



CHAPTER TWO

ADJUSTMENT, DIAGNOSTIC & AUDIT MENUS

MENU SYSTEM

WHAT IS THE MENU SYSTEM?

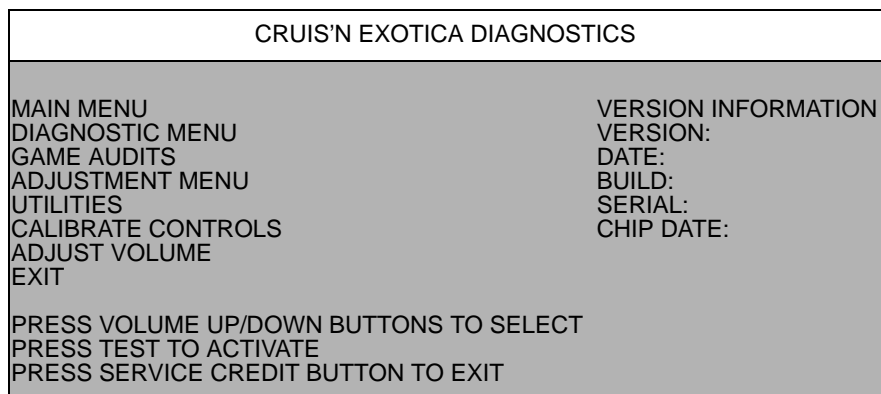
The game's Menu System is a series of auditing, game adjustments and diagnostic screens. You can easily access and apply these screens to optimize game performance. For instance...

- Use game audit screens to assess game performance.
- Use adjustment screens to help you customize game performance. For example, you can restore factory default game settings. You can also calibrate player controls for player accuracy.
- Use diagnostic screens to verify proper equipment operation.

ACCESSING THE MENU SYSTEM

Open the coin door. Locate and press the TEST MODE switch. The game system will exit game Attract Mode and enter Diagnostic Mode. The system runs a brief self-test, and then displays the Main Menu. The Main Menu is the opening screen of the Menu System.

Game audits, adjustments and diagnostics are line items on the Main Menu. Selecting an item opens its submenu. Every submenu presents various options that you may act upon.



TYPICAL MAIN MENU SCREEN

MENU LAYOUT

Observe that each menu screen basically uses the same layout. The game ID, Serial Number, and Date of Manufacture will appear on most of the menu screens. These numbers will be helpful to factory personnel when referring to your game for parts or service.

- The block at the top of each screen displays the current menu title.
- Data, such as menu items and video reports, etc., appears in the center of the screen.
- Messages, for example explanations and active control functions, etc., appear at the bottom of the screen.

MENU NAVIGATION TOOLS

Use the operator control buttons located inside the coin door to navigate menus. Press the Volume Up or Volume Down buttons to scroll through the menu options.

Notice the options sequentially become highlighted. Press the Test button to select a highlighted option and access the next menu level. **NOTE:** Only one highlighted option can be selected at a time.

To return to play mode, select Exit and press the Test button while in the Main Menu screen.

<i>Main Menu, continued</i>
Diagnostics Menu

DIAGNOSTIC MENU

To verify the condition of the electrical and electronic hardware in the game, select Diagnostics Menu at the Main Menu. Diagnostic tests assist you in checking and adjusting the game’s major systems. It is important to periodically run diagnostics to improve and maintain game performance and player satisfaction.

DIAGNOSTIC MENU
SWITCH TEST
MOTION TEST
DIP SWITCH TEST
CPU BOARD TEST
SOUND BOARD TEST
LINKING TEST
STEERING WHEEL TEST
MONITOR TEST
BURN-IN TEST
LAMP TEST
LED TEST
EXIT TO MAIN MENU
PRESS VOLUME UP/DOWN BUTTONS TO SELECT
PRESS TEST TO ACTIVATE
PRESS SERVICE CREDIT BUTTON TO EXIT

Use the Volume Up or Volume Down button to highlight the desired Diagnostic Menu option and press the Test button to enter.

<i>Main Menu</i>
<i>Diagnostic Menu, continued</i>
Switch Test Menu

SWITCH TEST

To verify proper operation of switch and button inputs in the game, select SWITCH TEST at the Main Menu.

SWITCH TEST			
PRESS SERVICE CREDIT TO EXIT	CMOS VALUE		
	MIN	CENTER	MAX
POT READING	XX	XXX	XXX
STEERING WHEEL XXX	XX		XX
GAS PEDAL XX	XX	XXX	XXX
BRAKE PEDAL XX			
VIEW 1	SHIFT 1	SHIFT 3	
VIEW 2			
VIEW 3	SHIFT 2	SHIFT 4	
START			
COIN 1 LEFT			KEYPAD
COIN 2 RIGHT	TEST		1 2 3
COIN 3 CENTER	VOLUME UP		4 5 6
COIN 4	VOLUME DOWN		7 8 9
RADIO	SERVICE CREDIT		- 0 -


Main Menu
Diagnostic Menu, continued
Switch Test Menu, continued

Use the Volume Up or Volume Down button to highlight the Switch Test option and press the Test access it. Press any switch on the control panel or coin door to cause the corresponding indicator on the screen to illuminate. Each illuminated square represents one completed switch circuit.

Main Menu
Diagnostic Menu, continued
Motion Test

MOTION TEST

To verify functionality of motion seat controls, select MOTION TEST at the Main Menu.

	<p>NOTICE Selecting any test from the Motion Test Menu will activate the seat causing it to automatically begin to move on its own. Use caution when conducting tests from this menu.</p>
---	---

Use the Volume Up or Volume Down button to highlight the Motion Test option and press the Test button to access it. Use the Service Credits button at any time to exit the Motion Test and return to the Main Menu.

MOTION TEST	
HOME POSITION	MOTION ERRORS: X
OPERATIONS TEST	MOTION VERSION: X
TILT LEFT	ERROR:
TILT RIGHT	CODE: X
TILT FORWARD	
TILT BACK	
CLEAR MOTION ERRORS	
BURN-IN TEST	
PRESS VOLUME UP/ DOWN BUTTONS TO SELECT PRESS SERVICE CREDIT BUTTON TO EXIT	

HOME POSITION automatically centers the motion seat so that it is positioned upright and does not tilt at any angle.

OPERATIONS TEST automatically cycles through each of the other test options.

TILT LEFT automatically tilts the seat at a left leaning angle.

TILT RIGHT automatically tilts the seat at a right leaning angle.

TILT FORWARD automatically tilts the seat at forward-facing angle.

TILT BACK AUTOMATICALLY TILTS THE SEAT IN A BACKWARD-FACING ANGLE.

