



CHAPTER ONE

INSTALLATION & OPERATION










NOTICE: Information in this manual may change without notice. Midway Amusement Games, LLC reserves the right to make improvements in equipment function, design, or components as progress in engineering or manufacturing methods may warrant.




SAFETY INSTRUCTIONS

The following safety instructions apply to operators and service personnel. Read these instructions before servicing or preparing the Video Game Machine (VGM) for play. Other safety instructions appear throughout this manual.

DEFINITIONS OF SAFETY TERMS

- **DANGER** indicates an imminent hazard. If you fail to avoid this hazard, it **WILL** cause death or serious injury.
- **WARNING** indicates a potential hazard. If you fail to avoid this hazard, it **COULD** cause death or serious injury.
- **CAUTION** indicates a potential hazard. If you fail to avoid this hazard, it **MAY** cause minor or moderate injury. **CAUTION** also alerts you about unsafe practices.
- **NOTE** indicates information of special importance.

	<p>WARNING: TRANSPORTING GAMES. The VGM contains glass and fragile electronic devices. Use appropriate care when transporting. Avoid rough handling when moving the cabinet. Do not move with the power switched on.</p>
	<p>WARNING: DISCONNECT POWER. Always turn the power OFF and unplug the VGM before attempting service or adjustments unless otherwise instructed. Installing or repairing boards with power switched on can damage components and void the warranty.</p>
	<p>WARNING: GROUND GAMES. Avoid electrical shocks! Do not plug in a VGM until you have inspected and properly grounded it. Only plug this game into a grounded, three-wire outlet. Do not use a "cheater" plug, or cut off the ground pin on the line cord.</p>
	<p>WARNING: AVOID ELECTRICAL SHOCKS. The VGM system does not utilize an isolation transformer. Internal cabinet AC is not isolated from the external AC line.</p>
	<p>WARNING: HANDLE FLUORESCENT 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.</p>
	<p>CAUTION: CHECK POWER SELECTOR, LAMP. Set the 115/230VAC selector on the power supply for the correct line voltage. Check the selector setting before switching on the VGM. Verify that the fluorescent lamp assembly is correct for the local line voltage.</p>
	<p>CAUTION: USE PROPER FUSE. Avoid electrical shock! Replacement fuses must be identically rated. Fuse voltage and current ratings must be identically rated to the original fuse.</p>

	<p>CAUTION: ATTACH CONNECTORS PROPERLY. Be sure board connectors mate properly. If connectors do not slip on easily, do not force them. A reversed connector may damage the VGM and void the warranty. Connector keys only allow a connector to fit one set of pins on a board.</p>
	<p>CAUTION: USE CARE WHEN SHIPPING HARD DISKS. The hard disk drive must be packed in an anti-static bag. When shipping the drive for repair or replacement, pack it in an approved container (P/N 08-8068). Do not stack or drop hard disk drives.</p>
	<p>WARNING: HAZARD TO EPILEPTICS. A very small portion of the population has a condition which 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. People who have not had any previous seizures may nonetheless have an undetected epileptic condition.</p> <p>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.</p> <p>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.</p>



NOTICE: This manual contains only information related to the CPU Board and game features for *Cruis'n Exotica™*. Refer to the original Operator's Manual for the game machine being converted for specific service, parts and wiring information.

INSPECT KIT 44072

Kit 44072 contains artwork, a CPU Board assembly, PLD assemblies and the cables necessary to convert all cabinet styles (except motion games) of *Cruis'n USA™*, *Cruis'n World™* and *OffRoad Challenge™* into *Cruis'n Exotica™*.

Unpack the materials from the carton and check for obvious signs of damage. Use this checklist to be sure the kit is complete. **NOTE:** Thoroughly read and understand instructions prior to performing a conversion.

Item	Part Number	Qty.	Item	Part Number	Qty.
CABLES			ARTWORK		
Cable, Conversion kit	H-23699	1	Decal, Side, Right & Left	31-3601	2
Cable, Sound Adapter	H-23700	1	Marquee, Center	31-3600	1
Cable, Linking, 16ft.	20-10536-16	1	BOARD ASSEMBLIES		
MISCELLANEOUS			CPU Board	A-22536-2	1
IC PLCC Extractor	20-9924	1	PLD Assembly, U8	41-00001	1
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PREPARE GAME CABINET FOR CONVERSION

1. Verify operation of existing game machine prior to performing conversion. Pay special attention to components that will be reused once conversion is complete. Check power supply, video monitor, currency acceptors, wiring harnesses, cabinet locks, and lighted marquee, etc.
2. Prepare cabinet for artwork.

