

HYDROTHUNDER™

CHAPTER ONE

PRODUCT SAFETY, SPECIFICATIONS, SETUP, & MAINTENANCE



NOTICE: This manual is subject to change without notice. MIDWAY reserves the right to make improvements in equipment function, design, or components as progress in engineering or manufacturing methods may warrant.

Fill out and mail in the Game Information Card. Include the game serial number from the label on the rear of the cabinet. For your records, write the game serial number in the manual.
SERIAL NUMBER _____

SAFETY INSTRUCTIONS

The following safety instructions apply to operators and service personnel. Read these instructions before preparing the game 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.

NOTICE indicates information of special importance.

	WARNING: TRANSPORTING GAMES. This game contains glass and fragile electronic devices. Use appropriate care when transporting this game. Avoid rough handling when moving the cabinet. Do not move this game with the power on.
	WARNING: DISCONNECT POWER. Always turn the power OFF and unplug the game before attempting service or adjustments unless otherwise instructed. Installing or repairing PC boards with power ON can damage components and void the warranty.
	WARNING: GROUND GAMES. Avoid electrical shocks! Do not plug in a game 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.
	WARNING: AVOID ELECTRICAL SHOCKS. This video game system does not utilize an isolation transformer. Internal cabinet AC is not isolated from the external AC line.
	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.
	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 game. Verify that the fluorescent lamp assembly is correct for the local line voltage.
	CAUTION: USE PROPER FUSE. Avoid electrical shock! Replacement fuses must be of the same type as those they replace. Fuse voltage and current ratings must match ratings on the original fuse.
	CAUTION: ATTACH CONNECTORS PROPERLY. Be sure that printed circuit board (PCB) connectors mate properly. If connectors do not slip on easily, do not force them. A reversed connector may damage your game and void the warranty. Connector keys only allow a connector to fit one set of pins on a board.

	<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>

PRODUCT SPECIFICATIONS

Operating Requirements

<u>Location</u>	<u>Electrical Power</u>	<u>Temperature</u>	<u>Humidity</u>
Domestic	120VAC @ 60Hz 4.0 Amps	32°F to 100°F	Not to exceed 95% relative
Foreign	230VAC @ 50Hz 2.0 Amps	(0°C to 38°C)	
Japan	100VAC @ 50Hz 4.0 Amps		

Cabinet Statistics

<u>Shipping Dimensions</u>	<u>Shipping Weight</u>
Cabinet Width 32.0" (81.3 cm) Depth 66.5" (169 cm) Height 76.0" (193 cm)	Cabinet Boxed 328 lbs. (149 kg.)

Equipment Characteristics

<u>Video Display Monitor</u>	<u>Audio System</u>	<u>Currency Acceptors</u>
Medium Resolution RGB 25" (63.5 cm) CRT	Digital Stereo Sound Two 5.5" (14 cm) and One 6.5" (16.5 cm) Spkr	2 Coin Mechanism, Coin Counter Dollar Bill Validator Ready Electronic Coin Acceptor Ready

Game Characteristics

<u>Player Variables</u>	<u>Operator Variables</u>	<u>Diagnostics</u>
1 to 4 players per game (with linking) Choice of craft and course High Score Recognition	Coinage, Game Options Difficulty, Force, Volume, Audits, Statistics	Automatic Power-Up Self-Test Manual Multi-Level Menu System

PRODUCT CONFIGURATION

◆ Stand Alone Units

Each game is ready to play right out of the box. Operators may use the menu screens in the game menu system to determine some player variables in advance or leave the choices up to the players.

◆ Linked Units

Linking allows players to compete against each other (on one course). Operator menus are the same as in stand alone games. Crossover couplers and linking cables to connect two games are factory installed. Use the optional Hub Linking Kit to interconnect up to eight games (two groups of four).

MAINTENANCE

◆ Viewing Glass

It is not necessary to switch off power to the game to clean the glass. Apply a mild glass cleaner to a clean cloth or sponge, then use this to wipe the viewing glass. **Do not apply the cleaner directly on the glass!** Liquid could drip down into switch or control circuits and cause erratic game operation.

