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Table of Contents	
1. Safety Notices	3
2. FCC Compliance	3
3. Nicktoons Racing, Video Game	3
3.1. Game Background, The Characters	3
3.2. Game Background, The Races	4
4. Connections to the PC	4
4.1. DB15 Game Port Controls	4
4.2. Coin Door & Dollar Acceptor	6
4.3. DB9 Coin Counter/Switch on COM1 Serial port	7
4.4. USB Dongle	9
5. Came Aujustments & Cambrations	
5.2. 2ND Coinage for Game Play	10
5.3. 3RD and Additional Coinage for Game Play	11
5.4. Count Down To Insert Coin (Seconds)	11
5.5. Attract Messages	12
5.6. Difficulty per track & Easier Re-Race	12
5.7. Free Play	13
5.8. Allow Champion Tables	13
5.9. Reset Champion Tables	13
5.10. Allow Attract Mode Sounds	13 12
5.11. Omy Start at 1st 1 rack	13 13
5.13. Calibration buttons (Steering, Accelerator, Brakes, Fwd/Rev).	13
5.14. Diagnostics Button	13
5.15. OK button	13
5.16. Cancel button	13
5.17. Windows button	14
5.18. The Diagnostics Dialog Box	14
5.18.1. Pulse Meter Button	14
5.18.2. Calibration buttons (Steering, Accelerator, Brakes, Fwd/Rev)	15
5.18.3. OK button	15
5.18.4. Cancel button	15
5.18.5. Windows button	15
6. Trouble Shooting	16
6.1. Trouble shooting the Joystick connector	16
/. Watch Dog and the I/O board	1/
7.1. The Watch Dog (or WD1) (1BD)	I7
6. Reloading Software & DIOS settings	10 19
8.1. Main	10 18
8 1 1 Floppy Driver	10
8.1.1.2 IDE Devices	10
8.1.2 Advanced	10
8.1.2. Chinset Configuration	10
8122 Resource Configuration	17
8.1.2.3 Perinheral Configuration	10
8.1.2.4 System Hardware Monitor	10
8.1.2. System Haldware Monton	10
8131 Power	····19 20
8132 Boot	20 20
8133 Boot Device Priority	20 20
8131 Evit	20 20
0.1.J.H. LAU	20 20
9 MAIN WIRING SCHEMATIC [.]	21
10 AC SCHEMATIC	21

1. Safety Notices

The following safety instructions apply to all game operators. We recommend that you read this page before setting-up Nicktoons Racing. Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

- Use with only 115 volts/60Hz
- To help prevent electric shock, plug the system power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3 wire cable with properly grounded plugs.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner or uninterruptible power supply (UPS).
- Do not spill food or liquid on your system.
- Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your game far away from radiators and heat sources.
- Do not block cooling vents.
- Before working on the machine be sure to unplug it.
- Be sure to use fuses that meet the specified rating. (5A, 250V Fast-blow). Using fuses exceeding the specified rating can cause a fire and electrical shock.
- When working around the monitor, be extremely careful. Monitors parts are subject to high tension voltage. Even after turning off power, some portions are still subject to high tension voltage. Monitor repair and replacement should be performed only by technical personnel who have knowledge of electricity and technical expertise.

2. FCC Compliance

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

3. Nicktoons Racing, Video Game

Nicktoons Racing operates on a PC with a Windows XP embedded operating system.

3.1. Game Background, The Characters

The characters in the game come from various Nickelodeon cartoon shows.

1) SpongeBob (SpongeBob, SquarePants)

2) Patrick (SpongeBob, SquarePants)

3) Mystery Rider (Shhh!, this is Plankton from SpongeBob, SquarePants)

4) Ickis, (Real Monsters)

5) The Beavers: Daggett & Norbert (The Angry Beavers)

6) Cat & Dog (CatDog)

7) Tommy (The RugRats)

8) Angelica (The RugRats)

9) Arnold (Hey Arnold)

10) Helga (Hey Arnold)

11) Eliza (The Wild Thornberrys)

12) Darwin (The Wild Thornberrys)

