locate the game AC main switch to the bottom right side on back of the game cabinet.
- 3. Turn the switch to the ON position.
- 4. The game attract feature will begin after the game is finished loading- approximately 30 seconds.
- 5. Proceed to Switch Test of this document and verify proper game operation.

Game Networking

NOTICE: To link the two games together, use the crossover cable provided in the spare parts bag. Use of another cable other than the one shipped with the game could void warranty or cause games not to link. Use network cables that are at least CAT5 grade.

Networking Considerations

Each Nicktoons Nitro game comes with a network cable. Optionally, a hub can be installed and located remotely to monitor network activity.

Take care to protect exposed game wiring from general foot traffic around the game. Use a conduit or wire way to protect the cables as needed.

Please mark linking cables for your game if other such cables are in the vicinity to avoid confusion. Network cables are not marked or coded.

Avoid routing the network cables near sources of heat, moisture or electrical energy such as neon lights, compressor motors, transformers etc.

Networking Setup

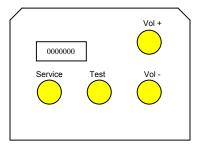
- 1. Remove the network cable from the spare parts bag inside the cashbox.
- 2. Connect each end of the cable to network jack behind each PC.
- 3. Neatly route the cable through the notch on the back of the cabinet.
- 4. Use the DIP switch diagram below for enabling link feature and master/slave configuration. The DIP switch is located on the JAMMA I/O board. The JAMMA I/O board is mounted inside the back of the cabinet.

DIP SW#	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Player ID 1	OFF	OFF						ON
Player ID 2	ON	OFF						ON
Player ID 3	OFF	ON						ON
Player ID 4	ON	ON						ON

5. Reset both games simultaneously and verify that link is successful. If not, check the DIP switch settings and make sure that the network cable is connected properly and secured. Please refer to the Game Troubleshooting Guide in this manual for more details.

SETUP AND TEST MENU

Locate the *Service Button Panel*. The Service Button Panel is made up of four pushbuttons. Simply press the button indicated by the function you want to activate. It is mounted inside the coin door area on top of the cash box vault. Press the **TEST** button to access the **Test Menu**.



Menu Navigation:

Button	Action
Test	Enter Operator Screen
Test or Start Button	Enter/Select Item Sub-Menu
Vol. (+)	Scroll up thru Menu items
Vol. (-) or View Button	Scroll down thru Menu items
Service	Exit to previous Menu

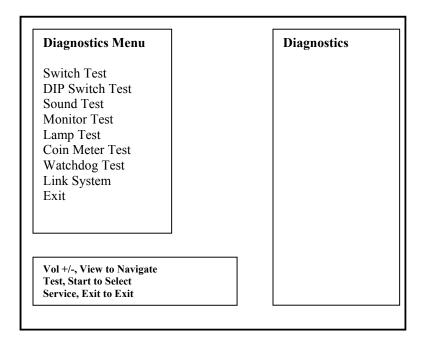
MAIN MENU

The **Test Main Menu** appears when the **TEST** button is pressed.

Test Main Menu	Version Information
Diagnostics Game Audits Pricing Adjustments System Adjustments Game Adjustments Utilities Calibration Volume Attract Volume Exit	Version: Nick 1.02 OS Version: 7.4u Exe Version: 1.1.4 Date: July 8, 2008 Time: 18:22:44 Machine ID: 1 JUSB Ver.: Release 4 USBWD Version: Release B10
Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit	

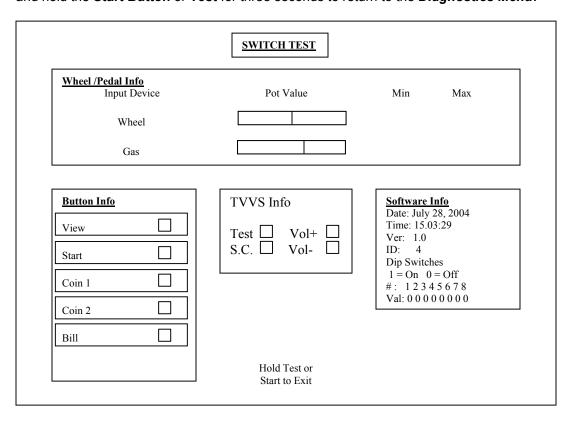
Diagnostics Menu

From the *Main Menu*, select *Diagnostics* and enter to view options.



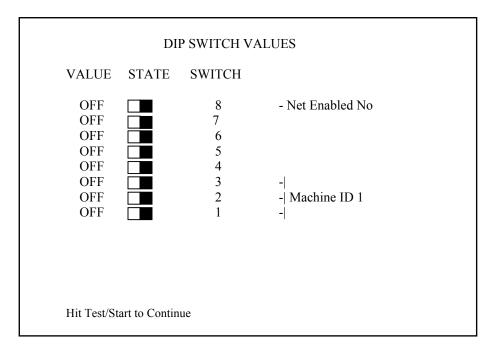
Switch Test

From the *Diagnostics* select and enter *Switch Test*. Verify proper switch input function using this menu. Each switch activated will be indicated on the test screen in corresponding yellow box and will be accompanied by a switch active sound indicator. Verify pot value for min and max are correct. If not, proceed to Calibration section of this manual. Press and hold the **Start Button** or **Test** for three seconds to return to the *Diagnostics Menu*.



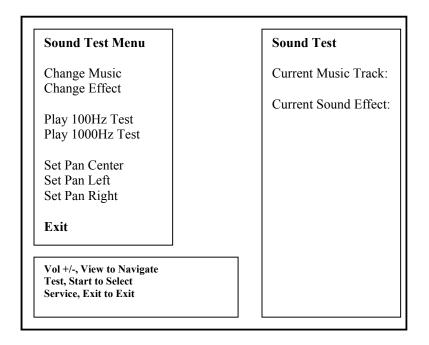
DIP Switch Test

From the *Diagnostics Menu* select and enter **DIP** *Switch Test*. Verify correct DIP switch settings. Please refer to Networking Setup on page 7. Press the Service Button to return to *Diagnostics Menu*.



Sound Test

From the *Diagnostics Menu* select and enter *Sound Test*. Verify that marquee, cabinet and seat sound volume and quality are good. Press the Service Button to return to *Diagnostics Menu*.