•**Cruis'n USA™** and **Cruis'n World™** game machines being converted need only be wiped down with a clean cloth. Spray a mild cleanser directly on a cloth-- never spray a cleansing product directly on game cabinet or any other components-- and wipe clean.

•**OffRoad Challenge™** game machines being converted require removal of old decals and any artwork from game cabinet. First, clean off any glue residue, then fill gouges or unused holes with quick-hardening wood putty and sand until smooth. Remove any dust and then evenly cover cabinet with black paint and allow to dry completely prior to continuing.

INSTALL NEW HARDWARE

3. Switch off power to game cabinet and unplug from outlet. Unlock and remove the rear cabinet door.
4. Remove perforated metal enclosure located over CPU Board assembly. Discard enclosure, as it will not be reused with new board assembly.
5. Label and disconnect all wiring connected to CPU Board.
6. Remove hex head screws used to fasten CPU Board assembly to electronics rack. Lift board from rack, careful not to let the PCB standoffs fall into cabinet, and place it in an anti-static bag. Set screws and standoffs aside for reuse later.

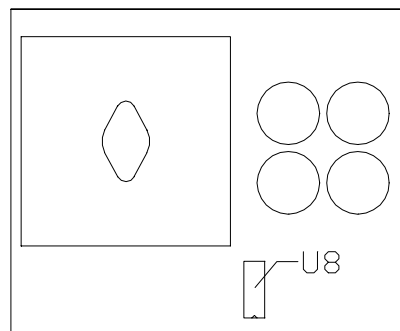
7. Prepare CPU Board for installation. Remove *Cruis'n Exotica™* CPU Board from its anti-static packaging. Verify and set DIP Switch settings prior to installing CPU Board to ensure proper operation.

•**Cruis'n USA™** and **Cruis'n World™** games being converted require Switch 1 on DIP Switch 1 be in the ON position. Switch 4 on DIP Switch 1 must be in the OFF position. Refer to *Setting Table for DIP Switch 1* located in *Section Two: Adjustment, Diagnostic & Audit Menus* for further information.

•**OffRoad Challenge™** games being converted require Switch 1 on DIP Switch 1 be in the ON position. Switch 4 on DIP Switch 1 must be in the ON position. Refer to *Setting Table for DIP Switch 1* located in *Section Two: Adjustment, Diagnostic & Audit Menus* for further information.

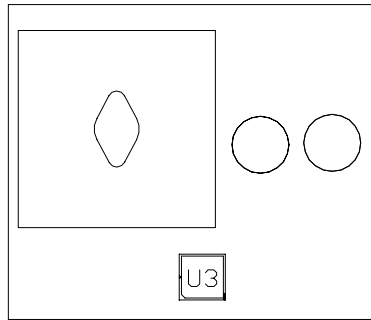
8. Place *Cruis'n Exotica™* CPU Board in same position on electronics rack as the old CPU Board and fasten in place reusing original screws and standoffs. During installation, be careful not to let the PCB standoffs fall into the cabinet
9. Reattach cabling and wiring onto new CPU Board. Please note that not all of the preexisting cabling will be reconnected onto the new CPU Board.
10. Connect Conversion Kit Adapter Cable, labeled H-23699, to main harness. Attach Z-header located at the end of this cable to harness --previously attached to P9-- and the opposite end to PLAYER 3 on CPU Board.
11. Connect Sound Adapter Cable, labeled H-23700. Attach Z-header located at the end of this cable to the pre-existing Sound Cable --previously attached to P3 on the old CPU-- and the opposite end to P18 on new CPU Board.
12. **Cruis'n USA™ game conversions only:** Connect Auxiliary Power Connector, the second cable attached to Sound Adapter Cable, which was previously connected to P5. Attach Z-header located at end of this cable to the pre-existing cable, and the opposite end to P22 on the CPU Board.
13. Attach A2D connection to P11 on the new CPU Board. This connection was previously attached to P8.
14. Remove cable for AC Power to Sound from P4 on the CPU Board. **NOTE:** DO NOT reconnect this cable. This connection is not reused.
15. Install PLD assembly on Wheel Driver Board. Locate appropriate assembly by first identifying the game being converted and follow the steps outlined below.