Nicktoons has a web site: http://www.nick.com/all_nick/nicktoons/

3.2. Game Background, The Races

There are 12 different races

1st Cup Races

- 1) Reptar Raceway (The RugRats)
- 2) Dam Prix (The Angry Beavers)
- 3) Rancid Raceway (CatDog)
- 4) Bikini Bottom Blowout (SpongeBob, SquarePants)

2nd Cup Races

- 5) Beaver Fever (The Angry Beavers)
- 6) Race Madness
- 7) Nearburg Rally (CatDog)
- 8) Safari Speedway (The Wild Thornberrys)

3rd Cup Races

- 9) Monster Mania (Real Monsters)
- 10) Pickles Parkway (The RugRats)
- 11) Gritty City Circuit (Hey Arnold)
- 12) Bongo Bangup (The Wild Thornberrys)

4. Connections to the PC

There are 9 connections to the PC:

- The DB15 Game Port Controls
- The DB9 RS232 serial port (COM1) (connector on motherboard)
- The DB25 Printer port (LPT1)
- The 4 pin PC power supply cable
- The reset connector (connector on mother board)
- The Audio Connector
- The Video Connector
- The Keyboard
- The Mouse
- USB Dongle

4.1. DB15 Game Port Controls

The controls connected to the DB15 game port are:

- The "Steering Wheel", using a 100K linear taper Potentiometer.
- The "Accelerator Pedal", using a 100K linear taper Potentiometer.
- The "Brake Pedal", using a 100K linear taper Potentiometer.
- The "Forward/Reverse" shifter switch, with a 100K resistor across its terminals.
- The "Speed Burst" push button.
- The "Power Up" push button.
- The "Jump" push button.
- The "Horn" push button.

Computers Female	DB15 Pin	Description (Pots are 100K ohms)	Control	Other Wire
Connector	1 Red +5V DC		Main 5VDC	
۲	2 Brn	Joystick A Button 1	Horn Switch	Gnd
¹ Ro 9	3 Pink	Joystick A X Axis	Steering Wheel Pot	5VDC
	4 Blk	Ground	To button	
	5 Blk	Ground	To Horn	
8 5 15	6 Orn	Joystick A Y Axis	Accelerator Pot	5VDC
•	7 Blu	Joystick A Button 2	Speed Burst Sw	Gnd
Plugs	8 Purple	(Do not use)	(Do not use)	
Male	9 Tan	5V DC NA		
Connector	10 Vio	Joystick B Button 1	PowerUp Sw	Gnd
8 . 15	11 Wht/Blk	Joystick B X Axis	Brake Pot	5VDC
	12 LtGrn	Midi Tx or Ground	(Do not use)	
	13 Wht	Joystick B Y Axis	Reverse Sw	5VDC
	14 Gra	Joystick B Button 2	Jump Sw	Gnd
8	15 RedWht	Midi Rx or 5V DC	(Do not use)	
1				

Table 1, Game Connector

Table 2, DB15 Controls Wiring

Steering Wheel	Accelerator	Brake	Reverse Switch
Pin1 Pin 2	Pin1_Pin6	Pin1 Pin11	Pin13 Pin1
			100K Resistor
100K Linear Pot,	100K Linear Pot,	100K Linear Pot,	(Brn, Bik, Yel)
about 50K ohms	about 0 ohms	about 0 ohms	
when centered	when pedal	when pedal	
	released	released	
Horn	Speed Burst	PowerUp	Jump
Pin2 Pin4	Pin7 Pin4	Pin10 Pin4	Pin14 Pin4



4.2. Coin Door & Dollar Acceptor

Both the coin switches and the Mars Electronics International AE2451U3 Dollar Bill acceptor (http://www.meiglobal.com/) are hooked up in parallel. The switch contacts to use for the coin switch are the common (COM) and the Normally open (N.O.) terminals. If the wrong coin switch terminal is used coins will not generate credits and the dollar acceptor will not generate credits. The Bill Acceptor should be set to send 4 pulses per dollar with a long pulse length.