CLEAR MOTION ERRORS erases any errors form memory.

BURN-IN TEST diagnoses intermittent circuit board problems. This test automatically cycles non-stop and *cannot* be stopped by pressing the Service Credit button.

Main Menu
Diagnostic Menu, continued
DIP Switch Test

DIP SWITCH TEST

To verify the functionality of both 8-position DIP switches on the CPU Board, select DIP SWITCH TEST at the Main Menu. Observe immediate on-screen results by changing the setting on a switch.

Use the Volume Up or Volume Down button to highlight the DIP Switch Test option and press the Test button to access it. The current settings appear on-screen. Consult the table on the next page to determine if changes are required. The default switch positions are all OFF for standard operation.

A vertical bar next to the switch position column indicates a common switch function.

DIP SWITCH TEST	
DIP SWITCH 1	DIP SWITCH 2
1 OFF DEDICATED	1 OFF
2 OFF MOTION OFF	2 OFF
3 OFF UPRIGHT CABINET	3 OFF
4 OFF WHEEL INVERT OFF	4 OFF
5 OFF 32M ROM NORMAL	5 OFF
6 OFF LINK DISABLED	6 OFF
7 OFF SHARED LINK GAME #	7 OFF
8 OFF SHARED LINK GAME #	8 OFF
PRESS ANY BUTTON TO EXIT	

TYPICAL DIP SWITCH SCREEN

Setting Table for DIP Switch 1

FUNCTION	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
DEDICATED KIT *	OFF ON							
MOTION DISABLED MOTION ENABLED		OFF ON						
UPRIGHT STYLE CABINET SIT DOWN STYLE CABINET			OFF ON					
WHEEL INVERT DISABLED** WHEEL INVERT ENABLED	SEE NOTES BELOW			OFF ON				
32M ROM NORMAL 16M ROM					OFF ON			
LINK DISABLED LINK ENABLED						OFF ON		
LINKING ID NUMBER MASTER (GAME NUMBER 1) SLAVE (GAME NUMBER 2) SLAVE (GAME NUMBER 3) SLAVE (GAME NUMBER 4)							OFF ON OFF ON	OFF ON OFF ON

*DIP 1, Switch 1 must be set to the ON position in order for proper kit operation.

**DIP 4, Switch 1 must be set to OFF for *Cruis'n USA™* and *Cruis'n World™* game conversions; DIP 4, Switch 1 must be set to ON position for *OffRoad Challenge™* game conversions in order to reverse wheel motion and allow the shifter to be read as Normally Closed.

Main Menu
Diagnostic Menu, continued
DIP Switch Test, continued

Game Adjustments for Linked Operation

To avoid confusion, we recommend that all adjustments be set to identical values before Video Game Machines (VGMs) are linked. VGMs might operate incorrectly if this is not the case, with the following exceptions:

NOTE: All cabinets must have compatible software in order to link properly. Unlock the coin door and press the TEST button. The software version number is found on the Main Menu screen in game diagnostics. It does not matter what version is installed as long as all version numbers are the same.

1. **Linked VGMs must all have compatible software versions.** Newer versions may contain instructions that previous versions do not have, causing them to halt or reset at random. On-screen messages will indicate that different versions are in use when the linking feature is enabled for each.
2. **The graphic effects and added attractions for the slave cabinets must be the same as the master.** All games must have these features enabled or all must have them disabled. Mixed settings, for example road kill or a show girls setting, can cause games to become unsynchronized during competition and lead to incorrect final results (i.e., two first place finishes with different times, collisions with unseen objects, etc.).
3. **The linking feature overrides some of the individual software settings.** For instance, the master (VGM #1) sets and controls the difficulty level for all linked slaves. The difficulty level reported by the slave games may not match the setting of the master game.
4. **The linked game with the highest ranking determines software settings.** Adjustments such as bonus times will be controlled by the games in decreasing identification order. For example, if four games are linked, slave game #3 will always override game #4 but have no effect on games #1 or #2. This permits games to have different standards to help equalize players with different skill levels.

The linking cables attach to a connector on a metal bracket located under the CPU Board Assembly at the rear of the cabinet. Unlock and remove the cabinet rear door for linking access.

Notes on Linking:

1. For a 2-way link, the leftmost VGM is the master (#1); the second VGM is slave #2. One linking cable is required.
 - For a 3-way link, the left VGM is the master (#1); the center and right VGMs are slaves #2 and #3. Two cables are required.
 - For a 4-way link, the leftmost VGM is the master (#1); the left center VGM is slave #2, right center machine is #3, and the right most machine is slave #4. Three linking cables are required.
2. *The linking feature will **not** function if the master is not turned on and in normal game play mode.* If the master is turned off, disconnected from the linking cable, or in any other mode of operation (offline, diagnostics, etc.), none of the slaves will be able to link.

Main Menu
Diagnostic Menu, continued
DIP Switch Test, continued

•The linking feature will function for all other VGMs if one of the slaves is not turned on and in normal game play mode. If any slave is turned off, disconnected from the linking cable, or in any other mode of operation (offline, diagnostics, etc.), the linking ability of other slaves will not be affected.

•The linking feature will function for some VGMs, and not others, if all of the link activity switches are not enabled or the software version numbers are not the same. The master game will not recognize other games with disabled linking or different link identification numbers.

Game Adjustments for Coinage

Setting Table for DIP Switch 2

COUNTRY CODE	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
USA	OFF*	OFF*	OFF*	OFF*	OFF*			
GERMANY	ON	OFF	OFF	OFF	OFF			
FRANCE	OFF	ON	OFF	OFF	OFF			
CANADA	ON	ON	OFF	OFF	OFF			
SWITZERLAND	OFF	OFF	ON	OFF	OFF			
ITALY	ON	OFF	ON	OFF	OFF			
UK	OFF	ON	ON	OFF	OFF			
SPAIN	ON	ON	ON	OFF	OFF			
AUSTRALIA	OFF	OFF	OFF	ON	OFF			
JAPAN	ON	OFF	OFF	ON	OFF			
TAIWAN	OFF	ON	OFF	ON	OFF			
AUSTRIA	ON	ON	OFF	ON	OFF			
BELGIUM	OFF	OFF	ON	ON	OFF			
SWEDEN	OFF	OFF	OFF	OFF	ON			
FINLAND	ON	OFF	OFF	OFF	ON			
NETHERLANDS	OFF	ON	OFF	OFF	ON			
NORWAY	ON	ON	OFF	OFF	ON			
DENMARK	OFF	OFF	ON	OFF	ON			
HUNGARY	ON	OFF	ON	OFF	ON			
GENERAL	ON	ON	ON	OFF	ON			
USA1/GER1/FR1/SPN1/AUSTRIA//1/GEN1						OFF	OFF	
USA3/GER1/FR1/SPN1/AUSTRIA//1/GEN3						ON	OFF	
USA7/GER1/FR1/SPN1/AUSTRIA//1/GEN5						OFF	ON	
USA8/GER1/FR1/SPN1/AUSTRIA//1/GEN7						ON	ON	
CAN1/SW1/ITL1/UK1/JPN1/TWN1/BLGN1						OFF	OFF	
CAN2/SW2/ITL2/UK2/JPN2/TWN2/BLGN2						ON	OFF	
CAN3/SW3/ITL3/UK3/JPN3/TWN3/BLGN3						OFF	ON	
NTRLNDS1/ FNLD1/NWY1/DNMK1/HUN1						OFF	OFF	
NTRLNDS2						ON	OFF	