◆ Player Controls

Use plastic-safe non-abrasive cleaners to avoid damage. Apply cleaner to a clean cloth or sponge, then use this to wipe the player controls. **Do not apply the cleaner directly on the controls!**

◆ Cabinet

Use plastic-safe non-abrasive cleaners to avoid damage. Apply cleaner to a clean cloth or sponge, then use this to wipe the cabinet. **Do not apply cleaner directly on artwork or cabinet!**

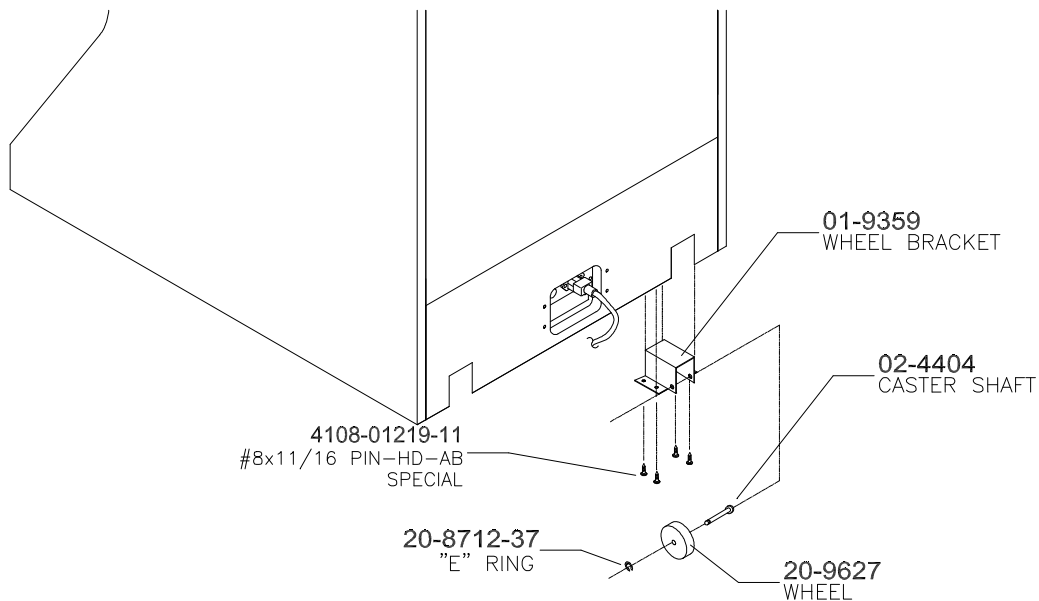
GAME SETUP



WARNING: The cabinet is top heavy. Use the two handles on the back of the cabinet when moving the game.

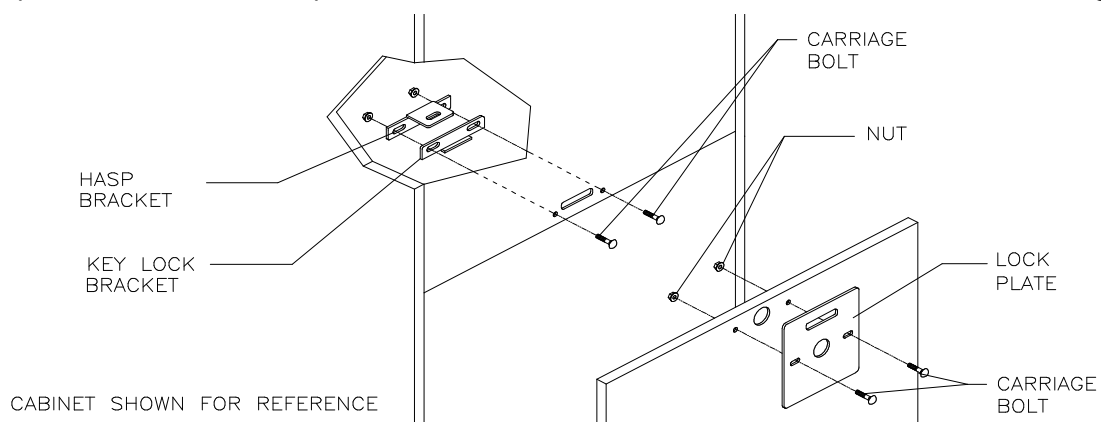
1. Remove all items from shipping containers and set aside. Casters, levelers, and mounting hardware are packed with the pedestal section. Inspect the exterior of the cabinet for any signs of damage.
2. Remove the keys from the steering wheel. Unlock and open the coin door and cash box. Remove the rear door. Inspect cabinet interior for any signs of damage. Check all major assemblies to assure that they are mounted securely. Ensure that nothing blocks fan airflow.
3. Electrical cords and game spare parts are in the cash box. Locate the casters and levelers first.