	Pin	Description
	1	NEUTRAL INHIBIT (Not used)
	2	NEUTRAL ENABLE (Not used)
13	3	HOT ENABLE (Not used)
	4	115 VAC HOT (POWER)
<mark>⊨ → <mark>⊨ →</mark> ⊨ →</mark>	5	24 VAC HOT (POWER) (Not used)
7 8	6	115 / 24 VAC NEUTRAL
	7	CREDIT RELAY (N.O.) (to coin Switch)
	8	CREDIT RELAY (COMM.) (to coin Switch)
	9	Reserved (Not used)

Table 3, Mars AE2451U3 Bill Acceptor, 9-pin Connector

4.3. DB9 Coin Counter/Switch on COM1 Serial port

The Coin counter and coin switch are hooked up to COM1 Serial port via the Mother Board D815EFV / D815EPFV. It also gets +12VDC from the computers power cable for disk drives (see next table).Table 4, ASRock M810LMR Mother board, COM1 port connector





If another motherboard is used with a DB9 or a DB25 connector; here are the pin-outs.

Computers	DB9 Pin	DB25 Pin	Description	Computer
Male	1 NC	8	DCD, Data Carrier Detect	Input
Connector	2 NC	3	Rx, Receive Data	Input
	3 Brn	2	Tx, Transmit Data	Output
	4 Vio	20	DTR, Data Terminal Ready	Output
و <mark>دی</mark> د	5 Blk	7	GND, Common Ground	Ground
K	6 Blk	6	DSR, Data Set Ready	Input
1 80 6	7 NC	4	RTS, Request to Send	Output
	8 Vio	5	CTS, Cleat to Send	Input
	9 Wht	22	RI, Ring Indicator	Input

Table 6, COM1 Serial port Coin Meter connection

Note: COM1 ports are mostly DB9 (9 pin) connectors. But sometimes computers have the older DB25 (25 pin) connector. In the case of a DB25 COM1 port, a standard 25 pin to 9 pin adapter would be supplied with the game.

Male Pins	Pin	Description
	1, Red	5VDC
	2, Blk	Ground
	3, Blk	Ground
	4, Yel	12VDC
\bigcirc		

Table 7, PC Power Supply Cable

4.4. USB Dongle

Always plug in the Nicktoons Racing USB dongle. This allows the game to start and play games.

5. Game Adjustments & Calibrations

To start the Game Adjustments & Calibrations menu, press F1 on the keyboard during the Attract Mode. To access the F1 key open the top coin-door; the keyboard is mounted on the left wall of the cabinet. The F1 key is indicated with a service label and can be accessed without removing the keyboard. The mouse is located on the top of the cashbox.