DIP SWITCH SETTING FOR COINAGE

There are many ways to select the type and quantity of currency recognized by the game machine.

1. The most common coin combinations for several countries are pre-programmed and may be selected from the table when Standard Pricing is activated (see Adjustments, pg. 16).
2. DIP Switch settings may be changed with the power switched on. Set any switch and then observe the screen to verify that the desired selection is enabled. **NOTE:** If CMOS Coin Settings are active (set to ON), switch settings for an individual Country will have no effect.
3. Some European countries may accept currency used in other countries. The most popular coinage settings are listed beneath 'Other' in the Standard Pricing Table.

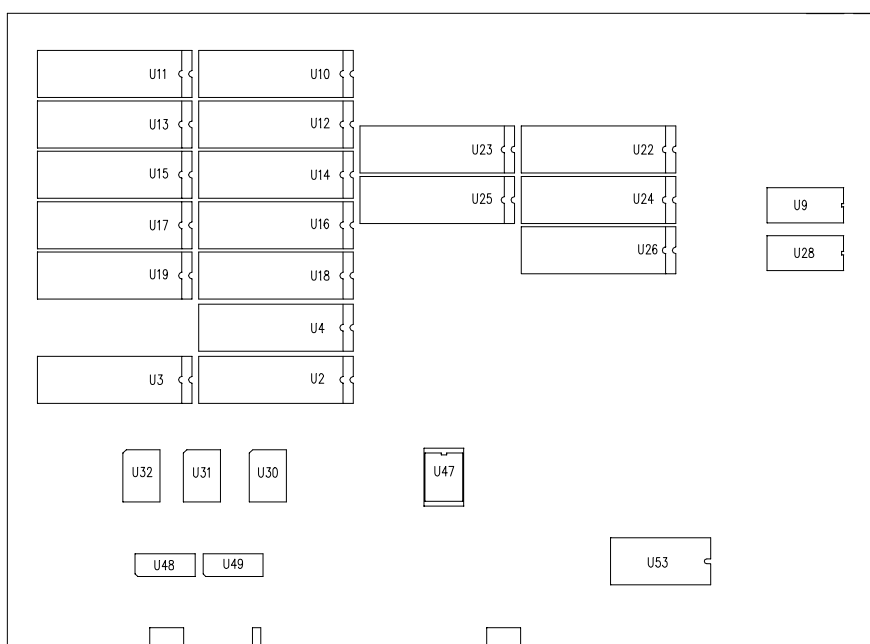
Main Menu
Diagnostic Menu, continued
DIP Switch Test, continued

4. Alternate settings are listed beneath 'General' in the Standard Pricing Table.
5. Default settings are denoted by an (*). Switches 1 through 5 select country codes. Switches 6 and 7 are used to select one of four modes for each country.

Main Menu
Diagnostic Menu, continued
CPU Board Test

CPU BOARD TEST

To verify proper operation of memory circuits, select CPU BOARD TEST at the Main Menu. This test checks the memory circuits in a manner similar to the Start-Up Test. A pattern representing the layout of the RAM and ROM circuits on the CPU Board will appear on-screen while the video circuits are tested.



TYPICAL CPU RAM & ROM PATTERN

Use the Volume Up or Volume Down button to highlight CPU Board Test and press the Test button. The memory circuits are shown as gray with a white outline. During the test, good ICs are colored green; faulty ICs are colored red. Press the Service Credits button to return to the Diagnostic Menu.

Main Menu
Diagnostic Menu, continued
Sound Board Test

SOUND BOARD TEST

To verify proper operation of sound components, select SOUND BOARD TEST at the Main Menu. This test allows you to access and listen to the sounds used in the game.

SOUND BOARD TEST	
UP	TO CHANGE MUSIC
DOWN	TO TRIGGER SOUND EFFECTS
SERVICE CREDIT	TO EXIT
TUNE	
SPEED LOOP	
SOUND EFFECT	
GIRL SPEECH	

Use the Volume Up or Volume Down button to highlight the Sound Board Test option and press the Test button. Press Service Credit to return to the Diagnostic Menu when finished.

Main Menu
Diagnostic Menu, continued
Linking Test

LINKING TEST

To verify communications between the game machine and others connected to it, select Linking Test at the Main Menu.

LINKING TEST	
MACHINE 1 MASTER	ACTIVE
MACHINE 2 SLAVE	ACTIVE
MACHINE 3 SLAVE	ACTIVE
MACHINE 4 SLAVE	ACTIVE
TOTAL TRANSMISSIONS	X
TOTAL ERRORS	X
LINK ENABLED	
LINKED GAME NUMBER	X
PRESS TEST TO CLEAR ERRORS	
PRESS SERVICE CREDITS BUTTON TO EXIT	

Use the Volume Up or Volume Down button to highlight the Linking Test option and press the Test button. This test runs automatically and will display all results on-screen.

Press Service Credit to clear errors and restart the test cycle. Press the Test button to exit from this menu screen.

<i>Main Menu</i>
<i>Diagnostic Menu, continued</i>
Steering Wheel Test

STEERING WHEEL TEST

To verify the proper directional movement of the steering wheel, select Steering Wheel Test at the Main Menu. Make sure hands and other objects are clear of the steering wheel when this test is selected because the wheel will automatically rotate on its own. Follow the on-screen instructions.

STEERING WHEEL TEST
TURN WHEEL LEFT PRESS TEST TO CONTINUE
TURN WHEEL RIGHT PRESS TEST TO CONTINUE

Use the Volume Up or Volume Down button to highlight Steering Wheel Test and press the Test button. The steering wheel immediately turns to the left. Press the Test button a second time and the wheel turns to the right and will automatically return to the Diagnostic Menu.