Note:

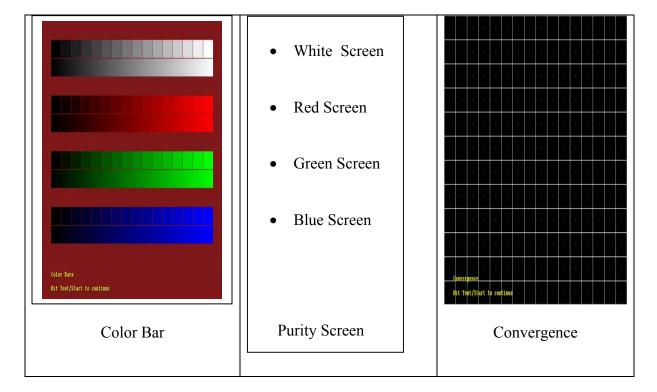
Use Pan functions to test left/right speakers separately.

Use 100-1Khz test to verify subwoofer sound quality.

Go to Volume section to adjust sound level.

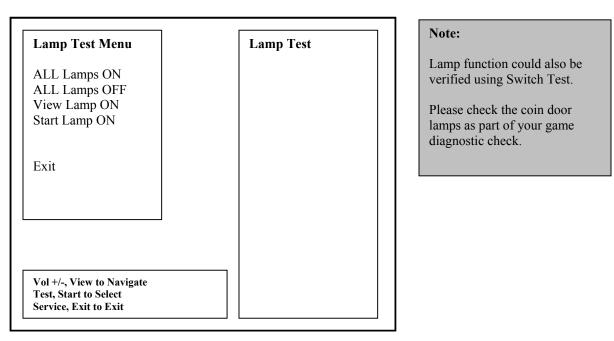
Monitor Test

From the *Audio/Video Options* menu, select and enter *Color Bars & Purity*. Verify correct color and purity for Red, Blue and Green screens. Use the convergence screen to also verify linearity. See Appendix n.



Lamp Test

From the *Diagnostics Menu* select and enter *Lamp Test*. Use Vol +/- to select the lamp and press Start or Test to activate that lamp. Verify that ALL lamps are working.



Coin	Meter	Test
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From the <i>Diagnostics Menu</i> select and enter <i>Coin Meter Test</i> . Press the Service or View Button to return to <i>Diagnostics Menu</i>	
Hit Test/Start to advance coin meter.	
Press Service/View to Exit	
Press Service/ View to Exit	
<u>Watchdog Test</u> From the <i>Diagnostics Menu</i> select and enter <i>Watchdog Test</i> . The watchdog feature allows the PC to monitor normal game so	
Hit Test/Start to begin.	

PC will reset in 9 seconds.....

Hit Test/Start to Cancel

Link System Menu

From the *Diagnostics Menu*, select *Link System* and enter. *Reliability Test and Reset Link System Config.* open in new menus. *Status* shows the Link Status and *Show All Machine IDs* displays the ID of each machine on its monitor. Press Start to Select. Press Service to Exit.

Link System Menu **Link System Status Status Link System** Reliability Test config. is invalid Show All Machine Ids Restart System Link The Link System configuration has Reset Link System Config. been reset. You must reboot the Exit machine before using the Link System. Vol +/-, View to Navigate **Test, Start to Select** Service, Exit to Exit

Reliability Test

This test shows how well each machine is communicating with the other linked machines. Press Service or View to exit the test.

	Link System Reliability Test			
This machine				
Test Status: N	o other ma	chines are linked	d (or Link Syste	m is down)
Machine ID	Sent	Received	Success	Status
Widomiio 12	To	From	Rate	Otatao
		-		
2	0	0	0.00%	No Data
3	0	0	0.00%	No Data
4	0	0	0.00%	No Data
5	0	0	0.00%	No Data
6	0	0	0.00%	No Data
Test/Start to toggle data flow				
	Service/View to exit this test			

Reset Link System Configuration Menu

From the *Utilities Menu*, select *Reset Link System Config* and enter. This utility allows the communication between linked games to be re-established due to a possible fault other than hardware. Check all network related hardware (cables, router) and make sure that they are connected and then power cycle the games. Press Start to Select. Press Service to Exit.

REALLY Reset Link System Config?

Yes (All Linked Games) Yes (This Game Only)

Cancel

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Confirmation:

Select "Yes" to carry out this utility.

Select "Cancel" to return to the previous menu.

This will cause the Link System configuration to be reset. The Link System will not function until the machine reboots.

Game Audits

From the *Main Menu*, select *Game Audits* and enter to view options.

Audits Menu General 1 General 2 Courses Course Wins Placings Vehicles Items Used Stunts Exit Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Note:

- Use game audit screens to assess game performance.
- Use information to determine options such as game difficulty and free game award to maximize game earnings.
- Use information to detect possible intermittent problems.

General 1 Audits

From the *Audits Menu*, select *General 1* and enter to view general game statistics. Press the Service Button or choose Exit to return to *Main Menu*.

Audits Menu

General 1

General 2 Courses Course Wins Placings Vehicles Items Used

Exit

Stunts

Vol +/-, View to Navigate Test, Start to Select

Service, Exit to Exit

General Audits

Time Game On Time Game Played Time Per Game

Games Played
Games Started
Game Continued
Game Timed Out
Free Games
Link Games
Boot Ups
Test Mode Entries
Automatic Reboots
Watchdog Resets
No I/O Board Init
Unfinished Games

General 2 Audits

From the *Audits Menu*, select *General 2* and enter to view additional general game statistics. Press the Service Button or choose Exit to return to *Main Menu*.

Audits Menu

General 1

General 2 Courses

Course Wins Placings Vehicles Items Used

Stunts Exit

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

General Audits

Total Coindrops Slot 0 Left Slot 1 Right Slot 2 DBV

Current Credits Current Coins

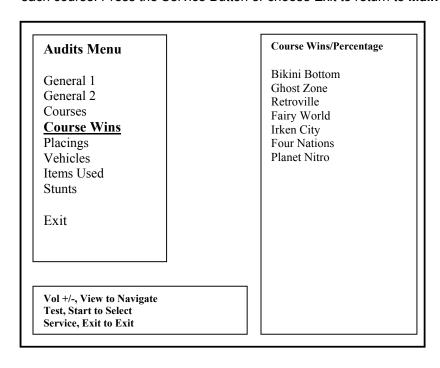
Course Audits

From the *Audits Menu*, select *Courses* and enter to view individual information on each course. View how many times each course is selected, as well as its popularity by overall percentage. Press the Service Button or choose Exit to return to *Main Menu*.