And an and a state of the state	0.11				
1st Coinage for Game Play					
2 Coins for	150 🖆 Seconds	Message			
2nd Coinage for Game Play					
2 Coins for	150 Seconds	Message			
3rd and Additional Coinage for Ga	ame Play				
2 Coins for	150 Seconds	Message			
Cou	unt Down To Insert Coi	in 🗌	15 - Seconds		
Attract Mode Messages					
Alliaci mode messages					
CHICAGO GAMING COMPANY	3		PRESENTS		
CHICAGO GAMING COMPANY	Easv=80%. Medium=90)%. Hard=10	PRESENTS		
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, E Track 1	Easy=80%, Medium=90)%, Hard=10	PRESENTS	8 9	10 11 12
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, E Track 1 Difficulty % 60	Easy=80%, Medium=90 2 3 4 70 - 80 - 80	0%, Hard=10 5	PRESENTS 00% 6 7 90 100 100	8 9 100 - 90 - 1	10 11 12 100 - 105 - 110 -
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, B Track 1 Difficulty % 60	Easy=80%, Medium=90 2 3 4 70 ★ 80 ★ 80 7 2 🔽 3 🔽 4	0%, Hard=10 5 1 1 1 1 80 1 5	PRESENTS 6 7 90 * 100 * 7 6 7 7	8 9 100 <mark>*</mark> 90 <mark>*</mark> 1 7 8 ⊽ 9 ⊽	10 11 12 100 • 105 • 110 • 10 • 11 • 12
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, 8 Track 1 Difficulty % 60 Easier Re-Race 1 1	Easy=80%, Medium=90 2 3 4 70 3 80 1 80 2 2 7 3 7 4)%, Hard=10 5 - 80 <u>-</u> - 80 <u>-</u> - 7 5	PRESENTS 6 7 90 100 100 00 7 R	8 9 100 - 90 - 1 7 8 🔽 9 🔽	10 11 12 100 105 110 1 10 11 12 10 11 12 Calibrations
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, 8 Track 1 Difficulty % 60 Easier Re-Race 1 1 Free Play Allow Champion Tables	Easy=80%, Medium=90 2 3 4 70 80 80 2 2 2 3 4 2 2 3 4 2 2 3 4)%, Hard=10 5 	PRESENTS 6 7 90 - 100 - 100 100 - 100 - 100 100 - 100 - 100	8 9 100 ★ 90 ★ 1 7 8 ▼ 9 ▼ Diagnostics	10 11 12 100 ★ 105 ★ 110 ★ 10 ▼ 11 ▼ 12 Calibrations Calibrate Steering
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, f Track 1 Difficulty % 60 Easier Re-Race 1 Free Play Allow Champion Tables Allow Attract Mode Sounds Only Start at 1st Track	Easy=80%, Medium=90 2 3 4 70 80 80 80 2 2 7 3 7 4 Reset Champion)%, Hard=10 5 ₩ 80 ₩ ▼ 5	PRESENTS 00% 6 7 90 * 100 * 7 6 7 7	8 9 100 • 90 • 1 7 8 🔽 9 🔽 Diagnostics	10 11 12 100 ★ 105 ★ 110 ★ 10 ▼ 11 ▼ 12 Calibrations Calibrate Steering Calibrate Accelerator
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, f Track 1 Difficulty % 60 Easier Re-Race 1 Free Play Allow Champion Tables Allow Attract Mode Sounds Only Start at 1st Track	Easy=80%, Medium=90 2 3 4 70 3 80 80 2 1 3 4 Reset Champion	0%, Hard=10 5 ₩ 80 ÷ ₩ 5	PRESENTS	8 9 100 - 90 - 1 2 8 9 9	10 11 12 10 105 110 1 10 105 110 1 10 11 10 12 Calibrations Calibrate Steering Calibrate Accelerator Calibrate Brakes
CHICAGO GAMING COMPANY Difficulty per track, 25%-150%, f Track 1 Difficulty % 60 Easier Re-Race 1 Free Play Allow Champion Tables Allow Attract Mode Sounds Only Start at 1st Track	Easy=80%, Medium=90 2 3 4 70 80 80 2 2 7 3 7 4 Reset Champion)%, Hard=10 5 ₩ 80 <u>+</u> 7 5	PRESENTS	8 9 100 ★ 90 ★ 1 7 8 ▼ 9 ⊽ Diagnostics	10 11 12 100 105 110 10 100 105 110 10 10 11 10 12 Calibrations Calibrate Steering Calibrate Accelerator Calibrate Brakes Calibrate Fund/E

Table 8, Adjustments & Calibration Dialog Box

5.1.1ST Coinage for Game Play

To start a game. This is the amount of X coins needed to add Y play time (in seconds). There is an additional message (up to 35 characters) that can be displayed above the "Insert X coins to start" message. See section 5.5 "Attract Message" for message limitations. Below is an example of the message "1ST COINAGE MESSAGE"



5.2.2ND Coinage for Game Play

If the player wishes to continue the game for the first time. This is the amount of X coins needed to add Y play time (in seconds). There is an additional message (up to 35 characters) that can be displayed above the "Insert X coins to continue" message. See section 5.5 "Attract Message" for message limitations. This message

temporarily stops the game to ask from more coins. Below is an example of the message "2ND COINAGE MESSAGE" if the amount of coins is non-zero.