<i>Main Menu</i>
<i>Diagnostic Menu, continued</i>
Monitor Test

MONITOR TEST

To verify color clarity of the monitor, select Monitor Test at the Main Menu.

Use the Volume Up or Volume Down button to highlight the desired monitor test and press the Test button. Repeatedly press the Test button to cycle through test screens and automatically return to the Main Menu. Watch for the following results on-screen during this test.

COLOR BARS. Observe 4 color bars in different shades appear on-screen as aids in adjusting the green, blue, and red color levels. Each color should appear sharp and clear. Check video brightness and contrast.

The **CROSSHATCH PATTERNS** test fills the screen with a series of dots within a grid. Observe the dots are perfectly round and that both the grid and dots are clear. Inspect monitor convergence, linearity, and screen size.

If any of the tests show a need for CRT adjustment, use the proper knobs on the Monitor Controls board.

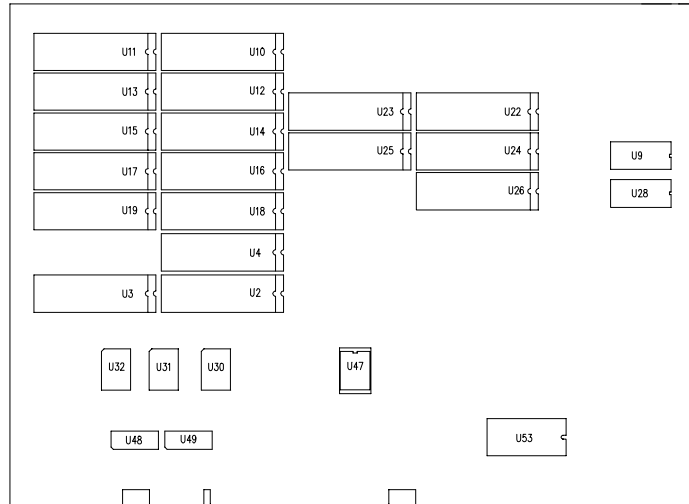
<i>Main Menu</i>
<i>Diagnostic Menu, continued</i>
Burn-In Test

BURN-IN TEST

To properly diagnose intermittent CPU Board problems, select Burn-In Test at the Main Menu. This test cycles non-stop through the CPU Board Test.

A pattern representing the layout of the RAM and ROM circuits on the CPU Board will appear on-screen while the video circuits are tested.

Main Menu
Diagnostic Menu, continued
Burn-In Test, continued



Use the Volume Up or Volume Down button to highlight Burn-In Test and press the Test button to activate. The Burn-In Test will stop and display an error message on-screen if an error is detected.

Inputs from the control buttons are ignored during Burn-In. The Burn-In Test cannot be halted from the menus. To halt the test switch off power to the game machine and then power back up.

Main Menu
Diagnostic Menu, continued
Lamp Test

LAMP TEST

To detect intermittent or faulty incandescent bulbs, select Lamp Test at the Main Menu. This test ensures that the incandescent bulbs critical to game operation function properly.

Use the Volume Up or Volume Down button to highlight Lamp Test and press the Test button. During the test observe the selected lamp switches turn *on* or *off* when the corresponding selection is made.

LAMP TEST
TURN ALL LAMPS TURN OFF ALL LAMPS TURN ON START TURN ON VIEW 1 TURN ON VIEW 2 TURN ON VIEW 3 TURN ON MARQUEE LAMP 1 TURN ON MARQUEE LAMP 2 PRESS VOLUME UP/DOWN TO SELECT PRESS TEST BUTTON ACTIVATE PRESS SERVICE CREDIT TO BUTTON EXIT

Main Menu
Diagnostic Menu, continued
Lamp Test, continued

Notes on the Lamp Test

1. The RADIO button is not illuminated and requires no lamp test.
2. The MARQUEE LAMPS are located inside the lighted header as part of the Deluxe Linking Kit.
3. To override individual tests select either TURN ON or TURN OFF ALL LAMPS. The lamps also automatically switch off when the Service Credit button is pressed to exit this screen.

Press the Service Credit button to return to the Diagnostic Menu.

Main Menu
Diagnostic Menu, continued
LED Test

LED TEST

To verify the proper functionality of the Dashboard LEDs, select LED Test at the Main Menu. This test allows you to control and test the illumination of the LED's located on the dash PCB.

Use the Volume Up and Volume Down buttons to highlight the LED Test and press the Test button. Observe the following activity on the dash PCB.

LED TESTS
LEDS ON LEDS OFF LEDS CYCLE PRESS VOLUME UP/DOWN TO SELECT PRESS TEST BUTTON TO ACTIVATE PRESS SERVICE CREDIT BUTTON TO EXIT

Select **LEDs ON** to simultaneously turn on all LED's. LEDs will remain illuminated until switched off. Select **LEDs OFF** to simultaneously turn off all LED's. LEDs will not be illuminated during this phase. Select **LEDs CYCLE** to sequentially cycle through and turn each LED on and off, originating on the left-hand side of the dashboard PCB. Press the Service Credit button to halt the cycle.

Main Menu
Game Audits

GAME AUDITS

Press the Volume Up or Volume Down button to highlight Game Audits in the Main Menu and press the Test button. To move between pages in an Audit Table, press the Volume Up or Volume Down button. Press the Test or Start button to return to the Main Menu from this screen.

The Game Audits table displays play statistics. The Audit item is listed on the left side of the table and the amount of play appears on the right side. Record all statistics prior to performing any service or repairs.

Main Menu**Game Audits, continued**

GAME AUDITS	
COIN AUDITS, PAGE 1	
COIN 1 LEFT	X
COIN 2 RIGHT	X
COIN 3 CENTER	X
COIN 4	X
BILL	X
SERVICE CREDITS	X
TOTAL STARTS	X
TOTAL CONTINUES	X
TOTAL GAMES	X
TOTAL FREE RACES	X
FREE GAMES PERCENT	X
EXPIRED RACES	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 1

GAME AUDITS	
MISC. AUDITS, PAGE 2	
POWER-ON TIME SECONDS	X
GAME TIME SECONDS	X
AVERAGE TIME SECONDS	X
KEYPAD LOG-INS	X
EVENT	X
U-GAMES	X
WATCHDOG(S)	X
MOTION ERRORS	X
BURN-IN LOOPS	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 2

GAME AUDITS	
VEHICLE SELECTED, PAGE 3	
JEEP	X
PROWLER	X
VETTE	X
HUMMER	X
NASH	X
MUSTANG	X
TRIPY	X
UGLY CAR	X
JET CAR	X
VIPER	X
MUSCLE CAR	X
SEMI	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 3