Audits Menu Course Selects/Percentage Bikini Bottom General 1 Ghost Zone General 2 Retroville Courses Fairy World Course Wins Irken City Four Nations Placings Planet Nitro Vehicles Items Used Stunts Exit Vol +/-, View to Navigate **Test, Start to Select** Service, Exit to Exit

Course Wins Audit

From the *Audits Menu*, select *Courses Wins* and enter to view individual win and overall percentage information on each course. Press the Service Button or choose Exit to return to *Main Menu*.



Placings Audit

From the *Audits Menu*, select *Placings* and enter to view individual count for each standing and percentage information. Use this information to determine game difficulty adjustments to properly reward players and maximize game earning performance. Press the Service Button to return to *Main Menu*.

Audits Menu	Placings/Percentage
General 1	1 st Place
General 2	2 nd Place
Courses	3 rd Place
Course Wins	4 th Place
Placings	5 th Place
Vehicles	6 th Place
Items Used	
Stunts	Avg. Place:
Exit	Max Win Streak:
	Max Lose Streak:
	Cur Win Streak:
	Cur Lose Streak:
Vol +/-, View to Navigate	Reveals
Test, Start to Select	
Service, Exit to Exit	Finales

Vehicles Audit

From the *Audits Menu*, select *Vehicles* and enter to view individual count for each vehicle selection and percentage information. Press the Service Button or choose Exit to return to *Main Menu*.

Audits Menu	Vehicle
General 1 General 2 Courses Course Wins Placings Vehicles Items Used Stunts Exit Vol +/-, View to Navigate Fest, Start to Select Service, Exit to Exit	Selects/Percentage SpongeBob Phantom Neutron Turner Zim Aang Nitro

Items Used Audit

From the *Audits Menu*, select *Items Used* and enter to view individual count the number of times each item has been used, total number of items picked up, and total number of items used. Press the Service Button to return to *Main Menu*.

Audits Menu	Items Used
General 1	Seeker
General 2	Shield
Courses	Boost
Course Wins	Bomb
Placings	Splat
Vehicles	Ricochet
Items Used	Super Seeker
Stunts	Ultimate
Exit	Items Used
LAIL	Items Received
Vol +/-, View to Navigate	
Test, Start to Select	
Service, Exit to Exit	

Stunts Audit

From the *Audits Menu*, select *Stunts* and enter to view individual count for each stunt performed. Press the Service Button to return to *Main Menu*

Audits Menu	Stunts / Assist
General 1 General 2 Courses Course Wins Placings Vehicles	Wheelies Slides Leap Frogs Back Flips Helis Rolls
tems Used Stunts Exit	End Over Ends Spin Outs Auto Pilot Triggers
fol +/-, View to Navigate fest, Start to Select	

Pricing Adjustment Menu

From the *Main Menu*, select *Pricing Adjustment* and enter. The Adjustment Menu allows you to customize the game. Each variable will change an aspect of the basic game pricing or player free game reward. Optimizing these settings should result in continued high player interest and game earnings. You can monitor the affects of these options by comparing audit information before and after the changes have been implemented. Press Start to Select. Press Service to Exit.

Pricing Menu

Free Play
Money Unit
Coin Value
Coins Per Bill Pulse
Coins Per Credit
Credits to Start
Credits to Continue
Max Credits
First Place Free Race
Multiplay Win Free Race
Sync All Adjustments
Exit

Vol +/-, View to Navigate Test, Start to Select Service. Exit to Exit

Credit Options

Please note the following:

Adjusting the number of coins per credit will reset the stored number of partial credits.

Price Menu

From the *Pricing Adjustment Menu*, select *Freeplay* and enter. This option allows you to set the game to Free Play or at no cost. Any coins or bills inserted will continue to be accepted and counted. This will be reflected in the Audits. The credits issued money accepted during Freeplay mode will be available after Freeplay is turned off or deactivated. Please perform Clear Credits to remove unwanted credits. Press Start to Select. Press Service to Exit.

Freeplay Activate? Yes No Cancel Cancel Adjusting the number of coins per credit will reset the stored number of partial credits. Vol +/-, View to Navigate Test, Start to Select Service. Exit to Exit

Money Unit Menu

From the *Pricing Menu*, select *Money Unit* and enter. Select the currency that applies to the games location and press Start to select. Press Start to Select. Press Service to Exit.

Select Currency **Credit Options** USD US Dollars AUD AUS Dollars Please note the following: CAD CAN Dollars EUR Euros GBP British Pounds Adjusting the number of DEM Deutschmarks coins per credit will reset FRF French Franks the stored number of JPY Japanese Yen partial credits. NLG Dutch Guilders ITL Italian Lire CHF Swiss Franks BRL Brazilian Reals DKK Danish Kroner MXN Mexican Pesos RUR Russian Rubles KRW Korean Won CNY Chinese Won Cancel Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Coin Value Menu

From the *Pricing Menu*, select *Coin Value* and enter. Choose the coin value based on the currency selected and the coin acceptor type or setting. Press Start to Select. Press Service to Exit.

Coin Value 0.01 USD	Credit Options
0.05 USD	_
0.10 USD	Please note the
0.25 USD	following:
0.50 USD	A 11 / 11 1
1.00 USD	Adjusting the number
2.00 USD	of coins per credit will reset the stored
5.00 USD	
10.00 USD	number of partial credits.
20.00 USD	credits.
50.00 USD	
100.00 USD	
500.00 USD	
1000.00 USD	
10000.00 USD	
Exit	
Vol +/-, View to Navigate	
Test, Start to Select	
Service, Exit to Exit	

Coin Per Bill Pulse Menu

From the *Pricing Menu*, select *Coin per Bill Pulse Menu* and enter. Choose the equivalent coin value based on the bill acceptor currency type or settings. Press Start to Select. Press Service to Exit.

Coin Per Bill Pulse?	Credit Options
1 2 3 4 5 10 20 25 50 100	Please note the following: Adjusting the number of coins per credit will reset the stored number of partial credits.
Exit Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit	

Coin Per Credit Menu

From the *Pricing Menu*, select *Coin per Credit Menu* and enter. Choose the number of coins required to earn one credit. Press Start to Select. Press Service to Exit.

Coin Per Credit	Credit Options
1 2 3	Please note the following:
4 5 6	Adjusting the number of coins per credit will
7 8 9	reset the stored number of partial credits.
10 Cancel	
Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit	

Credit To Start Menu

From the *Pricing Menu*, select *Credit To Start Menu* and enter. Choose the number of credits required to start one game. Press Start to Select. Press Service to Exit.

Credits to Start	Credit Options
1 2	Please note the following:
3 4 5 6 7 8 9 10	Adjusting the number of coins per credit will reset the stored number of partial credits.
Cancel	
Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit	

Credit to Continue Menu

From the *Pricing Menu*, select *Credit To Continue Menu* and enter. Choose the number of credits required to continue from the current game. Press Start to Select. Press Service to Exit.

Credits to Continue	Credit Options
1 2	Please note the following:
3 4 5 6 7 8 9	Adjusting the number of coins per credit will reset the stored number of partial credits.
10 Cancel	
Vol +/-, View to Navigate Test, Start to Select	
Service, Exit to Exit	

Max Credits Menu

From the *Pricing Menu*, select *Max Credit Menu* and enter. Choose the number of maximum credits the game will post. Please note that the game will continue to accept and count additional coins with no additional credits added over the maximum number selected. Press Start to Select. Press Service to Exit.

Max Number of	Credit Options
Credits 10 15 20 25 30 35 40 45 50	Please note the following: Adjusting the number of coins per credit will reset the stored number of partial credits.
Cancel Vol +/-, View to Navigate	
Test, Start to Select Service, Exit to Exit	

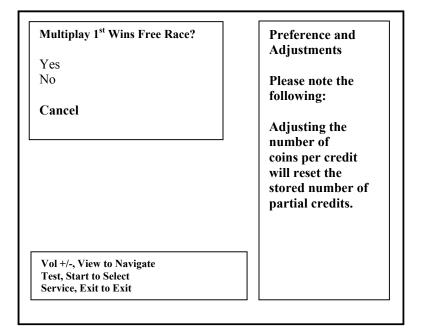
1st Place Free Race Menu

From the **Pricing Menu**, select **1**st **Place Free Race** and enter. The player wins a free race for a 1st place overall finish during a single of networked race game. Press Start to Select. Press Service to Exit.

First Place Wins Free Race?	Preference and Adjustments
Yes	
No	Please note the
	following:
Cancel	
	Adjusting the
	number of
	coins per credit
	will reset the
	stored number of
	partial credits.
X 1 1 / X 2	$\neg \mid$
Vol +/-, View to Navigate Test, Start to Select	
1 con start to scient	

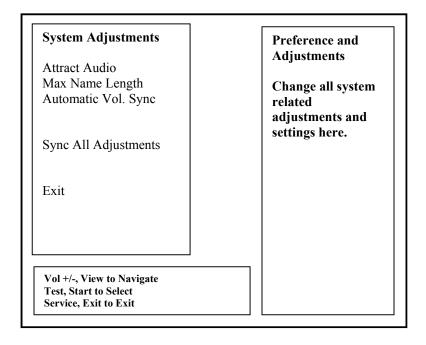
Multiplay 1st Place Wins Free Race

From the *Pricing Menu*, select *Multiplay 1*st *Wins Free Race* and enter. Select the amount of time in seconds given to the player to reach the first check point. Press Start to Select. Press Service to Exit.



System Adjustments Menu

From the *Main Menu*, select *System Adjustments* and enter. Press Start to Select. Press Service to Exit.



Attract Audio Menu

From the **System Adjustment Menu**, select **Attract Audio and** enter. Select option to play game music during standby or attract mode. Press Start to Select. Press Service to Exit.

Turn On Attract Mode Audio?	Preference and Adjustments
Yes	
No	Change all system related
Cancel	adjustments and settings here.
Vol +/-, View to Navigate	
Vol +/-, View to Navigate Test, Start to Select	

Max Name Length Menu

From the **System Adjustment Menu**, select **Max Name Length** and enter. Choose the maximum number of alphanumeric characters allowed during player name entry. Press Start to Select. Press Service to Exit.

Maximum Name Length	Preference and Adjustments
3 4 5 6 7 Cancel	Change all system related adjustments and settings here.
Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit	

Automatic Volume Sync Menu

From the **System Adjustment Menu**, select **Automatic Volume Sync** and enter. Select option to synchronize game volume adjustment across all linked or networked games. When active, volume for all linked games can be adjusted to the same level from any one of the games connected to the network. Press Start to Select.

Automatic Volume Sync?
Yes
No
Cancel

Change all system related adjustments and settings here.

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

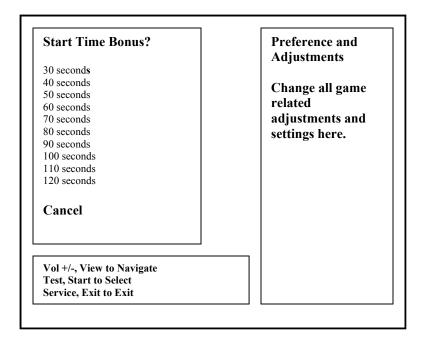
Game Adjustments Menu

From the Main Menu, select Game Adjustments and enter. Press Start to Select. Press Service to Exit.

Game Adjustments Preference and Adjustments Start Time Bonus Checkpoint Time Bonus Change all game Game Difficulty related adjustments Plays for Score Reset and settings here. Autopilot Available Bonus Character Unlocked Bonus Stage Unlocked Announcer Voice Sync All Adjustments Exit Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

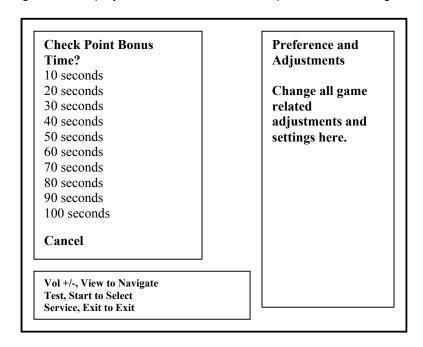
Start Time Bonus Menu

From the **Game Adjustment Menu**, select *Start Bonus Time* and enter. Select amount of time given at the start of the race to reach the first Checkpoint. Additional time is given at each Checkpoint. Press Start to Select. Press Service to Exit.



Checkpoint Bonus Time Menu

From the **Game** *Adjustment Menu*, select *Checkpoint Bonus Time* and enter. Select the amount of time in seconds given to the player to reach the next check point after reaching a check point. Press Start to Select. Press Service to Exit.



Game Difficulty Menu

From the **Game** *Adjustment Menu*, select *Game Difficulty* and enter. The default difficulty level is 5. Press Start to Select. Press Service to Exit.

Game Difficulty Level? Preference and Adjustments 1 Easier Change all game 3 related 4 adjustments and 5 settings here. 6 7 8 9 10 Harder Cancel Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Note:

Please reference the game Audit information to determine the appropriate difficulty setting for your location. Compare changes in game statistics and game revenue before and after the change.

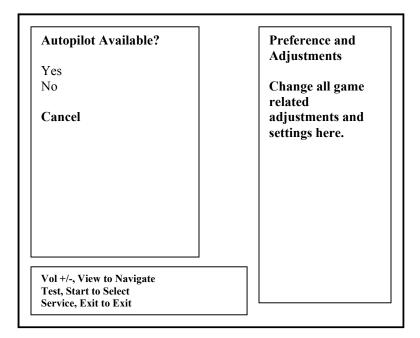
Plays for High Score Reset Menu

From the *Adjustment Menu*, select *Plays for High Score Reset* and enter. Select the number of plays before high score table is reset. Press Start to Select. Press Service to Exit.

Plays For High Score Reset?	Preference and Adjustments
1000	
2000	Change all game
2500	related
5000	adjustments and
7500	settings here.
10000	
12500	
15000	
17500	
20000	
Cancel	
Vol +/-, View to Navigate	$\neg \mid$
Test, Start to Select	
Service, Exit to Exit	

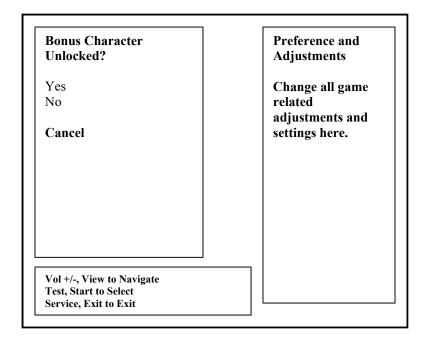
Autopilot Available Menu

From the **Game** *Adjustment Menu*, select *Autopilot Available* and enter. When active, this feature allows the game to run in autopilot mode after 10 seconds has elapsed without player input. This provides an opportunity for younger players to enjoy the game experience as well. Press Start to Select. Press Service to Exit



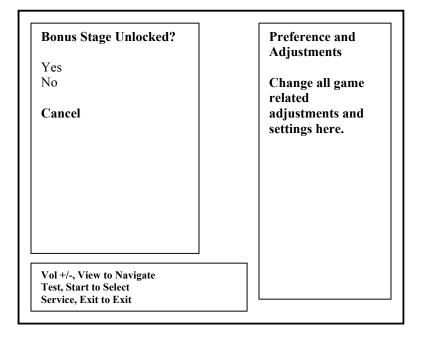
Bonus Character Unlocked Menu

From the **Game** *Adjustment Menu*, select *Bonus Character Unlocked* and enter. The default setting for this menu is **NO**.



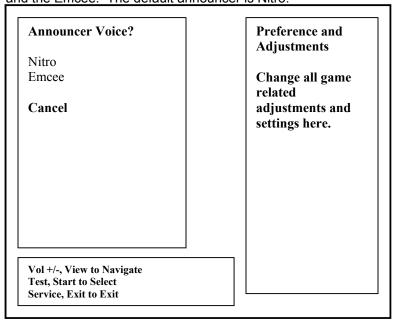
Bonus Stage Unlocked Menu

From the Game Adjustment Menu, select Bonus Stage Unlocked and enter. The default setting for this menu is NO.



Announcer Voice Menu

From the **Game** *Adjustment Menu*, select *Announcer Voice* and enter. This allows the user to switch between Nitro and the Emcee. The default announcer is Nitro.



Utilities Menu

From the **Test Main Menu**, select **Utilities** and enter. The Utilities Menu contains tools that the operator could use to manage game adjustments or reset key game and player score and statistic information. The option to perform a game factory restore can also be accessed.

Utilities Menu

CRC Check

Clear Credits Clear Audits Reset High Scores Default Adjustments Reset Link System Config. Factory Restore Sync All Adjustments View Errors

View Messages Copy Audits and Log to Disk

Cancel

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Utilities

Please note the following:

Setting default adjustments or performing a factory restore will require calibration afterwards.

A factory restore will perform all the resets listed at the left, clearing credits, audits, high scores, player data.

Note:

- Information will be permanently erased by Clear or Reset functions.
- It is often ideal to perform a factory restore when the game is being moved to a new location.
- Record your game audit information if performing any of the above functions.

CRC Check Menu

From the *Utilities Menu*, select *CRC Check* and enter. Performing CRC check verifies the integrity of the software. Press Start to Select. Press Service to Exit.

REALLY Perform CRC Check?

Yes (All linked machines) Yes (This machine only)

Cancel

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Confirmation:

Select "Yes" to carry out this utility.

Select "Cancel" to return to the previous menu.

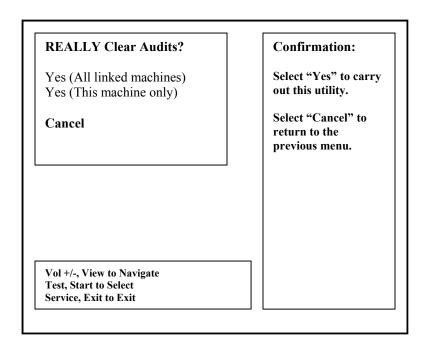
Clear Credit Menu

From the *Utilities Menu*, select *Clear Credits* and enter. Performing Clear Credit will delete any remaining credits posted. Press Start to Select. Press Service to Exit.

REALLY Clear Credits? Yes (All linked machines) Yes (This machine only) Cancel Select "Yes" to carry out this utility. Select "Cancel" to return to the previous menu.

Clear Audit Menu

From the *Utilities Menu*, select *Clear Audit* and enter. Performing Clear Audit will delete all audit information found on the Audit Menu. Please record them if you ever need to reference the information. Press Start to Select. Press Service to Exit.



Clear High Scores Menu

From the *Utilities Menu*, select *Clear High Scores* and enter. Performing Clear High Score will clear the all high score tables. Press Start to Select. Press Service to Exit.

Yes (All linked machines) Yes (This machine only) Cancel Confirmation: Select "Yes" to carry out this utility. Select "Cancel" to return to the previous menu.

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Set Default Adjustments Menu

From the *Utilities Menu*, select *Default Adjustment* and enter. Performing Default Adjustment setting will restore game adjustments back to its manufacturer recommended settings. The game will need to be re-calibrated. Press Start to Select. Press Service to Exit.