If the amount of coins in this coinage setting is 0, the player will be awarded free Bonus Time. This coinage is the only one that lets you set "0 coins" for a "Bonus Time" amount of free time. This "Bonus time" is always awarded. And is usually displayed dynamically while the player is still racing. (except if the player has already put in money or pre-paid for additional time). The 2nd coinage message is displayed as follows:



5.3.3RD and Additional Coinage for Game Play

If the player wishes to continue the game for the second time or any additional time thereafter; this is the amount of X coins needed to add Y play time (in seconds). The game is temporarily stopped to ask for more coins. There is an additional message (up to 35 characters) that can be displayed above the "Insert X coins to continue" message. See section 5.5 "Attract Message" for message limitations. Below is an example of the message "3RD COINAGE MESSAGE".



5.4. Count Down To Insert Coin (Seconds)

This is the amount of time for the player to insert a coin to continue a game. (10-30 seconds)

5.5. Attract Messages

This is 2 lines of text, up to 35 characters for each line, to be displayed during the attract mode. Messages are limited to certain characters, listed in the table below. If you try to use a character that is not supported, it will be converted into a space (except for letters which will be converted to upper case).

Character	Description
0 to 9	Numbers 0 to 9
A to Z	Upper case letters A to Z
(Space)	Space
&	Ampersand
6	Single quote
	Period (or decimal point)
?	Question Mark
:	Colon

Table 9, Supported Text Characters

Below are examples of how the text is displayed in the attract mode:



5.6. Difficulty per track & Easier Re-Race

These are the difficulties of all 12 tracks. The most noticeable "difficulty" is that all the computer opponents are faster or slower than normal. 100% means that the computer opponents speed is the same as the home PC Game. Below is a table and a relative degree of difficulty. Remember that if this adjustment is above 100%, the computer players will be faster than the player, forcing the player to use speed bursts, jump, and powerup buttons.

Percent	Description
25% Minimum	Very Easy
80%	Easy
90%	Medium
100%	Hard
110%	Very Hard
150% Maximum	Extremely Hard

Table 10, Difficulty Percentage Description

If the "Easier Re-Race" check box is checked, each additional re-race of the same track is made 10% easier (down to the Minimum 25%)

5.7. Free Play

Check this Box for all games to be free.

5.8. Allow Champion Tables

Check this box to allow the game to maintain 3 tables (the top 5 fastest players in each table) of the champion players per cup.

5.9. Reset Champion Tables

Press this button to reset 3 tables of champions to their initial values. Remember that the table is only reset if you press the "OK" button on the main adjustments Dialog box.

5.10. Allow Attract Mode Sounds

Check this box if it is OK to make sounds during the attract mode.

5.11. Only Start at 1st Track

Check this box to always start at the first track (cup 1, track 1). This will bypass the cup or difficulty selection screen. This adjustment is intended for locations with younger players that might not understand that higher cups are more difficult.

5.12. Factory Default

Press this button to show the Default adjustments and reset the Champion Tables. This does NOT effect any Calibration data. In order to use these default adjustments, press the OK button. To forget about these default adjustments, press the cancel button.

5.13. Calibration buttons (Steering, Accelerator, Brakes, Fwd/Rev)

Press any of these button to re-calibrate the Steering Wheel, Accelerator Pedal, Brake Pedal, Forward/Reverse shifter. Instructions are provided to release and depress the pedals or in the case of the steering wheel to center the wheel, turn it to the extreme right & left. Remember that these new calibrations are only saved if you press the "OK" button on the main adjustments Dialog box.

5.14. Diagnostics Button

Press this button to enter the Diagnostics dialog Box. See chapter 5.18 The Diagnostics Dialog Box.

5.15. OK button

Press this button to Save all changes (adjustments, reset champion table, and calibration data) then return back to the game.

5.16. Cancel button

Press this button to Cancel any changes (adjustments, reset champion table, and calibration data) and return back to the game

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5.17. Windows button

Press this button to Cancel any changes (adjustments, reset champion table, and calibration data) and exit the game to go to Windows DOS.

5.18. The Diagnostics Dialog Box

This is started by the Diagnostic button from the Adjustment Dialog Box. Major problems, like connectors disconnected, are prompted to be connected when the game starts.