Main Menu
Game Audits, continued

GAME AUDITS	
SPECIAL EFFECTS, PAGE 4	
AUTOMATIC SELECTED	X
MANUAL SELECTED	X
CUSTOM PAINT JOBS	X
WHEELIES	X
HORN BEEPED	X
TRICK JUMPS	X
SPINOUTS	X
CAM 1 TIME SECS	X
CAM 2 TIME SECS	X
CAM 3 TIME SECS	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 4

GAME AUDITS	
INDIVIDUAL TRACK SELECTED, PAGE 5	
VEGAS	X
KOREA	X
ALASKA	X
ATLANTIS	X
HONG KONG	X
INDIA	X
SAHARA	X
HOLLAND	X
IRELAND	X
AMAZON	X
TIBET	X
MARS	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 5

GAME AUDITS	
CRUIS'N EXOTICA STARTS, PAGE 6	
VEGAS	X
KOREA	X
ALASKA	X
ATLANTIS	X
HONG KONG	X
INDIA	X
SAHARA	X
HOLLAND	X
IRELAND	X
AMAZON	X
TIBET	X
MARS	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 6

Main Menu**Game Audits, continued**

GAME AUDITS	
TRACK WINS, PAGE 7	
VEGAS	X
KOREA	X
ALASKA	X
ATLANTIS	X
HONG KONG	X
INDIA	X
SAHARA	X
HOLLAND	X
IRELAND	X
AMAZON	X
TIBET	X
MARS	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 7

GAME AUDITS	
DRIVER SELECTION, PAGE 8	
JEN	X
JASON	X
CLOWN	X
RETRO	X
DUDE	X
ASIAN	X
BABY	X
AFM	X
COWBOY	X
ALIEN	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 8

GAME AUDITS	
BIG-HEAD DRIVER SELECTION, PAGE 9	
JEN BIG-HEAD	X
JASON BIG-HEAD	X
CLOWN BIG-HEAD	X
RETRO BIG-HEAD	X
DUDE BIG-HEAD	X
ASIAN BIG-HEAD	X
BABY BIG-HEAD	X
AFM BIG-HEAD	X
COWBOY BIG-HEAD	X
ALIEN BIG-HEAD	X
PRESS VOLUME UP/DOWN FOR NEXT PAGE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

AUDIT TABLE, PAGE 9

Main Menu
Adjustment Menu

ADJUSTMENT MENU

To optimize game performance and earnings or to change the look or sound of the game, select the Adjustment Menu at the Main Menu. The Attract Mode features, Game Pricing and Game difficulty may also be customized, along with awarding free races to encourage players. *Free game player incentives may reduce earnings.* **NOTE:** Individual Game Adjustments are explained in more detail on the following pages.

Press the Volume Up or Volume Down button to highlight the desired Adjustments Menu option on the Main Menu and press the Test button. Use these screens to optimize game performance and earnings.

The Adjustments Menu offers several options. Press the Volume Up or Volume Down button to highlight an option and press the Test button. Each time an option on the menu is activated you are provided with multiple setting choices. Use the Volume Up or Down button to change the current value setting and observe a confirmation box as shown below appears.

SELECT THIS PRICING? ARE YOU SURE?	
YES	NO
TEST TO ACCEPT UP TO INCREASE DOWN TO DECREASE	

TYPICAL CONFIRMATION BOX

Press the Volume Up or Volume Down to make your selection, then press the Test button to lock in the setting. Selecting NO cancels any changes changed values and returns the previous values to memory.

ADJUSTMENT VALUES	
STANDARD PRICING--USA 1	ON
CUSTOM PRICING	OFF
FREE PLAY	OFF
FIRST PLACE GETS FREE RACE	ON
START TIME BONUS SECONDS	75
CHECKPOINT BONUS SECONDS	20
ATTRACT MODE SOUNDS	OFF
INITIAL ENTRY	ON
MINIMUM VOLUME LEVEL	11
STEERING WHEEL POWER	5
SPEED IN MPH OR KPH	MPH
KEYPAD ACTIVE	OFF
MANUAL TRANS DISABLED	OFF
SHOW ROADKILL	ON
SHOW ENDING	ON
SHOW GIRLS	ON
HIGH SCORE RESET	5000
GAME DIFFICULTY	5
MAXIMUM CREDITS	30
MULTI-PLAYER FREE RACES	OFF
PRESS VOLUME UP/DOWN TO SELECT PRESS TEST BUTTON TO ACTIVATE PRESS SERVICE CREDIT BUTTON TO EXIT	

Main Menu
Adjustment, continued
Pricing Table,

Use the Pricing Table illustrated below as a guide to select and/or verify the desired coin credit setting(s).

NAME	START	CONTINUE	CREDITS/COIN	COIN 1	COIN 2	COIN 3	COIN4	BILL
ANTILLES	2	2	1/25¢, 4/1G	.25¢	1G			
AUSTRALIA 1	2	2	1/3X20¢, 2/\$1.00	.20¢	\$1.00			
AUSTRALIA 2	1	1	1/5X20¢, 1/\$1.00	.20¢	\$1.00			
AUSTRIA 1	2	2	1/5Sch, 2/10Sch	5 Sch	10 Sch			
AUSTRIA 2	2	2	1/2X5Sch, 3/2X10Sch	5 Sch	10 Sch			
BELGIUM 1	2	2	1/20BF	20BF	20BF			
BELGIUM 2	2	2	3/20BF	20BF	20BF			
BELGIUM 3	2	2	2/20BF	20BF	20BF			
BELGIUM ECA	2	2	1/20BF	50BF	20BF	5BF		
CANADA 1	2	2	1 / 2 x 25¢, 3 / \$1	25¢	25¢			
CANADA 2	2	2	1 / 2 x 25¢, 3 / \$1	25¢	\$1.00			
CANADA 3	2	2	3 / \$1.00, 6 / \$2.00	\$1.00	\$2.00			
CANADA ECA	2	2	1 / 2 x 25¢, 3 / \$1	25¢		\$1.00	\$2.00	
DENMARK	2	2	3/5DKr, 7/10DKr	5DKr	10DKr			
FINLAND	2	2	1/1Fmk	1Fmk	5Fmk			
FRANCE 1	2	2	2/5Fr, 5/10Fr	5Fr	10Fr			
FRANCE 2	2	1	2/5Fr, 4/10Fr	5Fr	10Fr			
FRANCE 3	2	1	1/5Fr, 3/10Fr	5Fr	10Fr			
FRANCE 4	2	1	1/5Fr, 2/10Fr	5Fr	10Fr			
FRANCE 5	2	1	2/5Fr, 5/10Fr, 11/2 X 10Fr	5Fr	10Fr			
FRANCE 6	2	1	2/5Fr, 4/10Fr, 9/2 X 10Fr	5Fr	10Fr			
FRANCE 7	2	1	1/5Fr, 3/10Fr, 7/2 X 10Fr	5Fr	10Fr			
FRANCE 8	2	1	1/5Fr, 2/10Fr, 5/2 X 10Fr	5Fr	10Fr			
FRANCE 9	2	1	1/3 X 1Fr, 2/5Fr	1Fr	5Fr			
FRANCE 10	2	1	1/2 X 1Fr, 3/5Fr	1Fr	5Fr			
FRANCE 11	2	1	1/3 X 1Fr, 2/5Fr, 5/2 X 5Fr	1Fr	5Fr			
FRANCE 12	2	1	1/2 X 1Fr, 3/5Fr, 7/2 X 5Fr	1Fr	5Fr			
FRANCE ECA 1	1	1	2/5Fr, 5/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 2	1	1	2/5Fr, 4/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 3	1	1	1/5Fr, 3/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 4	1	1	1/5Fr, 2/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 5	1	1	2/5Fr, 5/10Fr, 11/2 X 10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 6	1	1	2/5Fr, 4/10Fr, 9/2 X 10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 7	1	1	1/5Fr, 3/10Fr, 7/2 X 10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 8	1	1	1/5Fr, 2/10Fr, 5/2 X 10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 9	1	1	1/3 X 1Fr, 2/5Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 10	1	1	1/2 X 1Fr, 3/5Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 11	1	1	1/3 X 1Fr, 2/5Fr, 5/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 12	1	1	1/2 X 1Fr, 3/5Fr, 7/10Fr	1Fr	5Fr	10Fr	20Fr	
FRANCE ECA 13	1	1	1/10Fr, 2/20Fr, 4/30Fr	1Fr	5Fr	10Fr	20Fr	
FREE PLAY	--	--	--	None	None	None	None	None
GERMANY 1	2	2	1/1DM, 6/5DM	1DM	5DM			
GERMANY 2	2	2	1/1DM, 7/5DM	1DM	5DM			
GERMANY 3	2	1	1/1DM, 8/5DM	1DM	5DM			
GERMANY 4	2	1	1/1DM, 5/5DM	1DM	5DM			
GERMANY 5	2	1	1/1DM, 6/5DM	1DM	5DM			
GERMANY ECA 1	2	2	1/1DM, 2/2DM, 6/5DM	1DM	2DM	5DM		
GERMANY ECA 2	2	1	1/1DM, 2/2DM, 6/5DM	1DM	2DM	5DM		
GERMANY ECA 3	1	1	1/1DM, 2/2DM, 6/5DM	1DM	2DM	5DM		
HUNGARY	2	2	1/2X10Ft, 3/2X20Ft	10Ft	20Ft			
ITALY	2	2	1/500Lit	500Lit	500Lit			
JAPAN 1	2	2	1/100Yen	100 Yen	100 Yen			
JAPAN 2	2	2	2/100Yen	100 Yen	100 Yen			
JAPAN 3	1	1	1/100Yen	100	100			
JAPAN 4	1	1	2/100Yen	100	100			
JAPAN 5	1	1	4/100Yen	100	100			
JAPAN 6	1	1	1/2X100Yen	100	100			
NETHERLANDS	2	2	1/1HFI, 3/2.5HFI	1HFI	2.5HFI			
NEW ZEALAND 1	1	1	1/\$1	\$1	\$2			
NEW ZEALAND 2	1	1	2/\$1	\$1	\$2			
NORWAY	2	2	3/5Nkr, 6/10Nkr	5Nkr	10Nkr			
SPAIN 1	2	2	1/100Pta, 6/500Pta	100Pta	500Pta			
SPAIN 2	2	2	1/100Pta, 5/500Pta	100Pta	500Pta			
SWEDEN	2	2	1/3X1SKr, 2/5SKr	1SKr	5SKr			
SWITZERLAND 1	2	2	1/1SFr, 6/5SFr	1SFr	5SFr			
SWITZERLAND 2	2	2	1/1SFr, 7/5SFr	1SFr	5SFr			
SWITZERLAND 3	2	2	1/1SFr, 8/5SFr	1SFr	5SFr			
UK ECA 1	1	1	1/50p, 3/£1.00	£1.00	50p	20p	10p	£2.00

CHAPTER 2 DIAGNOSTICS

NAME	START	CONTINUE	CREDITS/COIN	COIN 1	COIN 2	COIN 3	COIN4	BILL
UK ECA 2	1	1	1/50p, 2/£1.00	£1.00	50p	20p	10p	£2.00
UK ECA 3	1	1	1/30p, 2/50p, 5/£1.00	£1.00	50p	20p	10p	£2.00
UK 4	1	1	1/50p, 3/£1.00	£1.00	50p			
UK 5	1	1	1/50p, 2/£1.00	£1.00	50p			
UK ECA 6	1	1	1/30p, 2/50p, 4/£1.00	£1.00	50p	20p	10p	£2.00
UK ECA 7	1	1	3/£1.00	£1.00	50p	20p	10p	£2.00
UK ECA 8	1	1	1/50p, 2/£1.00, 4/£2.00	£1.00	50p	20p	10p	£2.00
USA1	1	1	1/3X25¢	25¢	25¢			\$1.00
USA2	1	1	1/4X25¢	25¢	25¢			\$1.00
USA3	1	1	1/25¢	25¢	25¢			\$1.00
USA4	1	1	1/50¢, 3/\$1.00	25¢	25¢			\$1.00
USA5	2	1	1/50¢, 4/\$1.00	25¢	25¢			\$1.00
USA6	1	1	1/50¢	25¢	25¢			\$1.00
USA7	1	1	1/50¢, 3/\$1.00	25¢	25¢			\$1.00
USA8	2	2	1/50¢, 4/\$1.00	25¢	25¢			\$1.00
USA9	3	2	1/25¢, 4/\$1.00	25¢	25¢			\$1.00
USA10	3	3	1/25¢, 4/\$1.00	25¢	25¢			\$1.00
USA11	4	2	1/25¢, 4/\$1.00	25¢	25¢			\$1.00
USA12	4	3	1/25¢, 4/\$1.00	25¢	25¢			\$1.00
USA13	4	4	1/25¢, 4/\$1.00	25¢	25¢			\$1.00
USA ECA	3	3	1/25¢, 4/\$1.00	\$1.00	25¢	10¢	05¢	\$1.00
USA 15	2	1	1/25¢	25¢	25¢			\$1.00

Main Menu
Adjustment, continued
Custom Pricing Menu

Use the Custom Pricing Menu to specify pricing settings other than the ones listed in the Standard Pricing Table. Custom Pricing can also be used to select the amount of credits required to start a game and the amount of credits required to continue a game.

Press the Volume Up or Volume Down button to highlight an option, i.e. Left Chute, Minimum Units, etc., and press the Test button. Next, use the Volume Up or Down button to adjust the current value setting, then press the Test button to lock in the setting. Selecting NO cancels any changes changed values and returns the previous values to memory.

CUSTOM PRICING MENU	
LEFT CHUTE UNITS	X
RIGHT CHUTE UNITS	X
CENTER CHUTE UNITS	X
FOURTH CHUTE UNITS	X
BILL CHUTE UNITS	X
UNITS PER CREDIT	X
UNITS FOR BONUS	X
MINIMUM UNITS	X
CREDITS TO START	X
CREDITS TO CONTINUE	X
LEFT CHUTE COUNTER	X
RIGHT CHUTE COUNTER	X
CENTER CHUTE COUNTER	X
FOURTH CHUTE COUNTER	X
BILL CHUTE COUNTER	X
SHOW FRACTIONS	YES
SELECT CUSTOMER PRICING	NO
EXIT TO MAIN MENU	
PRESS VOLUME UP/ DOWN TO SELECT	
PRESS TEST BUTTON TO ACTIVATE	
PRESS SERVICE CREDIT BUTTON TO EXIT	

Main Menu
Adjustment, continued
Custom Pricing Menu, continued

The following table clarifies Custom Pricing Menu terms...

SCREEN TERM	DEFINITION
CHUTE UNITS	Currency inserted accumulates units. This adjustment specifies the quantity of units given for each coin or bill in each coin chute.
UNITS PER CREDIT	Units needed to accumulate a credit.
UNITS FOR BONUS	Units awarded after a player has accumulated enough points for a bonus.
MINIMUM UNITS	No credits will be awarded until the minimum required currency units have been accumulated.
CREDITS TO START	Units needed to enter game play.
CREDITS TO CONTINUE	Units needed to continue game play.
CHUTE COUNTER	Total number of units accepted by a chute.
SHOW FRACTIONS	Fractional credits are observable in credit screen when YES is selected.
CUSTOMER PRICING	Selecting YES enables custom pricing and overrides default settings.

Main Menu
Adjustment Menu, continued

To further optimize game performance and earnings, select the desired option on the Adjustment Menu. Press the Volume Up or Volume Down button to highlight the desired Adjustments Menu option on the Main Menu and press the Test button. Use these screens to optimize game performance and earnings.

Each time an option on the menu is activated you are provided with multiple setting choices. Use the Volume Up or Down button to change the current value setting and observe a confirmation box as shown below appears.

SELECT THIS PRICING? ARE YOU SURE?	
YES	NO
TEST TO ACCEPT UP TO INCREASE DOWN TO DECREASE	

TYPICAL CONFIRMATION BOX

Press the Volume Up or Volume Down to make your selection, then press the Test button to lock in the setting. Selecting NO cancels any changes changed values and returns the previous values to memory.

Main Menu
Adjustment, continued
Free Play Menu

Free Play

This option selects free play. The setting choices for this adjustment are:

- On
- Off
- Factory Setting: Off**

Main Menu
Adjustment, continued
First Place Awards Free Game Menu

First Place Awards Free Game

Awards a player a free game upon a first place finish. The setting choices are:

- On
- Off
- Factory Setting: On**

Main Menu
Adjustment, continued
Start Time Bonus Seconds Menu

Start Time Bonus Seconds

Determines the initial amount of time a player is given to finish a race. The setting choices are:

- Maximum: 90
- Minimum: 60
- Factory Setting: 75**

Main Menu
Adjustment, continued
Checkpoint Bonus Time Menu

Checkpoint Bonus Time

Awards a player a time bonus for passing a checkpoint. The setting choices are:

- Maximum: 10
- Minimum: 25
- Factory Setting: 20**

Main Menu
Adjustment, continued
Attract Sound

Attract Sound

This option selects the attract mode sounds. The setting choices for this adjustment are:

- On
- Off
- Factory Setting: Off**

Main Menu
Adjustment, continued
Initial Entry Menu

Initials Entry

This enables players to enter their initials following a successful race. The setting choices are:

- On
- Off
- Factory Setting: On**

Main Menu
Adjustment, continued
Minimum Volume Level Menu

Minimum Volume Level

This determines the minimum volume level of the game sounds. The setting range is:

- Maximum: 30
- Minimum: 0
- Factory Setting: 11**

Main Menu
Adjustment, continued
Steering Wheel Power Menu

Steering Wheel Power

This selects the amount of power provided to steering. The setting range is:

- Maximum: 10
- Minimum: 1
- Factory Setting: 5**

Main Menu
Adjustment, continued
Speed in MPH or KPH Menu

Speed in MPH or KPH

This determines the speedometer setting in miles per hour or kilometers per hour. The setting range is:

- MPH
- KPH
- Factory Setting: **MPH**

Main Menu
Adjustment, continued
Manual Trans Disabled Menu

Manual Trans Disabled

This provide control of the manual transmission option. The setting range is:

- On
- Off
- Factory Setting: **Off**

Main Menu
Adjustment, continued
Keypad Active Menu

Keypad Active

This determines whether a player is allowed to use the keypad for inputs. The setting range for a kit is:

- On
- Off
- Factory Setting: **Off**

Main Menu
Adjustment, continued
Show Roadkill Menu

Show Roadkill

This determines if dead animals are shown in the game. The setting range is:

- On
- Off
- Factory Setting: **On**

<i>Main Menu</i>
<i>Adjustment, continued</i>
Show Ending Menu

Show Ending

This determines if an image of the President is shown upon completion of a game. The setting range is:

- On
- Off
- Factory Setting: On**

<i>Main Menu</i>
<i>Adjustment, continued</i>
Show Girls Menu

Show Girls

This determines if “sexy” girls are shown at various points in the game. The setting range is:

- On
- Off
- Factory Setting: On**

<i>Main Menu</i>
<i>Adjustment, continued</i>
High Score Reset Menu

High Score Reset

This determines the number of points required to reset the high score. The setting range is:

- Maximum: 25000
- Minimum: 1000
- **Factory Setting: 5000**

<i>Main Menu</i>
<i>Adjustment, continued</i>
Game Difficulty Menu

Game Difficulty

This determines the level of difficulty for the game. The setting range is:

- Easiest 0
- Hardest 9
- Factory Setting: 5**

Main Menu
Adjustment, continued
Maximum Credits Menu

Maximum Credits

This allows the operator to select the maximum number of credits allotted. The setting range is:

- Maximum: 99
- Minimum: 1
- Factory Setting: 30

Main Menu
Adjustment, continued
Multi-Player Free Races Menu

Multi-Player Free Races

Awards free game to top player in a 2, 3, 4 or more player race. The setting range is:

- Off
- 2 Player
- 3 Player
- 4 Player
- Factory Setting: Off

Main Menu
Utilities

UTILITIES

To clear bookkeeping memory and reset factory defaults, select Utilities at the Main Menu. Press the Volume Up or Volume Down button to highlight the Utilities option on the Main Menu, then press the Test button. Press the Service Credit button to return to the Main Menu from this screen.