(CABINET SHOWN FOR REFERENCE)



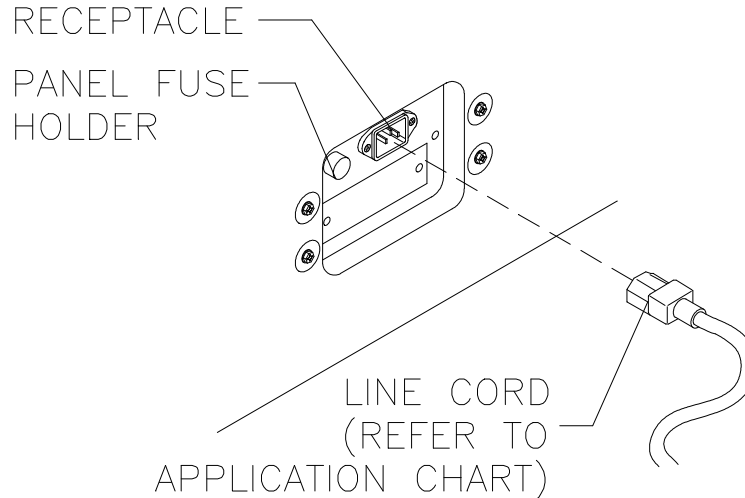
INSTALL CASTERS

4. Fasten caster wheels to their wheel brackets with caster shafts and e-rings. Mount the two wheel brackets to the bottom-rear of the game cabinet. Each bracket requires four screws.
5. Install one nut onto each leg leveler. Tilt as needed to locate four threaded holes under the cabinet. Install a leveler and nut into each hole. Do not tighten nuts at this time.
6. You can install an extra padlock to secure the rear door. You'll find a hasp in the spare parts bag. Remove the two lock bracket nuts from inside the cabinet, above the rear door opening. Slide the hasp onto the bolts so that it protrudes from the hole in back of the cabinet. Reinstall nuts and tighten.



INSTALL THE DOOR LOCK AND SECURITY BRACKETS

7. Modify the lock plate at the top of the rear door. Remove the bolts and nuts from the lock plate. Rotate the plate so that the slot will be above the door. Reinstall the bolts and nuts and tighten firmly.



INSTALL THE POWER CORD

8. The power cord is with the spare parts. Match the holes on the IEC plug with the prongs in the receptacle. Push the plug firmly to seat it. Route the cord away from cabinet wheels and foot traffic areas.
9. Refer to the game's Cabinet Wiring Diagram in Chapter 5 and check to see that all cable connectors are correctly secured. Inspect for damaged connectors. Be sure that you **DO NOT FORCE CONNECTORS**. Most connectors are keyed to prevent making reversed connections.



CAUTION: CHECK POWER SUPPLY LINE VOLTAGE SELECTOR SWITCH. Set the 110/220 VAC selector on the power supply for the correct local line voltage. Check the selector setting before switching on the game.

10. Reinstall the rear door and close it. Lock the rear door and remove the key. If required, install the extra padlock through the hasp. Install the screws at the top and sides of the rear door. Tighten the screws snugly. Close and lock the cash box and coin doors.



NOTICE: Tamper-resistant screws and a matching wrench are provided with this game for additional security. Four tamper-resistant screws and a wrench are located in the spare parts bag. If desired, replace the original screws with the tamper-resistant screws. Tighten the screws firmly with the wrench.

11. Move the game to its play location. Lower each leg leveler until the cabinet is stable and level. Adjust the levelers as required to raise wheels and distribute weight equally on each corner. Tighten the nuts.
12. Plug the game into a grounded (3-terminal) AC wall outlet. Switch on the game, using the on/off switch at the top-left rear of the cabinet. The game will power up and begin self-diagnostics. If diagnostics find no errors, the game enters its Attract Mode of operation.
13. Unlock and open the coin door. Locate the control switches. Press TEST MODE to enter the Menu System.
14. Follow the on-screen instructions to select the Diagnostics Menu, then choose Hard Drive Tests. Perform each of the routines to verify hard disk drive operation. If no errors are found, the program should function well.
15. Return to the Diagnostics screen, then choose Monitor Patterns. Use the various patterns to verify that the monitor is properly adjusted.

16. Return to the Diagnostics screen, then choose Switch and Lamp Tests. Follow the on-screen instructions to verify that each of the controls and lights is operational. If no errors are found, the controls should function well.
17. Return to the Diagnostics screen, then choose Stereo Sound Tests. Follow the on-screen instructions to verify that each of the speakers is operational. If no errors are found, the audio should function well.
18. Return to the Diagnostics screen, then choose Force Feedback Tests. Follow the on-screen instructions to verify that steering resistance is present. If no errors are found, the aim should be good.
19. Return to the Main Menu screen, then choose Calibrate Steering and Throttle. Follow the on-screen instructions to set steering and throttle limits. If no errors are found, the controls will have the maximum accuracy.
20. Return to the Main Menu screen, then choose Start the Game. The game will automatically enter its Attract Mode of operation (scenes and sounds from typical races, players' scores, messages, etc.).
21. Insert currency or tokens and play a game. Change the volume and make any other adjustments. Install the rear door. Close and lock all doors. Tighten the leveler nuts and engage the caster locks.