Diagnostics		×
Joystick Connector		RS232 Connector
Switches Speed PwrUp		Coins Pulse Meter
Jump	Horn	R2232 Status
100K Potentiometers (adjusted from Calibration information) Left Steering Wheel Right		Legend All Green = 100K Pot or Sw closed
Brake Center Gas 100K	Fwd 100K	All Grey = 0 ohm Pot or Sw open Red = A problem, see status
ОК	OK Rev	Calibrations Calibrate Steering
Joystick Status		
Јок		
		Calibrate Brakes
OK Cancel Windows		Calibrate Fwd/Rev

Figure 1, Diagnostic Dialog Box

The Boxes for the Switches turn green when the switch is closed, and go back to gray when the switch is opened. A sound is made when the switch opened and closed. The Rectangles for the 100K potentiometers fill up green when the potentiometer reaches its CALIBRATED full value (not necessarily 100K). And are empty (gray) when they are at 0 ohms. The Gas and Brake pedals typically use about 1/3 to 1/2 a full turn of the potentiometer and will never reach their full 100K ohm value. Note, the displayed value in the dialog box (after calibration) implies the *calibrated* full range. Sounds are made when the potentiometer reaches Maximum and Minimum calibrated values. The steering wheel also has a center position sound and bar graph pauses in the center position; this is normal.

The status line(s) print OK or a typical corrective action, like plug in the connector. In extreme cases, a Windows OS error number is displayed .

5.18.1. Pulse Meter Button

Press this button to advance the coin meter by 1 count per press.

5.18.2. Calibration buttons (Steering, Accelerator, Brakes, Fwd/Rev)

Press any of these buttons to re-calibrate the Steering Wheel, Accelerator Pedal, Brake Pedal, Forward/Reverse shifter. Instructions are provided to release and depress the pedals or in the case of the steering wheel to center the wheel, turn it to the extreme right & left. Remember that these new calibrations are only saved if you press the "OK" button on the main adjustments Dialog box.

5.18.3. OK button

Press this button to Save all changes (adjustments, reset champion table, and calibration data) and then return back to the game.

5.18.4. Cancel button

Press this button to Cancel any changes (adjustments, reset champion table, and calibration data) and return back to the game

5.18.5. Windows button

Press this button to Cancel any changes (adjustments, reset champion table, and calibration data) and exit the game to go to Windows OS.

6. Trouble Shooting

In case something happens to the software on the Hard Drive or other problems, a boot CD has been included to reload all software. See chapter 8 "Reloading Software & BIOS settings" if your problem is not easily resolved. In most cases the plugs just have to be re-connected.

Description of Problem	Possible solution
Turn on game and the message "USB Dongle	Your USB dongle is un-plugged. Find the Nicktoons
Problem: Please plug in the USB Dongle for	Video game USB dongle and plug it into any USB
Nicktoons Racing" appears in a dialog box with	port on the PC. Or if it is already plugged into game
the buttons OK & Cancel.	unplug it and re-plug it in. Then power cycle the
	game.
Turn on game and the message "Please connect Coin	The coin (switch & meter) connector is un-plugged.
Meter to COM1 port for this game." appears in a	Find the coin connector and plug it into the COM1
dialog box with the buttons OK & Cancel.	port of the game. Or if already plugged into game
	unplug it and re-plug it in. Then power cycle the
	game.
Turn on game and the message "Please plug the	The controls connector is un-plugged or a 100K
Control Plug into the Joystick Connector on the	potentiometer is disconnected. Find the controls
PC " appears in a dialog box with the buttons OK &	connector and plug it into the Joystick port of the
Cancel.	game (typically a 15 pin female connector) on the PC.
	Or if already plugged into game unplug it and re-plug
	it in. Then power cycle the game. If it still fails, see
	the chapter 6.1 "Trouble shooting the Joystick
	Connector"
While playing the game or during the attract mode, the	See above solution.
players controls do not respond and a message "The	
controls seem to be unplugged., Please re-plug the	
controls into the Joystick connector on the PC and	
press OK.," appears.	
I insert a coin during the game, but no credits or sound	Press "F1" to enter the adjustments page and press the
is generated.	"Diagnostics" button. If the box for the coin switch is
	red, look at the RS232 status line for recommended
	action. If it is not red, then press the coin switch to see
	if the software can read the switch. If the coin box
	does not turn green when the switch is closed, look for
	a broken wire or mechanical switch.