UTILITIES MENU
CLEAR CREDITS CLEAR GAME AUDITS RESET HIGH SCORES RESET HIGH SCORES, PLAYER STATS DEFAULT ADJUSTMENTS FULL FACTORY RESTORE EXIT TO MAIN MENU PRESS VOLUME UP/VOLUME DOWN TO SELECT PRESS TEST BUTTON TO ACTIVATE PRESS SERVICE CREDIT BUTTON TO EXIT

UTILITIES MENU

The Utilities Menu offers several options. Press the Volume Up or Volume Down button to highlight an option, then press the Test button. Each time an option on the menu is activated you are provided with multiple setting choices. Use the Volume Up or Volume Down button to change the current value setting and observe a confirmation box as shown appears.

Main Menu
Utilities, continued

ARE YOU SURE YOU WANT TO CLEAR CREDITS?	
YES	NO

TYPICAL CONFIRMATION BOX

Press the Volume Up or Volume Down button to select YES or NO, then press the Test button to lock in the setting. Selecting NO cancels any changes values and returns the previous values to memory.

NOTE: Record the numbers before they are cleared. These values cannot be restored once erased.

Main Menu
Utilities, continued
Clear Credits Menu

Clear Credits

Press the Volume Up or Volume Down buttons to highlight the Clear Credits option on the Main Menu, then press the Test button. This returns all credit values to zero and removes credit amounts from memory.

- Yes
- No

Main Menu
Utilities, continued
Clear Game Audits Menu

Clear Game Audits

Press the Volume Up or Volume Down buttons to highlight the Clear Game Audits option, then press the Test button. This returns all audit values to zero and removes totals from memory.

- Yes
- No

Main Menu
Utilities, continued
Reset High Scores Menu

Reset High Scores

Press the Volume Up or Volume Down buttons to highlight the Reset High Scores option on the Main Menu, then press the Test button. This deletes all high scores and removes player identities from memory.

- Yes
- No

Main Menu
Utilities, continued
Reset High Scores Menu, Player Stats

Reset High Scores, Player Stats

Press the Volume Up or Volume Down buttons to highlight the Reset High Scores, Player Stats option on the Main Menu, then press the Test button. This deletes player identities and high scores accessed only via game keypad. **This Utilities option NOT applicable to kit upgraded games.**

- Yes
- No

Main Menu
Utilities, continued
Full Factory Restore Menu

Default Adjustments

Press the Volume Up or Volume Down buttons to highlight the Default Adjustments option on the Main Menu, then press the Test button. This sets the adjustments back to their original values.

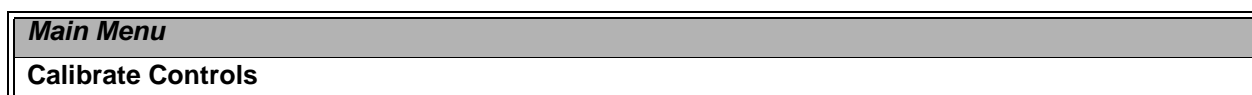
- Yes
- No

Main Menu
Utilities, continued
Full Factory Restore Menu

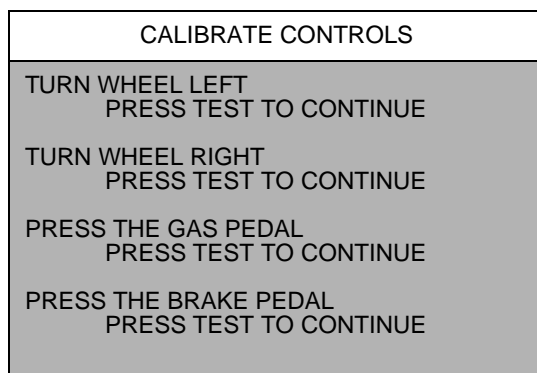
Full Factory Restore

Press the Volume Up or Volume Down buttons to highlight the Full Factory Restore option on the Main Menu, then press the Test button. This returns every variable in the game to the original factory settings.

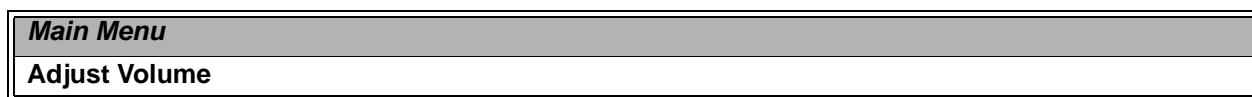
- Yes
- No

**CALIBRATE CONTROLS**

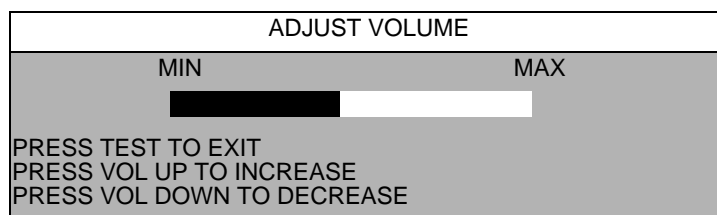
To calibrate the steering wheel and pedals, select Calibrate Controls at the Main Menu. Press the Volume



Up or Volume Down button to highlight the Control Calibration option on the Main Menu, then press the Test button. Follow the instructions on screen.

**ADJUST VOLUME**

To select a desirable volume level, select Volume Level at the Main Menu. Press the Volume Up or Volume Down button to highlight the Adjust Volume option on the Main Menu, then press the Test button. Remember that the minimum sound level is set under Game Adjustments.



Press the Volume Up button to increase, or the Volume Down button to decrease the sound level of the game. Press the Test button to lock the volume level at the selected value and return to the Main Menu.

NOTES