REALLY set Default Adjustments? Confirmation: Yes (All linked machines) Select "Yes" to carry Yes (This machine only) out this utility. Select "Cancel" to Cancel return to the previous menu. Calibration data will be reset as a result of resetting default adjustments. Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Reset Link System Configuration Menu

From the *Utilities Menu*, select *Reset Link System Config* and enter. This utility allows the communication between linked games to be re-established due to a possible fault other than hardware. Check all network related hardware (cables, router) and make sure that they are connected and then power cycle the games. Press Start to Select. Press Service to Exit.

REALLY Reset Link System Config?

Yes (All Linked Games) Yes (This Game Only)

Cancel

Vol +/-, View to Navigate **Test, Start to Select** Service, Exit to Exit

Confirmation:

Select "Yes" to carry out this utility.

Select "Cancel" to return to the previous menu.

This will cause the Link System configuration to be reset. The Link **System will not function** until the machine reboots.

Factory Restore Menu

From the *Utilities Menu*, select *Factory Restore* and enter. Performing Factory Restore will restore game adjustments back to its manufacturer recommended settings and clear all audit information. The game will need to be re-calibrated. Press Start to Select. Press Service to Exit.

REALLY Perform CRC Check?

Yes (All linked machines) Yes (This machine only)

Cancel

Vol +/-, View to Navigate Test, Start to Select Service, Exit to Exit

Confirmation:

Select "Yes" to carry out this utility.

Select "Cancel" to return to the previous menu.

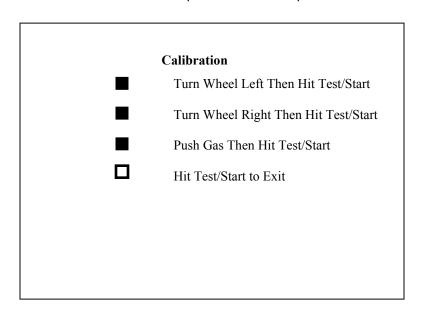
Copy Audits and Log to Disk Menu

From the *Utilities Menu*, select *Factory Restore* and enter. Performing Factory Restore will restore game adjustments back to its manufacturer recommended settings and clear all audit information. The game will need to be re-calibrated. Press Start to Select. Press Service to Exit.

REALLY Copy Audits and Log?	Confirmation:
Yes (All linked machines) Yes (This machine only)	Select "Yes" to carry out this utility.
Cancel	Select "Cancel" to return to the previous menu.
Vol +/-, View to Navigate	
Test, Start to Select	
Service, Exit to Exit	

Calibration Menu

From the **Test Main Menu**, select **Calibration** and enter. Making sure that the wheel, gas and brake are all properly calibrated is the easiest way to make sure that your driving game could maximize its earning potential. Follow the screen instructions carefully. Verify proper calibration on the Switch Test screen. Check and make sure that the minimum, center and maximum values correspond to the actual position of the control.

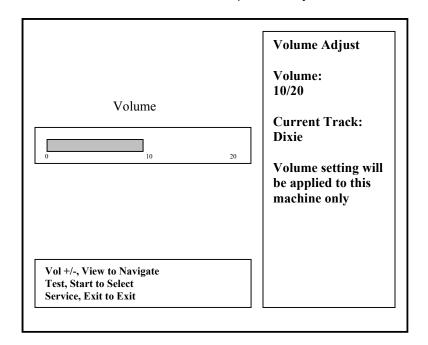


Note:

- If the game requires constant recalibration, check the controls for mechanical wear or damage. Replace if necessary.
- Normal wear and tear of the controls means that calibration should be part of the games scheduled maintenance.

Volume Menu

From the **Test Main Menu**, select **Volume** and enter. This refers to the game volume while in play. Use the Volume Up/ Volume Down button on the service panel to adjust volume level. Press Start to Select. Press Service to Exit.

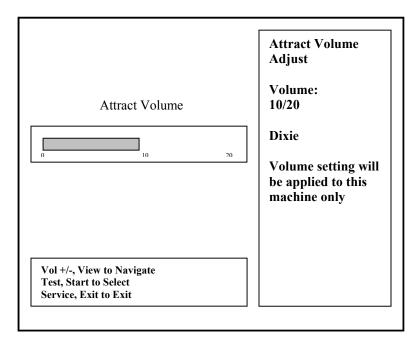


Note:

- Adjusting the volume while in attract mode only affects the attract volume and the not the actual game volume.
- Adjustment to game volume must be done while on Volume Adjust screen or while on game mode.
- Adjust volume levels relative to location and environment.

Attract Volume Menu

From the **Test Main Menu**, select **Attract Volume** and enter. This refers to the attract mode volume. Use the Volume Up/ Volume Down button on the service panel to adjust volume level. Press Start to Select. Press Service to Exit.



TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Game will not power up	Game not plugged in.	Plug game into receptacle.
	Game not turned on.	Turn ON main power switch
	Game fuse is blown	Check game fuse.
	No power to receptacle.	Plug game into powered receptacle.
	PC power switch is OFF	Turn PC power switch ON.
	PC BIOS set wrong.	See Appendix B.
"No Signal" Message	Video cable not secure.	Check and secure video connector.
	PC not turned ON.	Turn ON power to PC.
No video display	No power to video display.	Check power to video display.
		see Game will not power up.
No sound	Audio cable not connected.	Check audio cable connection.
	Speaker not connected.	Check speaker connection.
"I/O Board Missing"	USB connector not	Check USB connector from PC to I/O
	connected.	board. Perform Hard Drive Recovery
Game will not load.	New Hard Drive installed.	Power cycle by un-plugging game.
		Perform Hard Drive Recovery
	Hard Drive data corrupted.	Perform Hard Drive Recovery.
Game Freezes	Security Dongle Loose	Secure and Tighten Dongle
	Poor Ventilation	Check Fan Operation and Airflow
	USB cable loose	Remove and Reinsert USB both ends of cable
	Failing or Bad Power	Check Power Supply Output or
	Supply	Replace With Known Good.
	Corrupted Hard Drive	Perform CRC Check. Re-Image if bad.
Game resets.	Low DC voltage.	Check for proper voltage(+5V,+12V).
		Adjust cabinet main power supply.
	Door lamp is wrong rating.	Use only 5volt lamps.
	Cabinet/PC temperature is	Check that vents and fans are
	too high.	functioning and not obstructed.
	Hard Drive data corrupted.	Perform Hard Drive Recovery
Not Linking	DIP Switch Set Wrong	Refer to Networking Setup Section.
	Network Cable Bad	Check Connection or Replace
	Game Operator Settings	Make Sure All Settings Are The Same
	Not The Same.	Between Linked Games

Warning: Do not connect or disconnect any cables or connectors on this game with the power on. This could potentially damage the game.

Parts List

Part Pic	Part Number	Part Description	Qty.
	NT2-ART-BUTPNLL	Art – Button Panel Left	1
	NT2-ART-BUTPNLR	Art – Button Panel Right	1
NICKTORNS	NT2-ART-CABLEFT	Art – Left Cabinet Side	1
NIERTORIS	NT2-ART-CABRGT	Art – Right Cabinet Side	1

Part Pic	Part Number	Part Description	Qty.
SUITABLE FOR ALL ARES NICKELODEON NICKTOONS	NT2-ART-MARQUEE	Art – Marquee	1
	NT2-ART-SEATLFT	Art – Seat Base Left	1
MCHTISHES NILKTOONS	NT2-ART-SEATLOW	Art – Seat Base Back	1
	NT2-ART-SEATRGT	Art – Seat Base Right	1
	NT2-ART-SEATUPP	Art – Upper Seat Back	1

Part Pic	Part Number	Part Description	Qty.
100 00 00 00 00 00 00 00 00 00 00 00 00	NT2-ART-SPEDPNL	Art – Speedometer Panel	1
	000-CBL-6PWR18G	Standard 18 Gauge Powercord, 6' Long	1
	NT2-CBL-ACPOWER	Power Wire Harness	1
	NT2-CBL-COINDOR	Coin Door Harness	1
	NT2-CBL-DELLY	Dell Y Cable	1
	NT2-CBL-FUSEPCB	Fuse PCB Cable	1
	NT2-CBL-JAMMA00	Jamma Harness	1
	NT2-CBL-SPEDLMP	Speedometer Lamp Cable	1
	NT2-CBL-SPEAKER	Speaker Wire Harness	1
	NT2-CBL-SPKRSAT	Seat Speaker Cable	1
	000-CBL-RCA6M2M	RCA Cable 6'	1
	000-CBL-USB3ABB	3' USB A-M to B-M Cable	2
	000-CBL-35ADIO2	3.5mm Plug to Plug Stereo Audio Cable 2'	1
	000-CBL-10CRSOV	Cross Over Cable 10' Grey	1
	NT2-CCC-DASHPNL	Cabinet - Plywood Panel for Dash Support	1
	NT2-CCC-ELECMNT	Cabinet – Electronic Mount	1
	NT2-CCC-MAINCAB	Cabinet Main	1

Part Pic	Part Number	Part Description	Qty.
	NT2-CCC-MARQUEE	Cabinet - Wood Marquee	1
	NT2-CCC-SEATBAS	Cabinet - Seat Base	1
Flash Voyager Flash Voyager	000-ELE-4GFLASH	Corsair Flash Voyager, 4GB Flash Drive Corsair Part # CMFUSB2.0-4GB	1
	000-ELE-ACFAN	AC Fan	1
	NT2-ELE-DONGLE	Security Dongle	1
	000-ELE-FILTINL	Filter, Yenpen 6A with IEC Connector Pac West Part # YB06T36A	1
	000-ELE-FUSHOLD	Fuse Holder	1
	NT2-ELE-PCASSY	Dell Computer	1
	000-FUS-5A250V	Fuse – 5A 250V Fastblow	1

Part Pic	Part Number	Part Description	Qty.
	NT2-GLS-MONGLAS	Monitor Glass 28 7/16" x 22 1/4"	1
Market B: 1999900	000-HAP-5VMETER	5V Meter Happ Part # 42-0756-07	1
	000-HAP-DBLDOOR	Coin Door w/ .25 x 2 label and two .25 mechs, 12V Bulbs Happ Part # 40-6000-00	1
	000-HAP-MBUTTON	Miniature Round Pushbutton (Black Bezel, Yellow Center) Happ Part # 49-0577-05	4
	000-HAP-SEASLID	Seat Slide for Hunsaker #9000 Seat Happ Part # 50-3137-00	1
	000-HAP-SNGPEDL	Single Pedal Assembly	1
	000-HAP-SPLTHUB	Split Hub Assembly F/5/8 Shaft 20 TAPS 270 wheel Happ 50-2525-00	1

Part Pic	Part Number	Part Description	Qty.
	000-HAP-STEER5K	270 Degree Steering Mech. w/ 5K Pot	1
	000-HAP-STERWHL	Steering Wheel Happ Part # 50-2846-00	1
	NT2-HAP-YBUTNLF	Jumbo Round Yellow Button Printed "View"	1
START NO.	NT2-HAP-YBUTNRT	Jumbo Round Yellow Button Printed "Start"	1
	000-HDW-3SCASTE	3" Swivel Caster	8
	000-HDW-5LEGLEV	½" Leg Levelers	8
	000-HDW-5LEGPLT	½" Leg Leveler Plates	8
÷)	000-LMP-24FLORE	24" Fluorescent Lamp Duray Part # F20T12CW	1
WHITE WAS DO	000-LMP-T314LED	T3-1/4 Wedge Base LED Cluster	6

Part Pic	Part Number	Part Description	Qty.
The second secon	000-LMS-24FLORE	24" Lamp Fixture Duray Part # EE1120	1
· · · · · · · · · · · · · · · · · · ·	NT2-MLS-STRBRAC	Steering Brace	1
	NT2-MLS-CONTBRK	Button Counter Bracket	2
	NT2-MLS-CPUHOLD	Computer Hold Down	1
0 0 0	NT2-MLS-FLORTRM	Floor Trim Bracket 18.22"	1
0 0 0	NT2-MLS-FLRTRMB	Back Floor Trim Bracket 18.22"	1
	NT2-MLS-GLSRETN	Glass Retainer L Bracket	1
0	NT2-MLS-MRQSPRT	Marquee Support Bracket	2
	NT2-MLS-PEDLGRL	6" Pedal Speaker Grill	1

Part Pic	Part Number	Part Description	Qty.
	NT2-MLS-PWRSWT	Power Switch Plate	1
	NT2-MLS-SEATBAK	Seat Speaker Grill	1
0 0 0 0	NT2-MLS-SIDETRM	Coin Door Side Trim 19.44"	1
	NT2-MLS-SMOUNTU	Steering Mount Upper	1
	NT2-MLS-SPKGRIL	Speaker Grill	2
	NT2-MLS-STERMTB	Steering Mount Bottom	1
	NT2-MLS-STRBRAC	Steering Brace	1
	000-MWF-FANGRIL	Fan Grill	2
	000-NEO-27SVGA	27" SVGA Monitor Neotec Part # NT-550DXF9	1

Part Pic	Part Number	Part Description	Qty.
	NT2-PCB-SUBAMP	CGC Audio Amp	1
	NT2-PCB-IOPCB1	Raw Thrills I/O PCB Raw Thrills Part # 2-1-12-00-00-002	1
	NT2-PCB-RESET	Raw Thrills Reset PCB Raw Thrills Part # 520-00004-01	1
	000-PLF-27BEZEL	Bezel	1
	NT2-PLF-DASHBRD	Cart Fury Vacuum Form Dashboard – Blue	1
	NTR-PLM-HUNSEAT	Seat (Pantone Orange)	1
	NT2-PLS-MARQUEE	Polycarbonate Marquee	1

Part Pic	Part Number	Part Description	Qty.
	000-SPK-475IN8O	Speaker, 4 3/4", 8 Ohm Challenge Electronics Part # 5060CESH-1	2
	000-SPK-8IN8OHM	Subwoofer, 8" 8 Ohm Betson Part # 43-3009-8	2
	000-SWC-ALCO16A	Alcoswitch, 16A, Double Pole – Single Throw, Rocker, Black Tyco Part # 157-1103-1	1
	NT2-WMD-SPKRING	Wood Speaker Ring	2
	NT2-WPL-BASCNCT	Base Connect Board	2
	NT2-WPL-SPCRBOX	Seat Base Extension	
	NT2-PLS-FLORMAT	Rubber Floor Mat	1

Appendix A: Flash Drive Recovery

NOTICE: Nicktoons Nitro is shipped with a recovery compact disk. Flash drives have been known to occasionally fail for many reasons. Follow the procedure below to restore data on the flash drive if a disk failure should occur. Use extreme care when performing the following procedure and avoid rough handling of pc or CD. Please check the Troubleshooting Guide section of this document. Have the recovery CD ready before you begin.

The following are some symptoms that may indicate a possible bad flash drive:

- Flash Drive Test reports "bad" or "missing" files. Please refer to Trouble Shooting section of the manual.
- The game fails to finish loading.
- A boot error is reported after game is power cycled or reset.
- The game is looking for a boot CD to be inserted.
- Erratic game or attract mode.

Note: It is important that the USB cable from pc and power is connected to the I/O board before you proceed.

Flash Drive Recovery Procedure:

- 1. Open the control panel to access the pc.
- 2. Press the button on the CD drive to open CD tray.
- 3. Carefully insert the recovery disk into the tray.
- 4. Press the button on the CD drive to close the CD tray.
- 5. Turn OFF the pc by pressing the power button once.
- 6. Turn ON the pc by pressing the power button once.
- 7. Disk recovery process will begin automatically.
- 8. A message at the top of the screen will prompt you to remove the disk when process is over. Press the CD drive button to open tray. Remove the recovery disk and store safely.
- 9. Turn OFF the pc by pressing the power button once.
- 10. Turn ON the pc by pressing the power button once.

Note: Do not interrupt power or reset the game during the following process!

- 11. The game will begin to initialize and load. It will typically take about five minutes to complete.
- 12. The flash drive recovery process is complete when the game enters attract mode.
- 13. Proceed with control calibration and make necessary game adjustments. Please refer to Setup and Test section of this manual.
- -- End of Procedure--

Appendix B: Power Management Setting (BIOS)

NOTE: Nicktoons Nitro is shipped with the correct BIOS settings. Any changes made to the BIOS other than what is described below may adversely affect game functionality.

This BIOS setting allows the PC to automatically power up when AC power is detected. This eliminates the need to manually turn the PC ON after a power disruption.

Procedure:

- 1. Turn game OFF.
- 2. Connect a USB keyboard to the PC and turn game ON.
- 3. When the Dell loading screen appears, press <u>F2</u>.
- 4. On the BIOS menu screen, use the DOWN arrow to scroll to Power Management Setup.
- 5. Hit the ENTER key once.
- 6. On the Power *Management Setup* menu, use the <u>DOWN</u> arrow to scroll to *After AC Power Lost*.
- 7. Hit ENTER and use the RIGHT arrow to highlight [On].
- 8. Hit ENTER.
- 9. Press ESC to exit.
- 10. Use the RIGHT arrow to highlight *Exit* and press *ENTER*.
- 11. PC will reset and begin to load game.

Appendix C: Basic Display Adjustments

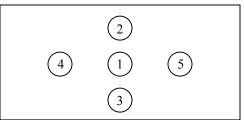
WARNING: Extremely high voltage is present on the monitor assembly. The monitor does not contain any user serviceable parts. Do not attempt to service the monitor.

The following are display settings that you should become familiar with. It is important to note that settings may differ slightly between manufacturers and even between displays of the same manufacturers. Certain factors like age of the display could also be a factor. Therefore, the information below should only serve as a reference as actual settings may not be practical in most cases.

Setting		Adjustment
Prightness	Function:	Background Brightness or Black Level.
Brightness	Set Level:	Black background should appear dark and not gray.
Contrast		Definition/ Sharpness of character against background.
Contrast	Set Level:	Outer edges of character or text should not be distorted.
H-Position	Function:	Horizontal Position. Side/side centering.
n-Position	Set Level:	Picture should be centered from side to side.
H-Size	Function:	Horizontal Size. Side/side dimension.
п-эіге	Set Level:	Picture should be full from side to side.
V-Position		Vertical Position. Up/down centering.
V-POSITION	Set Level:	Picture should be centered up and down.
V-Size		Vertical Size. Up/down dimension.
V-SIZE	Set Level:	Picture should be full from top to bottom.
Pin Cushion		Degree of straightness along both vertical sides of the picture.
Pin Cusnion	Set Level:	Both sides of the picture should be straight, without curvature.
Dogause		De-magnetizes the picture tube when activated. This eliminates
Degauss	picture disc	coloration caused by magnetic disturbance around the picture tube.

Digital displays are adjusted using a button type remote adjust board. Below are functional diagrams for Kortek and Wells Gardner 27" digital displays:

Neotec Remote:



Button 1: Display Menu

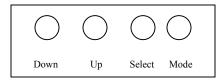
Button 2: Cycle up thru menu levels

Button 3: Cycles downward thru menu levels

Button 4: Increase Value of Selected Item

Button 5: Decrease Value of Selected Item

Wells Gardner:



Down: Cycles downward thru levels **Up:** Cycles upward thru levels

Select: Select setting to be adjusted.

Mode: Menu/Exit

Wiring Schematics