Table 11, Trouble Shooting Table

6.1. Trouble shooting the Joystick Connector

Typically, the 100K linear taper potentiometers vary from 0 ohms to 100K ohms. If any of the 4 potentiometers have an open circuit, then all the joystick controls will not operate. An ohm meter between pins 1 & 2, pins 1 & 6, pins 1 & 11, and pins 1 & 13 on the male plug should always have 0 to 100K ohms.

7. Watch Dog and the I/O board

The I/O board contains solenoid drivers, audio amplifier, and a watch dog circuit (to reset the PC if the PC gets locked). The CPU reset signal (Reset#) is accessed via a connector on the mother board.



The Watch Dog circuit also receives signals from parallel port (DB25 connector) and it is plugged into the parallel port connector.

7.1. The Watch Dog (or WDT)

There are 3 switches (S1, S2, & S3) and 3 LED's (CR1, CR2, & CR3).

Switch S1 - Enable/Disable watch dog Switch S2 - Reset the PC. Switch S3 - Set power on "watch dog reset counter" to 0. Green LED CR1 – power on "reset counter" (medium ¾ sec blinks, Heartbeat (slow 1 second blinks), or CPU Reset active (fast ½ sec blinks) Red LED CR2 - Watch dog disabled (when solid on), 2 blink rates when watch dog is being petted. LED CR3 – Not used

When the game is turned on, the Green LED CR1 blinks the amount of times the watch dog circuit has reset the game (Note: switches do not operate during this state). If this "watch dog reset counter" is zero, it blinks both CR1 (Green) & CR2 (Red) one at a time. In state 2 and 3. the switches are continuously monitored when LED CR1 blinks at the heartbeat rate (Regular, 1 beat/second), except where noted.

Pressing (and holding) Switch S1 will toggle between the Enable (Red LED CR2 blinking or off) or disable (Red LED CR2 is solid on). Note: The disabled state of watch dog is "remembered" even when power is turned off, then on again. So it is possible to never enable watch dog.

Pressing Switch S2 (when watch dog is enabled) will start a PC reset (Green LED CR1 will fast blink) .

Pressing Switch S3 will set the power on "watch dog reset counter" to 0 blinks.

State	Heartbeat LED (Green CR1)	Disabled LED (Red CR2)	Comment
(1) if ZERO resets stored	Alternate blink with Disabled LED	Alternate blink with Heartbeat LED	Indicates '0' resets have been done by the WDT, state 2 is next.
(1) If > 0 reset stored	Blink 150ms ON, 600ms OFF	OFF	The number of blinks by Heartbeat LED indicate the number of resets that have been done by the WDT. Operator FORCED Resets are NOT counted in this number, state 2 is next.
(2) IDLE	Regular, 1 beat/second	OFF	upon PC Boot-UP will sit in IDLE for 10 minutes before looking for the PC to pet it, state 3 is next.
(3) PC Pet the dog	Regular, 1 beat/second	Blink *half fast*	Indicates that the PC, cabling, and WDT circuit are working properly.
(3) PC Pet the dog	Regular, 1 beat/second	blink *superfast*	Indicates that the PC, cabling, and WDT circuit are working properly.
(3) RESET PC (WDT or SW2)	Fast	OFF	The PC is the process of being RESET by WDT. State 1 is next
(3) Set Count=0 (SW3)	Fast	OFF	Indicates that any stored RESETS are set to ZERO
(3) WDT DISABLED (SW1)	Regular, 1 beat/second	ON	WDT is disabled and not looking for any characters on parallel port. PC cannot be reset from this state. state 4 is next.
(4) WDT ENABLE (SW1)	Regular, 1 beat/second	OFF	From WDT disabled, so LED's will end up in IDLE for 5 seconds. state 2 is next.

Table 13	, Watch	Dog	LED	states
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8. Reloading Software & BIOS settings

In case something happens to the software on the Hard Drive, a boot CD has been included to reload all software. Also included is the BIOS settings if the BIOS settings are lost. To get into the BIOS on the ASRock M810LMR Mother board, press F2 during the power on self test.