•**Cruis'n USA™** games being converted use PLD assembly 41-00001. Remove old PLD assembly from location U8 on wheel driver board using the PLCC extractor supplied in the kit to aid in removal of this part. Properly orient new PLD assembly over socket and press firmly to seat.



Cruis'n USA™ WHEEL DRIVER

•**Cruis'n World™** and **OffRoad Challenge™** games being converted use PLD assembly 41-00002. Remove old PLD assembly from location U3 on the wheel driver board, using a slight rocking motion. Properly orient the new PLD assembly over socket and press firmly to seat.



Cruis'n World™ & OffRoad Challenge™ WHEEL DRIVER BOARD

UPDATE ARTWORK

16. Apply cabinet decals. Remove backing and apply decal(s) to cabinet, smoothing it out as you go.
17. Replace marquee artwork. Remove hex head screws used to fasten retaining bracket along top edge of cabinet marquee. Set screws and retaining strip aside for reuse later.
18. Carefully lift out marquee artwork and/or marquee glass. Determine cabinet size for your marquee and cut *Cruis'n Exotica™* marquee artwork to size. **NOTE:** Cutting guidelines are provided for your convenience and appear directly on the marquee artwork. Be sure to compare the size of the original artwork to the cutting guideline on the *Cruis'n Exotica™* artwork prior to cutting.
19. Install marquee artwork, as well as marquee glass if it was removed. Replace retaining strip above marquee and fasten in place.

ENABLE LINKING (Optional)

20. Install new linking cable. Remove and discard pre-existing linking cable.
21. Starting with game cabinet designated *Game 1*, which is always located on the far left hand side, attach one end of the new linking cable to P12 on game electronics.
22. Route remaining free end of cable through notch located in the rear door opening and extend it toward desired game cabinet.
23. Attach free end of linking cable to P14 on game electronics inside game cabinet to be designated as *Game 2*.
24. Check DIP Switch is properly set to enable linking. Switch 6 on DIP Switch 1 must be in the ON position. Refer to *Setting Table for DIP Switch 1* located in *Chapter Two: Adjustment, Diagnostic & Audit Menus* for further information.

FUNCTION	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
LINK DISABLED						OFF		
LINK ENABLED						ON		
LINKING ID NUMBER								
MASTER (GAME NUMBER 1)							OFF	OFF
SLAVE (GAME NUMBER 2)							ON	OFF
SLAVE (GAME NUMBER 3)							OFF	ON
SLAVE (GAME NUMBER 4)							ON	ON

TEST GAME

25. Plug power cord into AC line and switch on power to cabinet. Observe circuit board indicators light-up.
26. The game system loads program and automatically enters self-diagnostics. The system will automatically enter Attract Mode if no errors are found during self-diagnostics. Check wiring if problems occur and troubleshoot system if necessary.
27. Open coin door. Locate operator control switch panel and then press and hold the Begin Test button to enter menu system. Wait until the Main Menu screen appears on monitor.
28. Follow on-screen instructions to select Diagnostics, then choose SWITCH TEST. Follow on-screen instructions to verify that each of the controls is operational. If no errors are found, the controls will function well.
29. Return to Diagnostics screen, and then choose SOUND BOARD TEST. Follow on-screen instructions to verify that each of the speakers is operational. If no errors are found, the audio will function well.
30. Return to Diagnostics screen, and then choose STEERING WHEEL TEST. Follow on-screen instructions to verify presence of steering resistance.
31. Return to Main Menu screen, then choose CALIBRATE CONTROLS. Follow on-screen instructions to set steering limits. If no errors are found, controls will have the maximum accuracy.
32. Return to Diagnostics screen, and then choose LINKING TEST. Follow on-screen instructions to verify communications between game machine and another connected to it. If no errors are found, linking mode will function well.
33. Return to Main Menu screen, and then choose EXIT. The game will automatically enter its “attract” mode of operation (scenes and sounds from typical races, player’s scores, messages, etc.).
34. Insert currency or tokens and play a game. Change the volume and make any other adjustments. Close and lock all open doors. Tighten leveler nuts and engage caster locks. Replace and lock rear cabinet door.



CAUTION: You are solely responsible, and Midway has no responsibility for FCC compliance of installed kits. Do not install a FCC compliance label on the product until compliance is verified.

GAME FEATURES

CRUIS’N EXOTICA™ ships configured for one-player game play. Cabinets may be linked to permit player competition.

Cruis’n Exotica™ is the latest, most thrilling and adventurous driving game in the Cruis’n™ video game series. Players can select tracks located in nearly a dozen exotic locales around the globe. From Tibet to Atlantis, Mars to Hong Kong, it is every player’s goal to accumulate a high score and mileage points.

Speeding on their way toward a first place finish, drivers listen to cool tunes on the radio as they pass palms swaying in the breeze, 3-Dimensional animals cavorting roadside, and a variety of shortcuts hidden along the way. A player’s combined speed and skill virtually assure a place in the winner’s circle.

Player incentives, like free games for top speeds and distance, are sure to captivate players and ensure many trips around the track. And players finishing in first place will soon discover they have been whisked away on a free trip to an exotic locale. (Player incentives are Operator Optional and are enabled only at the Operator’s discretion)

STARTING UP

Each time power is switched on or restored to the game machine, the system enters Start-up Tests. Observe the screen displays a CPU Board map. Bad ICs are indicated in red, good ICs are in green. The software revision level is shown at the top of the screen.

A status screen to report on network activity will appear for about ten seconds. This screen is used to verify and troubleshoot connections on an array of cabinets.

The system enters Attract Mode once it passes all power-up tests. The Attract Mode screen will cycle endlessly and display a variety of scenes and sounds from a typical race on any given track. The system does not exit Attract Mode until the desired amount of coins or tokens is inserted and game play commences.

NOTE: An error message appears on screen and the game does not enter start up if an error is detected during the Start-Up Test. Record any messages before attempting to service game.

GAME RULES AND OBJECTIVES

The game is configured for one-player game play, but up to four cabinets may be linked at one time to promote multiple player competition.

To enter Game Mode, individual player(s) must insert required amount of currency or tokens, press the Start button, and select a car and track. The main objective of the game is to earn top ranking against other drivers.

PLAYER CONTROLS

- Green Start button
The start button is used to begin game play or to select certain features before a race.
- Orange Radio button
The radio button allows the player to turn radio sounds on and off, and to change stations.
- Red button
This button shows the view from the driver's seat inside the vehicle. This is a normal driver view.
- White button
This button shows the view from directly behind. The player can see the rear end of the vehicle.
- Blue button
This button shows an aerial view of the vehicle. This is what a helicopter camera would see.
- Pedals
The gas and brake pedals control vehicle speed. Press the gas pedal twice to create a power boost.
NOTE: Upright cabinet styles are not equipped with a brake pedal.
- Seat Position Adjuster
The seat position may be changed at any time, even during competition. Pull the adjustment lever to the left while seated then slide the seat forward or backward. Release the lever to lock the seat into position.

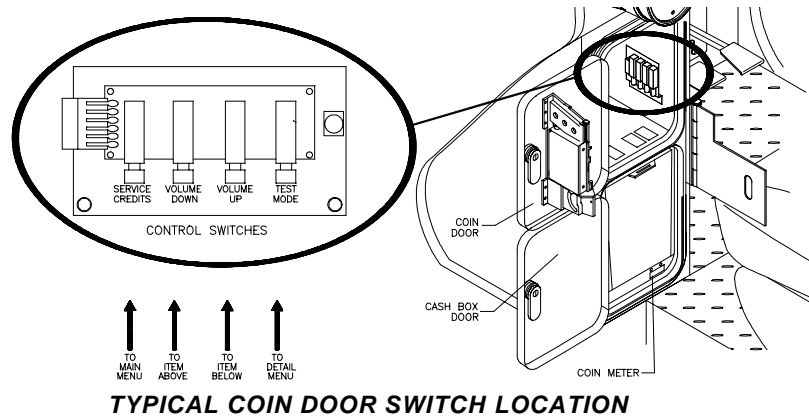
GAME OPERATION

Access to the menu system for statistics, adjustments, and testing is secured by a keyed lock to prevent tampering. When the menu system is entered, on screen messages guide the operator through tasks.

Cabinet Switches

- The **ON/OFF SWITCH** is located on the topside of the cabinet.

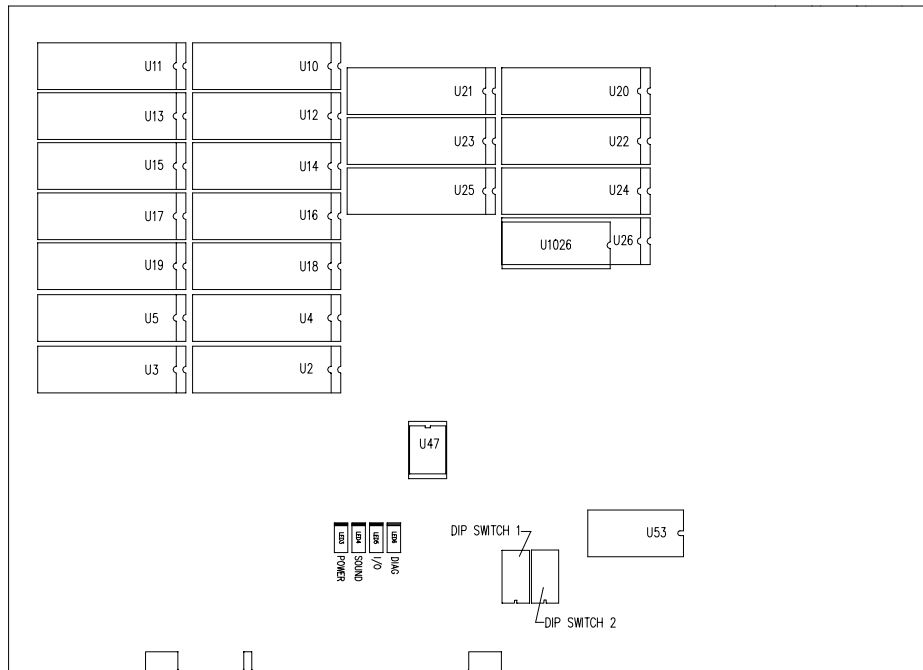
- The **REMOTE MONITOR ADJUSTMENTS** are located inside coin vault. Adjust video image size, brightness, contrast, etc., using the Monitor Test screens and the monitor controls.
- The **SLAM TILT SWITCH** detects forceful vibrations against coin door to eliminate pounding for free games. It is located on the inside of the coin door opening near the lock.
NOTE: The Slam switch is not present on Dollar Bill Validator (DBV) ready doors.



Control Buttons

- The **TEST BUTTON** accesses the game Menu System. Press the Test button to access the Main Menu and select individual diagnostics, audits, utilities, etc.
- The **VOLUME UP BUTTON** scrolls through menu selections or adjustment items and raises the sound level in game play. An audible tone accompanies activation of this button.
- The **VOLUME DOWN BUTTON** scrolls through the menu selections or adjustment items and lowers the sound level in game play. An audible tone accompanies activation of this button.
- The **SERVICE CREDIT BUTTON** allots credits without affecting the game's bookkeeping total. This button can also be used to exit from menu selections or to return to the main menu.

CPU BOARD ASSEMBLY A-22536-2



Designation	Part Number	Function	Description
U47	5460-15676-00	Config Memory Backup	3V Lithium Battery
F1, F2	5735-13853-00	Circuit Protection	2A SB Fuse 5x20mm
U2	A-5343-40072-11	Sound	EPROM Assembly
U3	5341-16431-14	Sound	EPROM Assembly
U4	5341-16431-15	Sound	EPROM Assembly
U10	A-5343-40072-1	Programming & Images	EPROM Assembly
U11	A-5343-40072-2	Programming & Images	EPROM Assembly
U12	A-5343-40072-12	Programming & Images	EPROM Assembly
U13	A-5343-40072-13	Programming & Images	EPROM Assembly
U14	5341-16431-3	Images	EPROM Assembly
U15	5341-16431-4	Images	EPROM Assembly
U16	5341-16431-5	Images	EPROM Assembly
U17	5341-16431-6	Images	EPROM Assembly
U18	A-5343-40072-23	Images	EPROM Assembly
U19	A-5343-40072-24	Images	EPROM Assembly
U20	A-5343-40072-21	Images	EPROM Assembly
U21	A-5343-40072-22	Images	EPROM Assembly
U22	5341-16431-17	Images	EPROM Assembly
U23	5341-16431-18	Images	EPROM Assembly
U24	5341-16431-19	Images	EPROM Assembly
U25	5341-16431-20	Images	EPROM Assembly
U26	5347-16378-00	High Score Memory Backup	Lithium Battery
U53	A-23250	27" Game Instructions	PIC Assembly