WARNING: Turn the watch dog off (press & hold Switch S1 until LED CR2 is solid ON) or else if you take too long, it will reset the PC! When you are done with reloading the software & the BIOS settings, turn watch dog back on (press & hold Switch S1 until LED CR2 is off or blinking).

8.1. The BIOS settings for the ASRock M810LMR Mother board

The menus are selected by the left & right arrow keys. To select item in any menu use the up & down keys. The bottom 2 lines on the BIOS screen describe the operation of the other keys. The last known BIOS was

"AMIBIOS NEW SETUP UTILITY – VERSION 3.31a".

But this will change...

8.1.1. Main

"system date" = {set the current date} "system time" = { set the current time }

8.1.1.1. Floppy Driver

Floppy Drive A = Not installed Floppy Drive B = Not installed Floppy Drive Swap = Disabled Floppy Driver Seek = Disabled

8.1.1.2. IDE Devices

Primary IDE Master = {your C: drives name, i.e. Maxtor 2F020L0} Type = Auto32 Bit transfer = OFFUltra DMA = DisablePrimary IDE Slave = Not Installed Secondary IDE Master = {your CD drive, i.e. GCR-8523B} Secondary IDE Slave = Not installed PCI IDE BusMaster = Enabled S.M.A.R.T. for Hard disks = Enabled 8.1.2. Advanced

Spread Spectrum = Disabled or Enabled CPU Host Frequency = By Jumper SDRAM Frequency 133Mhz

8.1.2.1. **Chipset Configuration**

PCI Delay Transaction = Disabled OnChip VGA Frame Buffer Size = 16MB USB controller = Enabled USB Device Legacy Support = Enabled SDRAM CAS Latency = Auto

8.1.2.2. Resource Configuration

PCI Latency Timer (PCI clocks) = 32

8.1.2.3. Peripheral Configuration

OnBoard FDC = Auto or Disabled OnBoard Serial Port = Auto or 3F8/COM1 OnBoard Infrared port = Disabled OnBoard Parallel port = Auto or 378Parallel Port Mode = EPP+ECPEPP Version = 1.9Parallel port IRO = 7Parallel Port DMA Channel = 3OnBoard Midi Port = Enabled MIDI Port I/O address = 330h-333h OnBoard Game Port = Enabled OnBoard IDE = Both OnBoard LAN = Enabled OnBoard AC'97 Audio = Auto OnBoard MC'97 Modem = Disabled

8.1.2.4. **System Hardware Monitor**

(Nothing is settable here)

8.1.3. Security

(Read only) Supervisor Password Is = Clear (Read only) User password Is = Clear Set Supervisor Password = [Enter] {Do not set a password!} Password Check = Setup

8.1.3.1. Power

Restore on AC/Power Loss = Power On Ring-in Power on = Disabled PCI Device Power On = Disabled RTC Alarm Power On = Disabled

8.1.3.2. Boot

Quick Boot Mode = Enabled Boot Up Num-Lock = On Boot To OS/2 = NO Boot to Network = Disabled

8.1.3.3. Boot Device Priority

(The order should be CD drive, then Hard drive. The position is not important. Here is an example) $1^{st} = CD/DVD-0$:

 2^{nd} = IDE-0:{your C: drives name, i.e. Maxtor 2F020L0}

 $3^{\rm rd}$ = Disabled

 $4^{th} = Disabled$

Try other Boot Devices = Yes

8.1.3.4. Exit

These settings allow you to save or discard your changes

8.2. Reloading software

If the BIOS setting are intact, insert the Boot CD into the CD drive and boot the machine. Follow instructions from the boot CD. This will erase the hard drive Nicktoons(C:) and reload all software and revert all adjustments back to factory settings (nothing is saved). After reloading the game (and removing the CD), power cycle the game, wait for it to start, then press F1 and ALWAYS calibrate your 4 controls! You can also modify your adjustments (if any). Do not forget to turn watch dog back on (press & hold Switch S1 until LED CR2 is off or blinking).

For assistance with your game call (708)780-0070, ask for technical support.

9. MAIN WIRING SCHEMATIC:



10. AC SCHEMATIC:

