

HYDROTHUNDER™

CHAPTER TWO

OPERATION, FEATURES, AUDITS, & ADJUSTMENTS



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.

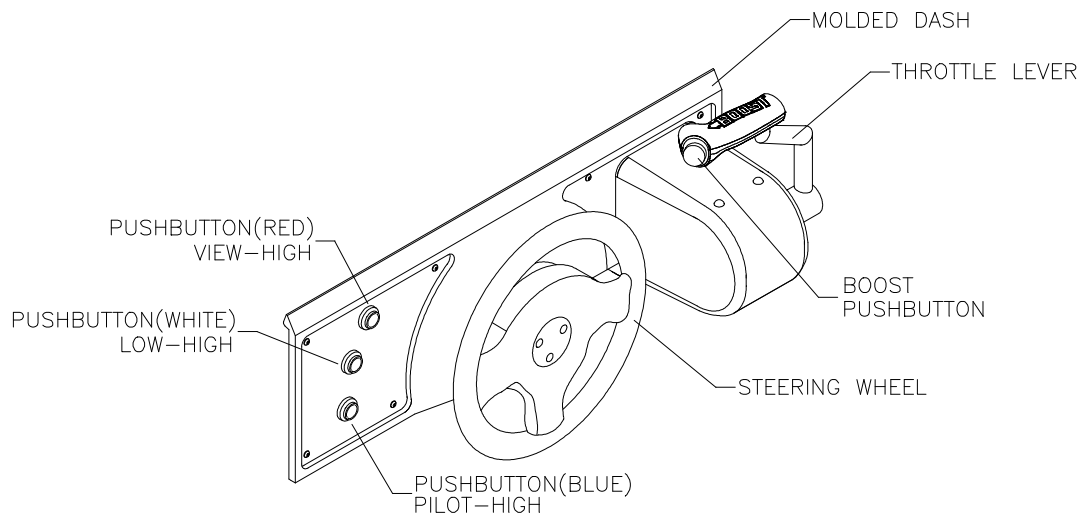
GAME OPERATION

DESIGN PHILOSOPHY

This game uses an “Arcade Computer” to control its functions. The “Arcade Computer” is a hybrid cross between the custom game computer circuits used in most games and the personal computers found in many offices. The “Arcade Computer” uses a familiar case enclosure with a motherboard, plug-in cards, a modular power supply, disk drives, etc., but it has been optimized specifically for playing this game. This design permits improved upgrade and service access without sacrificing game ruggedness or reliability.

PLAYER CONTROLS

- ◆ **BOOST Button**
This button allows a player to begin or continue play, select tracks and boats, etc. If the Boost feature is active, this adds a burst of power (the button is illuminated when Boost is available during a race). An on-screen gauge shows exactly how much Boost fuel has been collected by a player.
- ◆ **THROTTLE Lever**
Controls craft speed. Push up to move forward, down to back up. Stop is a detent position in between. Reverse is spring loaded, but forward speeds may be maintained without attention (cruise).
- ◆ **STEERING WHEEL**
The steering wheel is used to aim the craft. It provides course condition feedback to the pilot.
- ◆ **HIGH View**
This button gives a distant aerial view of the track. The position is from above and behind the boat. This is what a helicopter camera would see.
- ◆ **LOW View**
This button gives a close up aerial view of the track. The position is from above and behind the boat. This is what a boat camera would see.
- ◆ **PILOT View**
This button shows the cockpit view. The position is from the driver’s seat inside the boat. This is the view through the windshield as seen from normal driving perspective.



PLAYER CONTROL LOCATIONS


OPERATOR CONTROLS

CABINET CONTROLS

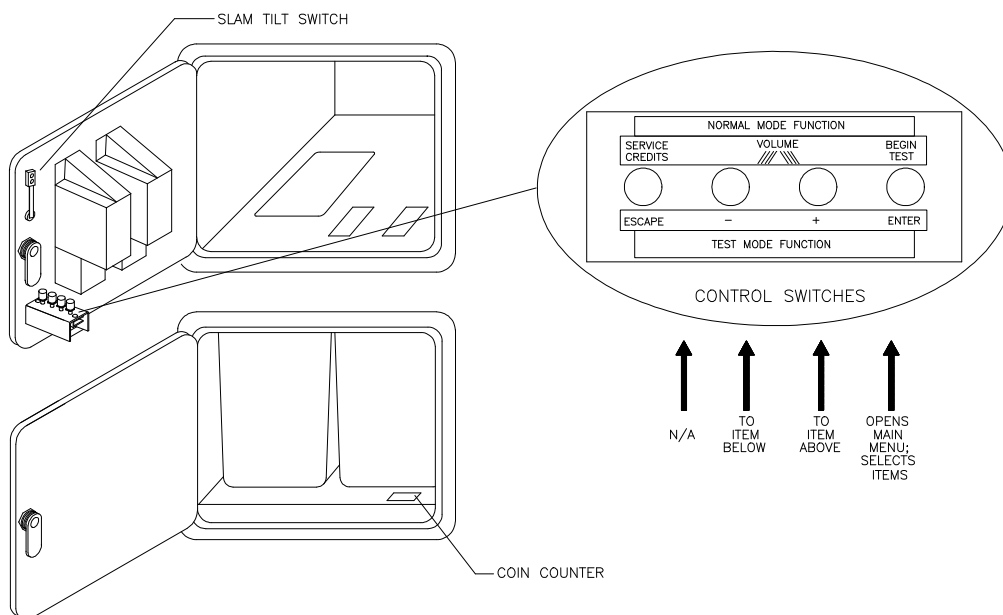
- ◆ **The DIP Switches** set some system variables. You can set other variables in the menu system.
- ◆ **The Monitor Remote Control Board** allows you to adjust the video display for optimum viewing.
- ◆ **The Cabinet POWER Switch** turns off the entire game, but does not reset game variables.
- ◆ **The Computer POWER Switch** turns off the computer. It is internally located. Use it for servicing.

CONTROL SWITCHES

- ◆ **TEST MODE Button** causes the game to enter the menu system. Press the TEST MODE button briefly to run automatic tests. Or, press and hold TEST MODE Button until the Main Menu appears. Within the menu system, the TEST MODE Button's function is described on each screen.
- ◆ **VOLUME DOWN and VOLUME UP Buttons** adjust the game sound levels. To make minor volume changes, press either button briefly. To make major changes, press and hold a button. In the menu system, VOLUME UP and VOLUME DOWN moves the item selector through each of the menus.
- ◆ **SERVICE CREDITS Button** allots credits without changing the game's bookkeeping total. SERVICE CREDITS Button functions in the menu system are also described on each screen.



NOTICE: The Attract Mode volume level is separate from the Game Mode volume level. For greater profits, raise volume levels to add realism and draw attention to this game.



OPERATOR CONTROL SWITCH LOCATIONS

GAME FEATURES

STARTING UP

Each time the game is first turned on or power is restored, it begins executing code out of the boot ROM. These self-diagnostic tests automatically verify and report condition of the CPU and the game hardware. If any of the individual tests fails, the game may display an error message.

Once all Power-up tests are complete, the game goes into the "attract mode". Scenes and sounds from a typical game alternate with previous high scores in an endless pattern until game play starts.

Insert currency to start the game. Players select a boat and a track. Play begins after a countdown period. The game will progress until time is exhausted or play is over. If no more play is required, the game automatically returns to the "attract mode".

GAME RULES *Play instructions are on the information panels over and under the video monitor.*

INDIVIDUAL PLAY

Insert currency to start the game. Select a boat and a track. Additional game information appears on the screen when needed. Individual statistics are shown periodically during the race and its end.

PLAYER CHOICES

Any boat can be used on any track. Each boat handles and performs differently. Players will learn which boats are best for a given track and driving style. Press one of the VIEW buttons to select more boats.

CONTROLLING THE BOAT

The steering wheel and throttle control the boat. The steering wheel directs the boat while the throttle sets its speed. A "BOOST" button on the throttle gives an extra burst of power. This button flashes when the additional "BOOST" is available. In order to use "BOOST," players must collect "BOOST" icons along a track by steering directly under them. A gauge shows exactly how much "BOOST" power is available.

INDICATORS

On-screen indicators give the players information about their boat and those of competitors. Across the top of the screen are numeric indicators for elapsed time, time remaining to pass the next checkpoint, and race position. Gauges show engine R.P.M., vehicle speed, and "BOOST" fuel remaining.

DISPLAYS

A superimposed radar map shows the terrain and the position of all boats, with your craft at the center. Computer-controlled boats are shown as green triangles, other human-piloted boats are shown as red triangles, and police craft are shown as blue triangles. At the bottom of the screen, another display shows the relative position of nearby boats.

GAME ACTION

Action begins when the three-two-one countdown ends and the announcer yells "Go!" Boats must pass checkpoints within time limitations to continue play. Players must avoid fixed obstacles and other boats to decrease their time between checkpoints. Ramps along the route allow players to advance more quickly, collect hovering "BOOST" icons, or avoid obstacles.

Players can change their view of the action by pressing the view buttons on the left side of the control panel. The game includes announcer comments, engine sounds, and other noises.

SCORING

Players who set a speed record for any track may enter their initials in the high score table. After a certain number of tracks are completed (determined by the adjustments), additional tracks become available.

MENU SYSTEM

SYSTEM OVERVIEW

A series of on-screen menus present game variables and diagnostics. The Main Menu screen allows the operator to view information, make changes, or verify equipment operation. Each Sub Menu screen displays one specific group of choices. Detail Menus present data or run the required tests. You must be at the Detail Menu level to detect errors, make changes, or activate tests. The operator control switches are used to move through the menus, select items, and start or stop particular routines.

Each time the game is turned on or switched from normal play mode to the menu system and back, the startup routine is activated. These basic system checks run automatically; their purpose is to detect those faults that would prevent the game or the menu system from operating properly. Messages appear on the screen as each item runs, including any error information. Successful startup takes less than one minute to complete. Write down any messages or information before proceeding to the menus or game play.

SCREEN LAYOUT

Each menu screen is different, but the material presented stays in the same physical location each time.

The color bar at the top center of each screen displays the current menu title.

The center of the screen shows data (menu items, video signals, statistics, reports, etc.)

The bottom of the screen displays messages (explanations, control functions, revision levels, etc.)

ORGANIZATION

The operator must activate and deactivate the menu system manually using control switches.

The Main Menu screen items are divided into categories: tests, statistics, audits, adjustments, etc.

Tests can verify proper operation of the equipment assemblies one at a time.

Other items allow operators to assess game performance and customize or return to factory defaults.

Sub Menu screen items present the operator choices within a category. Some items have no Sub Menu while others may have more than one. It is always possible either to return to the previous menu or go on to the next menu. The instructions are usually listed at the bottom of each individual screen.

Detail Menu screen items display specific information. The operator must command the system to get results or to make changes. There is always a way to go back to the previous menus from this screen.

Switch functions are listed on each screen. Use the control switches to highlight an item on any menu. *Only one highlighted item can be selected at a time.* Press the indicated button to select a highlighted item. To return the game to normal play mode, use the switches to return to the main Operator Menu and select START THE GAME, then press TEST. The menu screens will be replaced by the "Attract" scenes.

OPERATOR MENU



MAIN OPERATOR MENU SCREEN

The **Operator Menu** is the top-level screen of the Menu System. It presents the general categories of operator selectable items. All subsequent screens show more detail than this one. This screen does not permit changes. This is the only menu that allows the operator to exit from the menu system by choosing **Start the Game**.

Unlock and open the door to use the operator control switches. Press the TEST button to enter the **Operator Menu** screen. Use the **Volume Up** and **Volume Down** buttons to move up or down through the list of items. Follow the on-screen instructions to continue to other menu screens.

The top center area of the screen between the game and manufacturer's logos displays information about major variables that affect game operation. **FREE PLAY ON** indicates that the game will start without inserting currency or tokens). **Network play off-line** indicates that this game is not linked to another at this time. These items may be changed from the **Adjustments** menus.

GAME AUDITS



GAME AUDITS MENU SCREEN

The **Game Audits Menu** provides the operator with options for various summaries of the game statistics and audits. Detailed reports give statistics based on player selections and performance.

To view a report, use the operator control switches to select the **Game Audits Menu** and a specific report. Press TEST to activate the report. Follow the on-screen instructions to continue to other menu screens.

Use the information in these reports to keep records of the game's popularity and earnings. The operator may also analyze favorite tracks, most frequently used boats, and other statistics. These screens report information but do not permit changes.

Examine and record all game audit values before doing service or making repairs on this game.

*NOTE: Use caution when clearing audit information. Once data has been cleared, it cannot be restored. Use the "Save Audits to Floppy Disk" option on the **Game Utilities Menu** to save the data for analysis. To clear these statistics or audits, go to the **Game Utilities Menu**.*

GAME STATISTICS



GAME STATISTICS SCREEN

The **Game Statistics** report displays general information about coin counts and game usage. Use the operator control switches to select **Game Statistics** from the **Game Audits** menu. Press TEST to enter the **Game Statistics** display. This screen reports information but does not permit changes.

The **Coin Count** and **Bill Count** items permit the operator to assess currency collection. The other items present information on game operation.

Reset, **link**, and **sync** statistics are measures of the game software's ability to recover from conditions that adversely affect game play.

AUDITS TOTALS



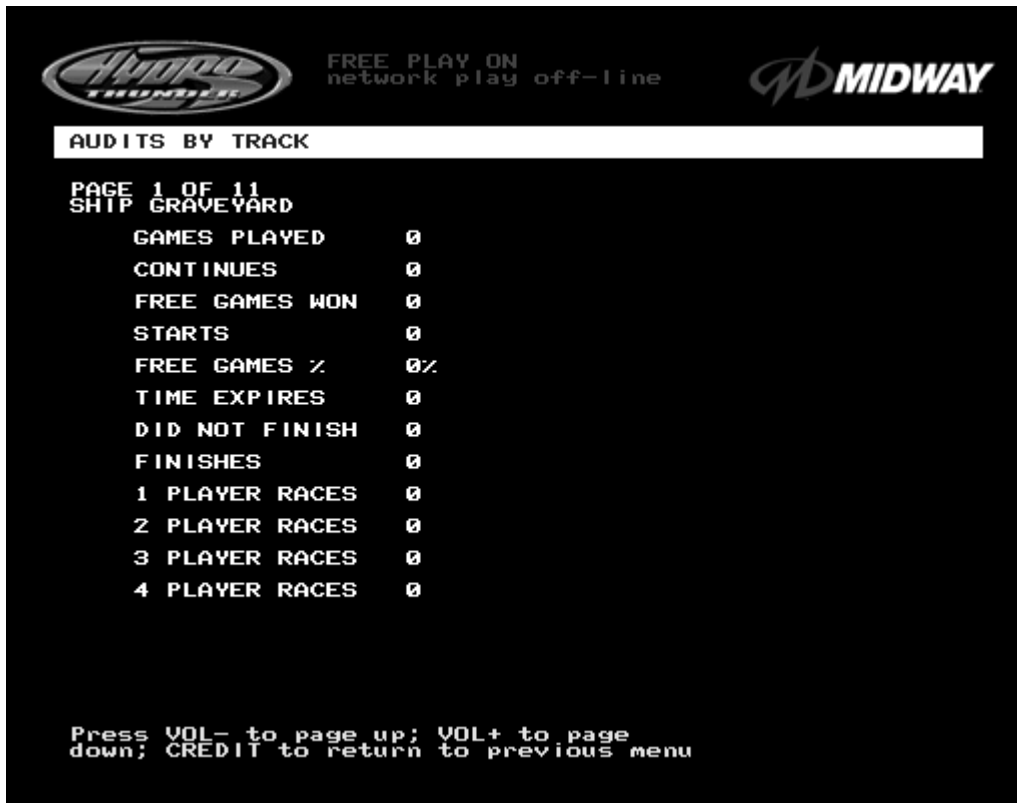
AUDITS TOTALS SCREEN

The **Audits Totals** display additional information about player statistics and ability. This information assists the operator in understanding game usage and profitability. Use the operator control switches to select **Audits Totals** from the **Game Audits** menu. Press TEST to enter the **Audits Totals** display. This screen reports information but does not permit changes.

Free Games Won remains at zero if the bonus and award options are set to **OFF**. Refer to the **General Adjustments Menu** for the bonus and award options settings.

Two-, Three-, and Four Player Races remain at zero if no other games are linked to this one.

AUDITS BY TRACK

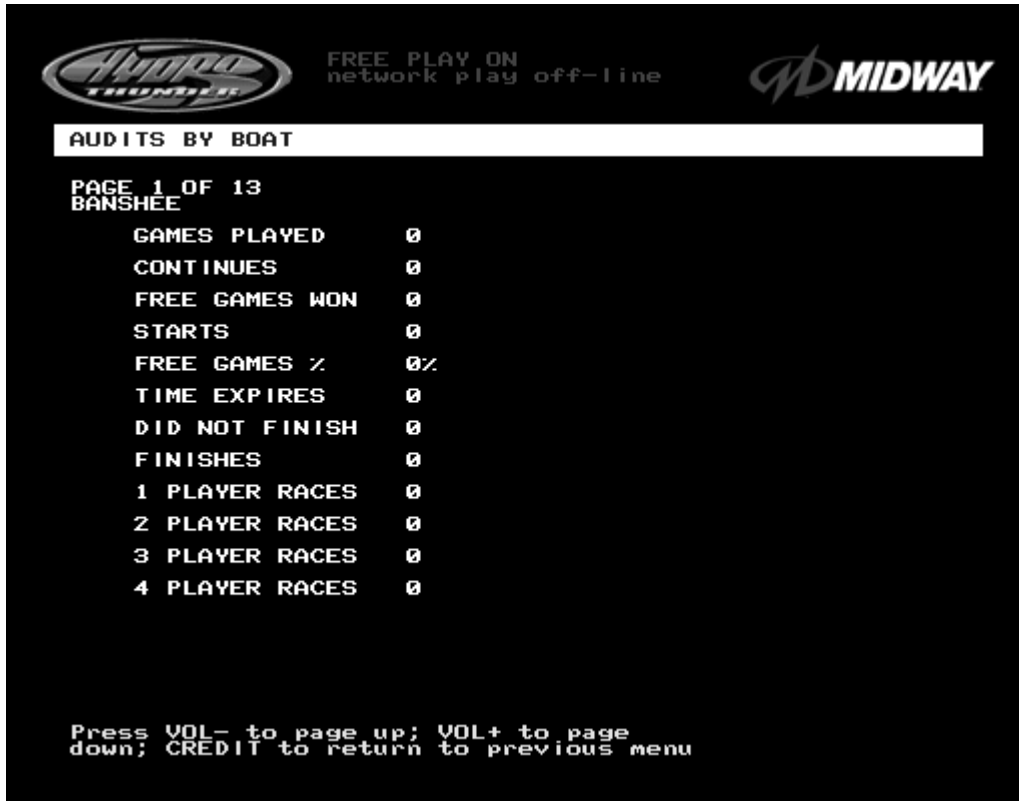


TYPICAL AUDITS BY TRACK SCREEN

The **Audits by Track** report gives operators more specific information about player choices and ability. Use the operator control switches to select **Audits by Track** from the **Game Audits** menu. Press TEST to enter either display. This screen reports information but does not permit changes.

There are several pages of these audits. The name of the track appears at the top of the page. Press the VOLUME UP or VOLUME DOWN buttons to move through these pages.

AUDITS BY BOAT



TYPICAL AUDITS BY BOAT SCREEN

The **Audits by Boat** report gives operators more specific information about player choices and ability. Use the operator control switches to select **Audits by Boat** from the **Game Audits** menu. Press TEST to enter either display. These screens report information but do not permit changes.

There are several pages of these audits. The name of the boat appears at the top of the page. Press the **Volume Up** or **Volume Down** buttons to move through these pages.

DIAGNOSTICS

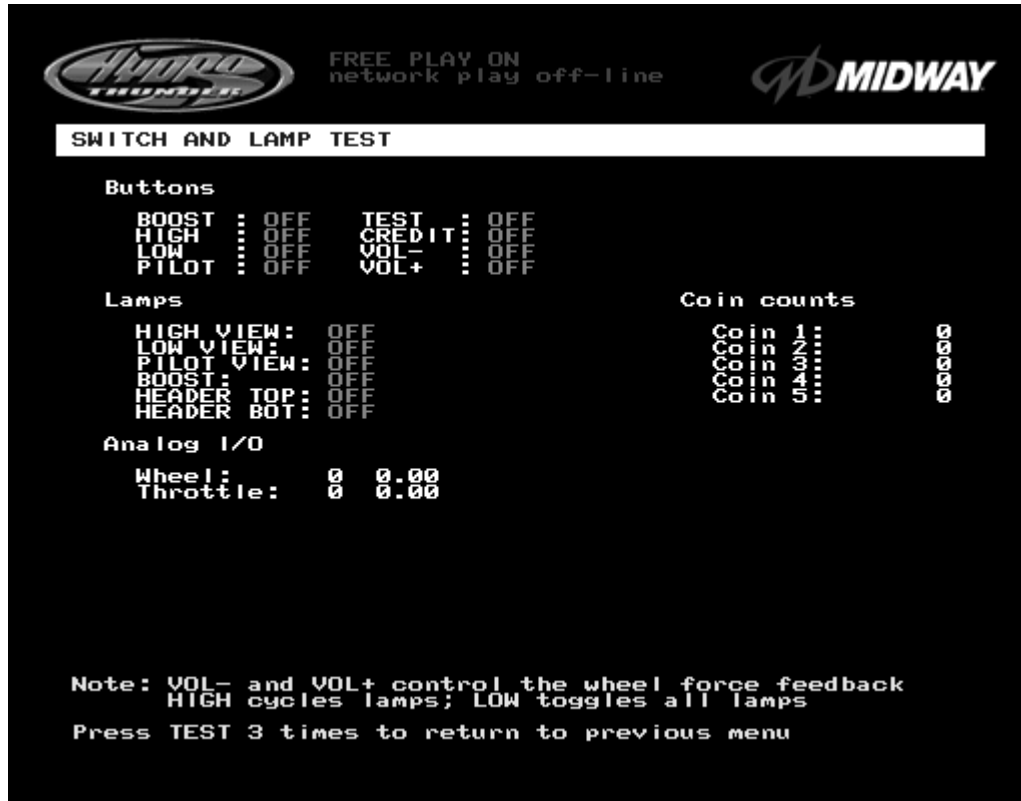


DIAGNOSTICS SUB MENU SCREEN

These tests allow the operator to verify the electrical and electronic condition of the game. This screen does not permit changes.

To select these tests, use operator control switches to select the DIAGNOSTICS MENU and press TEST to activate it. The screen displays the sub menu. Use the same steps to activate any one of the items listed. Follow the on-screen instructions to continue to other menu screens.

SWITCH AND LAMP TEST



SWITCH AND LAMP TEST SCREEN

Use the operator control switches to select the **Switch and Lamp Test** and press the TEST button. This screen reports information but does not permit changes.

Activate each switch and the indicator on the screen changes state. Release the switch and the indicator returns to its previous normally open or closed condition. Switches may be tested in any combination. These Switch Tests are used to verify crossed wires, intermittent conditions, and stuck switches.

The **Buttons** tests include the player control switches and operator control switches. Activating any of these switches causes the indicator on screen to change from OFF to ON and from gray to green. Each button change should be exactly duplicated by a single indication on the menu screen.

The Coin and Cabinet Switches are shown on the screen without regard for their actual game location. Each switch change should be exactly duplicated by a single indication on the menu screen.

The **Lamps** tests indicate the state of each of the lamps within control panel and overhead linking sign, or "header" (if installed). Press the LOW button to activate all of the lamps simultaneously, or the HIGH button to cycle the lamps in order. The HEADER TOP and HEADER BOT lamp tests have no effect unless a header or leader light is installed on the cabinet.

The **Analog I/O** test displays a value relative to the travel limits of the steering wheel or throttle indicating the current position of each control. **Wheel** position varies between 0 (full left) and 255 (full right). **Throttle** position varies between 0 (full back) and 255 (full forward).

The **Coin Counts** display the total number of coins deposited through each mechanism. Insert currency or tokens to perform these tests.

HARD DRIVE TEST



HARD DRIVE TEST SCREEN

The **Hard Drive Test** verifies the functioning of the Hard Disk Drive Assembly.

Highlight the test by using the operator control switches to select the option; then press TEST to begin. This screen reports information but does not permit changes.

The Hard Drive Test verifies the existence of the data necessary for the game to operate. Each test should return a “passed” result. Other results may indicate a problem with the hard disk drive.

There is a single hard disk drive unit in this game. It is partitioned into two virtual drives, C: and D:.. The test should report “passed” for both drives for the game to work properly.

Press TEST to exit the Hard Drive Test.

STEREO SOUND TEST



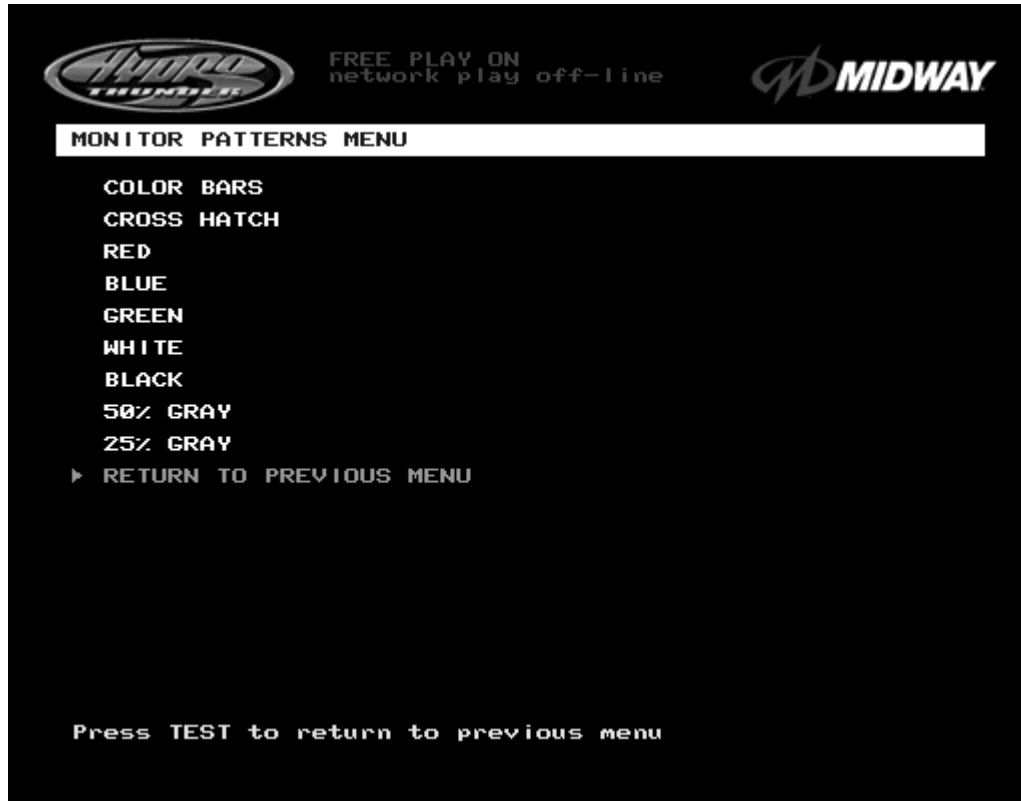
STEREO SOUND TEST SCREEN

The **Stereo Sound Test** verifies the operation of the stereo sound hardware and cabinet speakers. *Increase the master volume level before beginning this test.* Use the operator control switches to select this test and press TEST to activate it. This screen reports information but does not permit changes.

Press the TEST button when prompted by on-screen instructions to check each speaker and the game sound hardware. Listen to the audio signals from the speakers listed on the screen. There should be little or no sound coming from other speakers during each test. Use these tests to find crossed connections, incorrect phase, rattles, vibration, distortion, etc.

Press the TEST button to exit the Stereo Sound Test.

MONITOR PATTERNS TEST



MONITOR PATTERNS SUB MENU SCREEN

NOTE: This game uses a medium resolution monitor. The increased resolution means that more video information is displayed on the screen than with standard resolution monitors. Use of an industrial-grade degaussing coil is recommended before any corrections to monitor adjustments are attempted.

The Monitor Patterns routine provides test screens to verify monitor performance or make adjustments. To begin the tests, use the operator control switches to choose **Monitor Patterns Menu** from the **Diagnostics Menu** screen and press TEST to activate the sub-menu. Select a test from the sub-menu and press TEST to activate it. Press TEST once again to return to the **Monitor Patterns** sub menu.

Color Bars fills the screen with shades of colors to verify red, green, blue and white level dynamic adjustments. Each color bar should appear sharp, clear, and distinct from bars on either side.

There are 31 levels of intensity displayed in each of the color bars. Incorrect adjustment can cause detail to be missing at the top or bottom of a color bar. Set the monitor controls so that the maximum number of levels is visible in every bar.

The Color Bars screen helps to adjust the monitor brightness and contrast.

Cross Hatch fills the screen with a grid and a series of dots. The grid and the dots should be completely white, with no fringes or parallel images. The lines should be straight and the dots round.

Consult the service literature from the manufacturer of the monitor for more detail on these adjustments.

The Crosshatch Patterns assist in verifying the monitor convergence, linearity, and dynamic focus.

MONITOR PATTERNS TEST (continued from previous page)

Red, Blue, and Green Color Screen tests fill the screen with 100% of the chosen color at normal intensity. Each screen should be absolutely uniform from top to bottom and side to side. No retrace lines or noise should be visible.

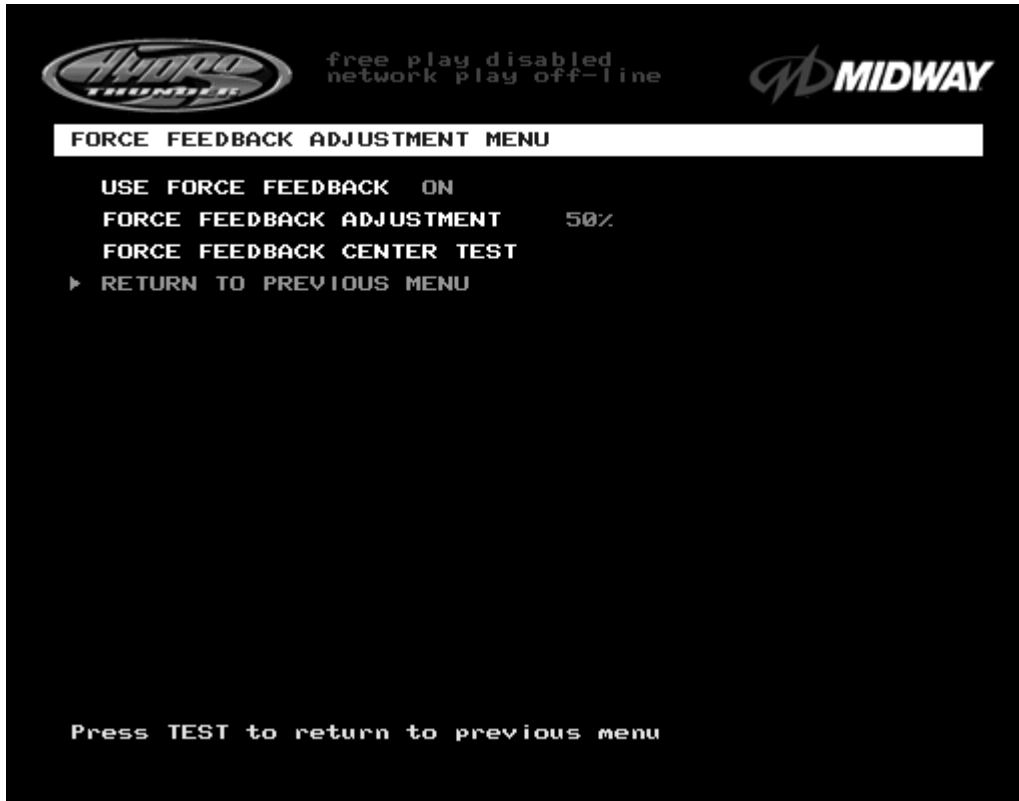
The Color Screen tests can verify monitor intensity, black level, blanking and color purity.

Color Screens may not hold their uniformity if the monitor degaussing circuit is defective.

White, Black, 50% Gray, and 25% Gray Screens fill the screen with black, gray or white at various intensities. The screens should be uniform with no color tints or distortion. No retrace lines or noise should be visible.

If any of the tests shows a need for adjustment, use the proper controls on the Video Monitor.

FORCE FEEDBACK ADJUSTMENTS



FORCE FEEDBACK ADJUSTMENT MENU SCREEN

The **Force Feedback Adjustment Menu** allows operators to set the use and intensity of feedback from the steering wheel motor. Select the test or adjustment with the operator control switches and press TEST to activate it. This screen permits changes to the existing values.

The **Force Feedback Adjustment** ranges from 0% (minimum) to 100% (maximum) with 50% as the factory default setting. Use a higher amount of force for players with greater upper body strength. Younger players may be more comfortable with lower force settings.

The **Force Feedback Center Test** checks the functioning of the steering wheel motor drive circuits. Select this item and move the steering wheel to any position. The wheel must automatically return to its center position as soon as it is released. If it does not do this, the boat will not respond properly.

WATCHDOG RESET



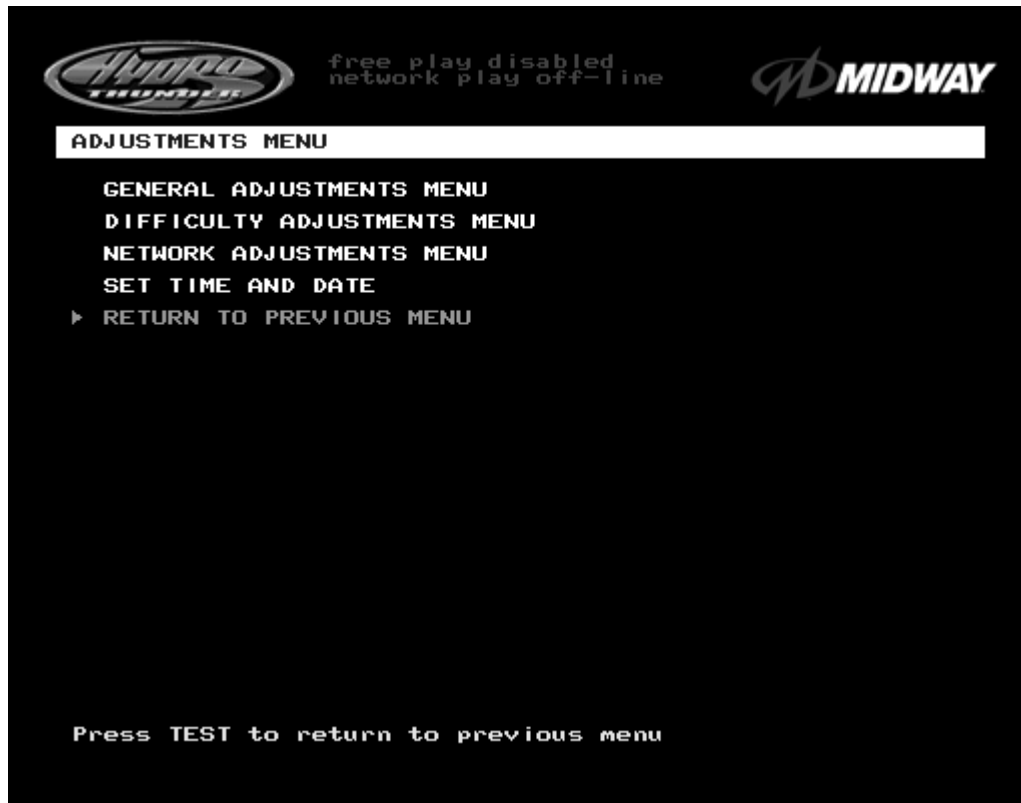
WATCHDOG RESET TEST CONFIRMATION BOX

The **Watchdog Reset Test** checks the function of the game's watchdog circuit by causing a forced reset. Use the operator control switches to select the **Watchdog Reset Test**, then press TEST to activate it. This test is similar to the restart command available on many personal computers.

Note: Use caution when performing a Watchdog Reset Test. Although game information should not be affected, audit data could be changed. Once data has been changed, it cannot be restored. Use the "Save Audits to Floppy Disk" option on the **Game Utilities Menu** to save the data for analysis.

When the operator chooses the **Watchdog Reset Test**, a confirmation box appears superimposed on the screen (as shown above). Select YES to reset the game or NO to return to the **Diagnostics Menu**. Upon reset, the screen blanks and the game starts up again. Note and record any messages that occur during this startup sequence.

ADJUSTMENTS MENU



ADJUSTMENTS MENU SCREEN

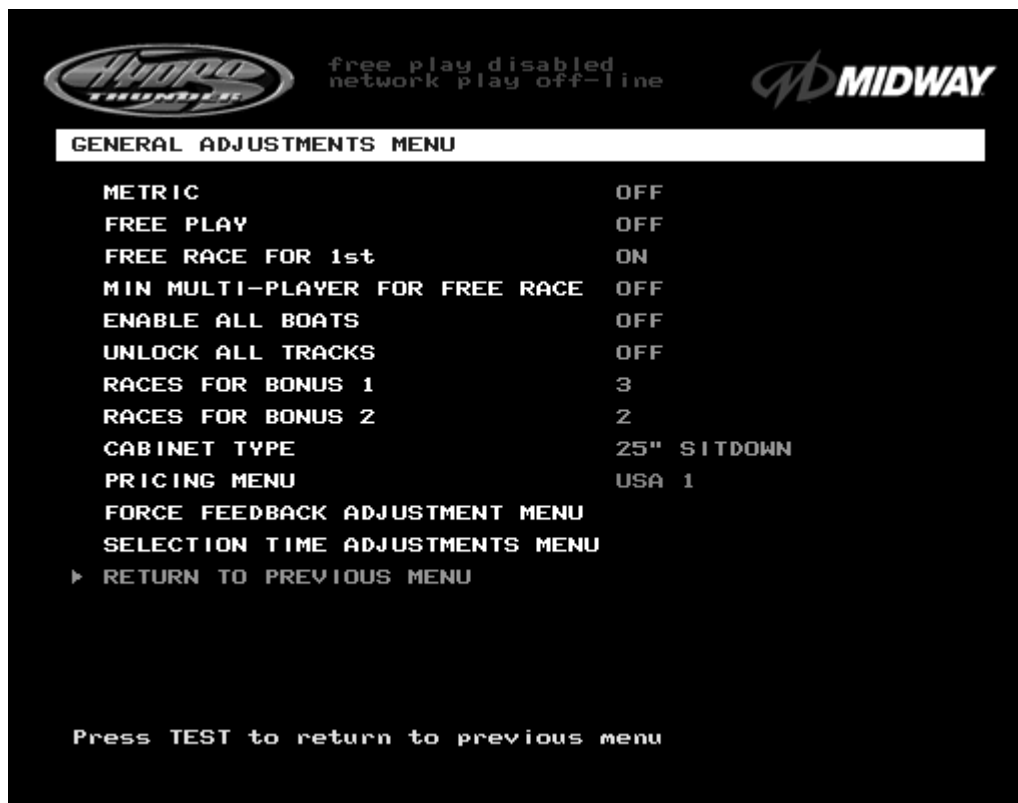
The **Adjustments Menu** allows operators to set game and player variables. Use these screens to optimize game performance and earnings.

The **General Adjustments** include pricing, game variables and cabinet type variables. Select these items to set player incentives, the cost of playing, and the size of game equipment.

The **Difficulty Adjustments** set the level of game difficulty. These adjustments can optimize the game's characteristics to best suit the needs of players.

The **Network Adjustments** control variables related to linking. These items are required to establish the identity of all cabinets in a network. These adjustments are transparent to the players.

GENERAL ADJUSTMENTS MENU



GENERAL ADJUSTMENTS MENU SCREEN

The **General Adjustments Menu** contains options to control the cost and type of play. It also sets the cabinet type game display and measurement system. Select a variable with the operator control switches. Use the VOLUME UP and VOLUME DOWN buttons to change a variable. Certain items have sub-menus. This screen permits changes to the existing values.

Metric sets the measurement system for display on game screens. Set this option to ON to display speed in kilometers per hour. Set this option to OFF to display speed in miles per hour. Factory default is OFF.

Free Play determines whether the game accepts currency or tokens for play, or allows operation without cost. Set this option to ON for free play. Set this option to OFF for paid play. Factory default is OFF.

Free Race for 1st permits a free game incentive for players who finish a race in first place. Set this option to ON to award a free race to a first-place finisher. Set this option to OFF to eliminate the free race award. Factory default is ON.

Min Multi-Player For Free Race sets the minimum number of players needed to activate the free race award for a first-place finish. The choices are OFF, two, three, or four players. Factory default is OFF. Use this feature to encourage players to participate in linked races.

Enable All Boats determines whether all boats are available for player selection at the start of a race. Set this option to OFF to hide certain boats from first time players. Set this option to ON to enable players to choose from all possible boats at all times. Players can override this option to choose from all boats by pressing any of the view buttons during the boat selection screen. Factory default is OFF.

GENERAL ADJUSTMENTS MENU (continued)

Unlock All Tracks enables or disables certain tracks until players finish a certain number of races. The hidden tracks are revealed as “bonus” tracks. Set this option to OFF to hide the “bonus” tracks. Set this option to ON to enable players to choose from all tracks at all times. Factory default is OFF.

Races for Bonus 1 is available only when **Unlock All Tracks** is turned OFF. This adjustment sets the number of races a player must complete to unlock the first of the hidden tracks. The range of adjustment is from 1 to 8 races. Factory default is 3.

Races for Bonus 2 is also available only when **Unlock All Tracks** is turned OFF. This adjustment sets the number of races a player must complete to unlock the second of the hidden tracks. The range of adjustment is from 1 to 8 races. Factory default is 2.

Pricing Menu allows the operator to choose from several pre-determined currency combinations. Select this item and press TEST to change the cost of starting and continuing a game. This option is disabled if **Free Play** is ON. Factory default is USA1.

Force Feedback Adjustment Menu allows changes to the amount of feedback from the steering wheel. Refer to **Force Feedback Adjustment** description on a previous page.

Selection Time Adjustments Menu permits operators to set the amount of time for a player to make selections at the beginning or end of play. Longer than necessary times cut into the number of games that can be played in one day. Slower or first time players may not be able to read information and act with very short times. When this adjustment is chosen, another menu screen presents the following items:

Track Select Time and **Boat Select Time** set the limits for player decisions at the beginning of a race. The range of adjustment for each item is from 10 to 60 seconds. Factory defaults are 15 seconds.

High Score Time and **Continue Time** set the limits for player decisions at the conclusion of each race. The range of adjustment for each item is from 10 to 60 seconds. Factory default for **High Score Time** is 20 seconds. Factory default for **Continue Time** is 17 seconds.

PRICING MENU



PRICING MENU SCREEN

The **Pricing Menu** contains options for selecting standard and custom currency combinations. Use the operator control switches to select **Pricing Menu** from the **General Adjustments Menu** and press TEST.

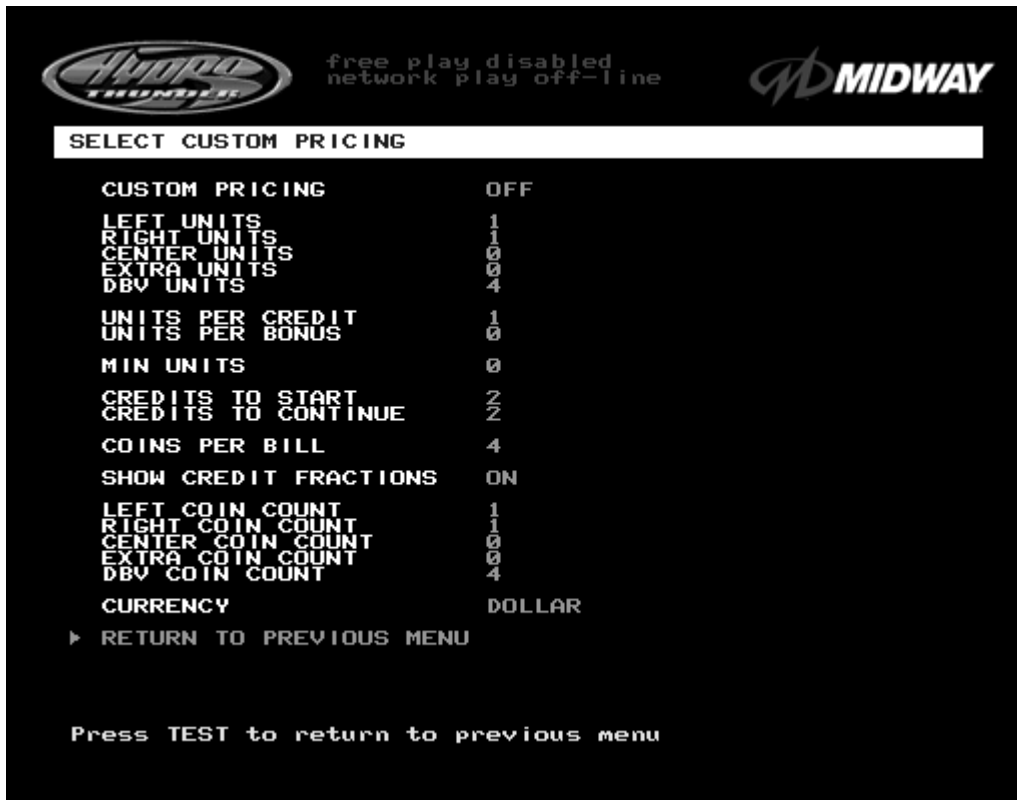
Select Custom Pricing allows the operator to set coinage and credits options manually. Use this item to set up combinations not found in the standard listing. This screen permits changes to the existing values.

Select Standard Pricing allows the operator to select from several standard price schemes. The most commonly used currency requirements to start and to continue games are ready for operator selection. This screen permits changes to the existing values.

View Current Pricing displays the present currency and credit settings. Choose this item to review the active game price scheme. This screen reports information but does not permit changes. Use either of the Select Pricing options to make changes, then return to this screen to verify the settings.

Reset to Defaults returns the price settings to factory defaults. Choose this item to return all variables to their original values. This screen permits changes all of the existing values at one time.

PRICING SUBMENUS




TYPICAL CUSTOM PRICING MENU




STANDARD PRICING MAIN MENU

PRICING SUBMENUS (continued)



FREE PLAY ON
network play off-line




CHOOSE TABLE FOR NORTH AMERICA, USA

| | | |
|---------|-----------------------|--------|
| ▶ USA 1 | LEFT UNITS | 1 |
| USA 2 | RIGHT UNITS | 0 |
| USA 3 | CENTER UNITS | 0 |
| | EXTRA UNITS | 4 |
| | DBV UNITS | |
| USA 4 | UNITS PER CREDIT | 1 |
| USA 5 | UNITS PER BONUS | 0 |
| USA 6 | MIN UNITS | 0 |
| USA 7 | CREDITS TO START | 2 |
| | CREDITS TO CONTINUE | 2 |
| USA 8 | MAX CREDITS | 32 |
| USA 9 | COINS PER BILL | 4 |
| USA 10 | SHOW CREDIT FRACTIONS | ON |
| USA 11 | LEFT COIN COUNT | 1 |
| USA 12 | RIGHT COIN COUNT | 0 |
| | CENTER COIN COUNT | 0 |
| | EXTRA COIN COUNT | 4 |
| | DBV COIN COUNT | |
| USA ECA | CURRENCY | DOLLAR |


RETURN TO PREVIOUS MENU

Press TEST to execute this command

TYPICAL STANDARD PRICING SUB-MENU



FREE PLAY ON
network play off-line



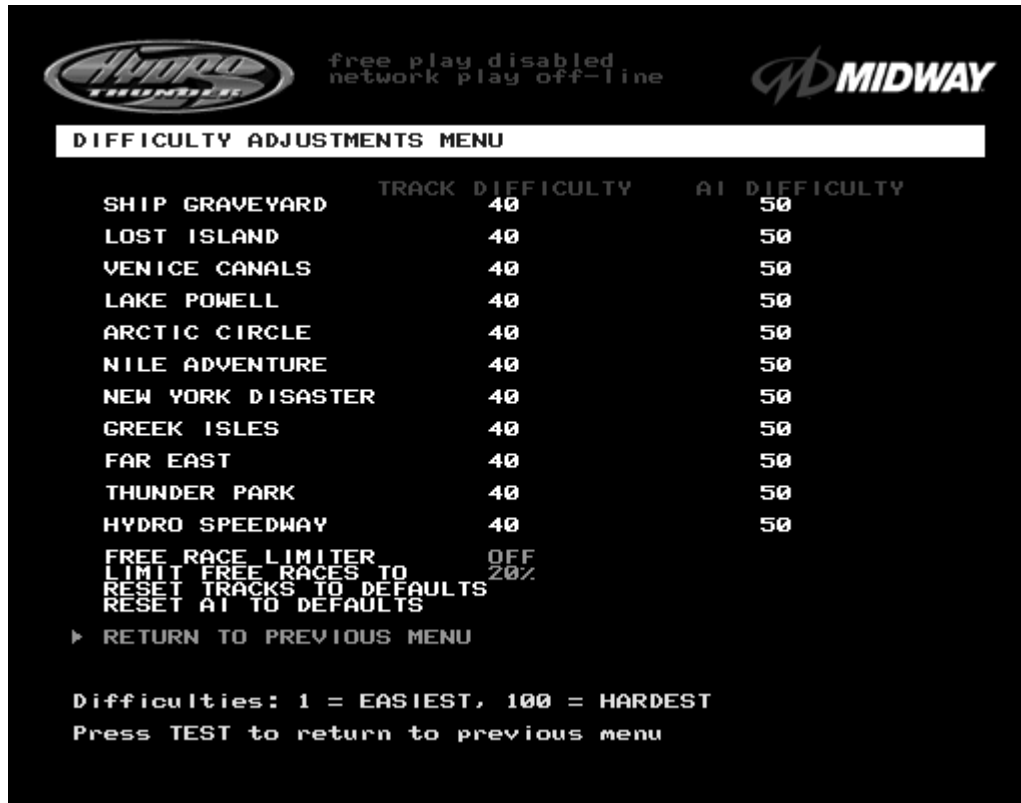
VIEW CURRENT PRICING

| | |
|-----------------------|--------|
| CURRENT PRICING: | USA 1 |
| LEFT UNITS | 1 |
| RIGHT UNITS | 0 |
| CENTER UNITS | 0 |
| EXTRA UNITS | 4 |
| DBV UNITS | |
| UNITS PER CREDIT | 1 |
| UNITS PER BONUS | 0 |
| MIN UNITS | 0 |
| CREDITS TO START | 2 |
| CREDITS TO CONTINUE | 2 |
| MAX CREDITS | 32 |
| COINS PER BILL | 4 |
| SHOW CREDIT FRACTIONS | ON |
| LEFT COIN COUNT | 1 |
| RIGHT COIN COUNT | 0 |
| CENTER COIN COUNT | 0 |
| EXTRA COIN COUNT | 4 |
| DBV COIN COUNT | |
| CURRENCY | DOLLAR |

Press TEST to return to previous menu

TYPICAL VIEW CURRENT PRICING DISPLAY

DIFFICULTY ADJUSTMENTS



DIFFICULTY ADJUSTMENTS MENU SCREEN

The **Difficulty Adjustments** set how much skill players must have to complete a race. Use the operator control switches to select **Difficulty Adjustments** and press the TEST button to activate the sub menu. Select each variable using the operator control switches and press TEST to enter change mode. Use the operator control switches to change the variable, then press TEST to save changes and exit the variable.

Track Difficulty sets the initial time available for play. Higher values require players to maintain faster average speeds between checkpoints. The range of adjustment is from 1 to 100. Factory default is 40.

AI Difficulty sets the competitiveness of drone boats. The number of boats does not change, but their skill at negotiating the track does. The range of adjustment is from 1 to 100. Factory default is 50.

The **Free Race Limiter** enables the **AI** (Artificial Intelligence) to keep pace with players' skill levels. Set this to ON to limit the number of free races based on player ability. Set it to OFF to keep **AI** values at a fixed level regardless of the number of free races won. The range is OFF or ON. Factory default is OFF.

Limit Free Races To is the award cut-off point. It prevents expert players from monopolizing a cabinet. It may be fixed or variable (see **Free Race Limiter** above). The range is 1 to 100%. Factory default is 20%.

Reset Tracks to Defaults returns the Track Difficulty settings to factory defaults. Choose this item to return this variable to its original value. This screen permits changes all of the existing values at one time.

Reset AI to Defaults returns the Track Difficulty settings to factory defaults. Choose this item to return this variable to its original value. This screen permits changes all of the existing values at one time.

NETWORK ADJUSTMENTS



NETWORK ADJUSTMENTS MENU SCREEN

The **Network Adjustments Menu** allows an operator to set the game cabinet network identity. Use the operator control switches to select the **Network Adjustments Menu** and press TEST to enter the sub-menu. Use the operator control switches to select one of the items and press TEST to permit change. Select a new value, then press TEST once again to save changes and return to the above screen.

The best way to set these variables is to set all cabinets to this adjustment menu at the same time.

Set **Network Enabled** to ON if the cabinet is linked to other games. This allows the game electronics to communicate with other cabinets. Choose OFF to disable linked game play. Factory Default is OFF.

Unit ID determines the address of the game. Each linked game must have a unique number to prevent network confusion. Sequence is not important, only that no two are the same. Factory Default is 1.

SET THE TIME AND DATE

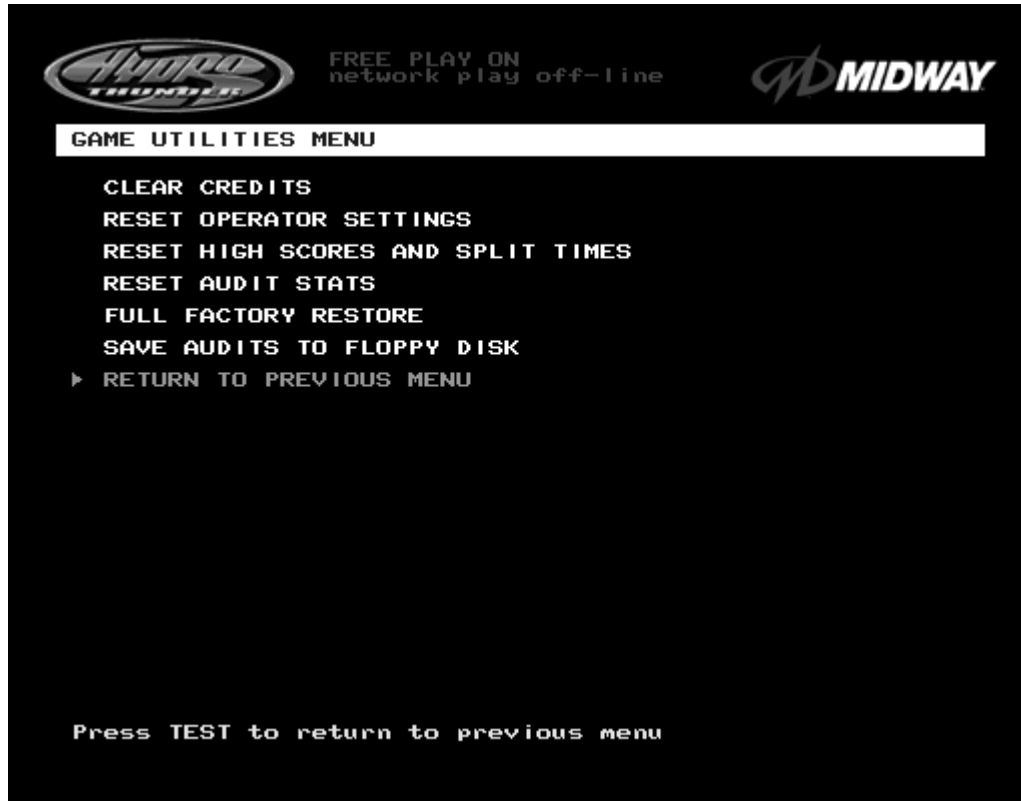


TIME AND DATE MENU SCREEN

The **Set Time and Date** menu provides the current date and time for the game. This screen also allows operators to adjust the clock for changes in time zones and seasonal changes in time. Use the operator control switches to select **Set Time and Date**, then press TEST to activate the sub-menu. Use the operator control switches to select a variable and press TEST to make changes. Select a new value, then press TEST once again to save changes and return to the above screen.

Once set, the clock runs until the battery dies or the electrical circuits are disrupted by service or a major fault. The clock assists in providing accurate game statistics. It does not affect the game operation.

GAME UTILITIES MENU



GAME UTILITIES MENU SCREEN

The **Game Utilities Menu** permits operator changes to credits, player statistics, and game audits. It also allows the operator to restore game settings to factory defaults or save audit information for later use. A confirmation screen appears before changes become final. Use the operator control switches to select the **Game Utilities Menu** and press TEST to activate the sub-menu. Follow the on-screen instructions to select any item and activate it.

Clear Credits resets the existing number of game credits to zero.

Reset Operator Settings returns the **Adjustments Menus** variables to the original factory defaults.

Reset High Scores and Split Times resets the player high score table to factory default ghost data.

Reset Audit Stats resets the track and boat audit values to zero.

Full Factory Restore resets all of the game variables above to factory default values at one time.

Save Audits to Floppy Disk allows the operator to save game data to a formatted 1.44MB high-density diskette before clearing values. The floppy disk drive is in the CPU cabinet. Comparison of audit data over time can provide the operator with useful information about the effect of game variables on profits.

*Note: Once data has been cleared, it cannot be restored. Use the "Save Audits to Floppy Disk" option on this menu to save the data for analysis. Use caution when clearing audit information. To clear these registers, use the **Reset** or **Full Factory Restore** functions of this menu.*

CALIBRATE STEERING AND THROTTLE



STEERING AND THROTTLE CALIBRATION INSTRUCTION SCREEN



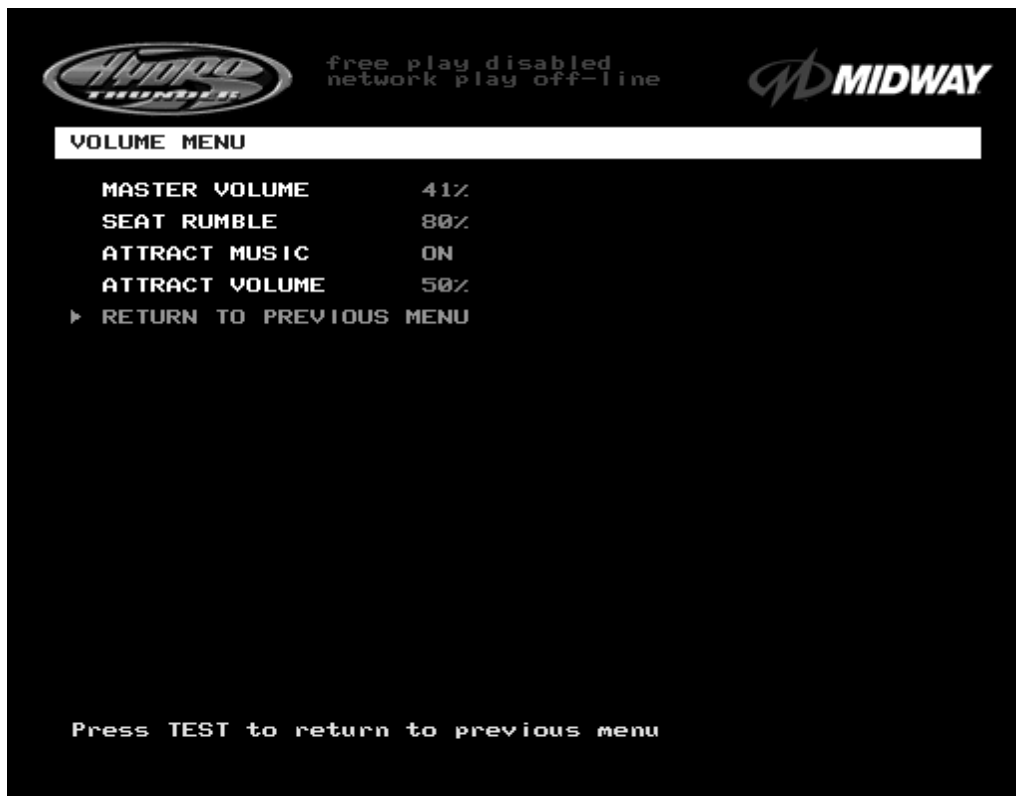
STEERING AND THROTTLE CALIBRATION ACTION SCREEN

CALIBRATE STEERING AND THROTTLE (cont'd)

Calibrate Steering and Throttle allows the operator to set the steering and throttle mechanisms for optimum control during game play. Poorly calibrated player controls can reduce profits. Calibrate the player control switches after making repairs to the game or moving it to a new location. Use the player control switches to select **Calibrate Steering and Throttle** and press the TEST button to activate the test.

Each of the controls has a minimum analog value of 0 and a maximum of 1.0 for its full range of motion. These numbers correspond to digital values from 0 to 255. Both sets of numbers must track correctly to achieve accurate steering of boats. When properly adjusted, the digital value will be equal to the analog value multiplied by 255. For example, a steering value of 0.5 (straight ahead) translates to a digital value of 128, exactly half way in between left and right steering wheel limits.

VOLUME MENU



VOLUME ADJUSTMENT MENU SCREEN

The **Volume Menu** allows the operator to adjust the relative loudness levels. Use the operator control switches to select **Volume Menu**, then press TEST to activate the sub-menu. Select an option with the operator control switches and press TEST to activate it. Follow the on-screen instructions to save the changes and continue to other menu screens.

Note: Use these adjustments to raise the audio levels during the sound tests. They may be returned to their optimum loudness after testing is completed.

Master Volume sets the relative volume level during game play. This value affects all of the other settings at the same time. The range is 1 to 100%. Factory default is 41%.

Note: The following individual volume adjustments are all affected by the Master Volume setting. However, this does allow the Attract sounds to be made higher or lower than the normal level of game sounds coming from the two upper cabinet speakers.

Attract Music selects sound or silence during the attract mode. This adjustment does not change any of the volume settings. Factory default is ON.

Attract Volume adjusts the sounds of the Attract mode only when **Attract Music** is set to ON. These sounds are independent of the game audio levels. The range is 1 to 100%. Factory default is 50%.

PRICING TABLE

| NAME | START | CONTINUE | CREDITS/COIN | COIN 1 | COIN 2 | COIN 3 | COIN4 | BILL |
|---------------|-------|----------|-----------------------------|---------|---------|--------|-------|--------|
| USA1 | 2 | 2 | 1/25¢ | .25¢ | .25¢ | | | \$1.00 |
| USA2 | 2 | 1 | 1/25¢ | .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 |
| USA 11 | 4 | 2 | 1/\$1.00, 2/\$1.50 | .25¢ | .25¢ | | | \$1.00 |
| USA 12 | 4 | 3 | 1/\$1.00, 2/\$1.75 | .25¢ | .25¢ | | | \$1.00 |
| USA 13 | 4 | 4 | 1/\$1.00 | .25¢ | .25¢ | | | \$1.00 |
| USA ECA | 3 | 3 | 1/25¢, 4/\$1.00 | \$1.00 | .25¢ | .10¢ | .05¢ | \$1.00 |
| GERMANY1 | 2 | 2 | 1/1DM, 6/5DM | 1DM | 5DM | | | |
| GERMANY2 | 2 | 1 | 1/1DM, 7/5DM | 1DM | 5DM | | | |
| GERMANY3 | 2 | 1 | 1/1DM, 8/5DM | 1DM | 5DM | | | |
| GERMANY4 | 2 | 1 | 1/1DM, 5/5DM | 1DM | 5DM | | | |
| GERMANY5 | 2 | 1 | 1/1DM, 6/5DM | 1DM | 5DM | | | |
| GERMANY ECA | 2 | 2 | 1/1DM, 2/2DM, 6/5DM | 5DM | 2DM | 1DM | | |
| FRANCE1 | 2 | 2 | 2/5Fr, 5/10Fr | 5Fr | 10Fr | | | |
| FRANCE2 | 2 | 1 | 2/5Fr, 4/10Fr | 5Fr | 10Fr | | | |
| FRANCE3 | 2 | 1 | 1/5Fr, 3/10Fr | 5Fr | 10Fr | | | |
| FRANCE4 | 2 | 1 | 1/5Fr, 2/10Fr | 5Fr | 10Fr | | | |
| FRANCE5 | 2 | 1 | 2/5Fr, 5/10Fr, 11/2 X 10Fr | 5Fr | 10Fr | | | |
| FRANCE6 | 2 | 1 | 2/5Fr, 4/10Fr, 9/2 X 10Fr | 5Fr | 10Fr | | | |
| FRANCE7 | 2 | 1 | 1/5Fr, 3/10Fr, 7/2 X 10Fr | 5Fr | 10Fr | | | |
| FRANCE8 | 2 | 1 | 1/5Fr, 2/10Fr, 5/2 X 10Fr | 5Fr | 10Fr | | | |
| FRANCE9 | 2 | 1 | 1/3 X 1Fr, 2/5Fr | 1Fr | 5Fr | | | |
| FRANCE10 | 2 | 1 | 1/2 X 1Fr, 3/5Fr | 1Fr | 5Fr | | | |
| FRANCE11 | 2 | 1 | 1/3 X 1Fr, 2/5Fr, 5/2 X 5Fr | 1Fr | 5Fr | | | |
| FRANCE12 | 2 | 1 | 1/2 X 1Fr, 3/5Fr, 7/2 X 5Fr | 1Fr | 5Fr | | | |
| FRANCE ECA | 1 | 1 | 1/10 Fr, 4/30 Fr | 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 | |
| CANADA | 2 | 2 | 1/\$1.00, 2/\$2.00 | \$1.00 | \$2.00 | | | \$1.00 |
| 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 | | | |
| ITALY | 2 | 2 | 1/500Lit | 500Lit | 500Lit | | | |
| UK ECA1 | 1 | 1 | 1/50p, 3/£1.00 | £1.00 | 50p | 20p | 10p | |
| UK ECA2 | 1 | 1 | 1/50p, 2/£1.00 | £1.00 | 50p | 20p | 10p | |
| UK ECA3 | 1 | 1 | 1/30p, 2/50p, 5/£1.00 | £1.00 | 50p | 20p | 10p | |
| UK4 | 1 | 1 | 1/50p, 3/£1.00 | £1.00 | 50p | | | |
| UK5 | 1 | 1 | 1/50p, 2/£1.00 | £1.00 | 50p | | 10p | |
| UK6 ECA | 1 | 1 | 2/50p | £1.00 | 50p | 20p | 10p | |
| UK7 ECA | 1 | 1 | 3/£1.00 | £1.00 | 50p | 20p | 10p | |
| SPAIN1 | 2 | 2 | 1/100Pta, 6/500Pta | 100Pta | 500Pta | | | |
| SPAIN2 | 2 | 2 | 1/100Pta, 5/500Pta | 100Pta | 500Pta | | | |
| AUSTRALIA1 | 2 | 2 | 1/3X20¢, 2/\$1.00 | .20¢ | \$1.00 | | | |
| AUSTRALIA2 | 2 | 2 | 1/5X20¢, 1/\$1.00 | .20¢ | \$1.00 | | | |
| JAPAN1 | 2 | 2 | 1/100Yen | 100 Yen | 100 Yen | | | |
| JAPAN2 | 2 | 2 | 2/100Yen | 100 Yen | 100 Yen | | | |
| AUSTRIA1 | 2 | 2 | 1/5Sch, 2/10Sch | 5 Sch | 10 Sch | | | |
| AUSTRIA2 | 2 | 2 | 1/2X5Sch, 3/2X10Sch | 5 Sch | 10 Sch | | | |
| BELGIUM1 | 2 | 2 | 1/20BF | 20BF | 20BF | | | |
| BELGIUM2 | 2 | 2 | 3/20BF | 20BF | 20BF | | | |
| BELGIUM3 | 2 | 2 | 2/20BF | 20BF | 20BF | | | |
| BELGIUM ECA | 2 | 2 | 1/20BF | 50BF | 20BF | 5BF | | |
| SWEDEN | 2 | 2 | 1/3X1SKr, 2/5SKr | 1SKr | 5SKr | | | |
| NEW ZEALAND1 | 1 | 1 | 1/3X20¢ | 20¢ | 20¢ | | | |
| NEW ZEALAND2 | 1 | 1 | 1/2X20¢ | 20¢ | 20¢ | | | |
| NETHERLANDS | 2 | 2 | 1/1HFI, 3/2.5HFI | 1HFI | 2.5HFI | | | |
| FINLAND | 2 | 2 | 1/1Fmk | 1Fmk | 1Fmk | | | |

| NAME | START | CONTINUE | CREDITS/COIN | COIN 1 | COIN 2 | COIN 3 | COIN4 | BILL |
|-----------|-------|----------|----------------------------|--------|--------|--------|-------|------|
| NORWAY | 2 | 2 | 1/2X1NKr, 3/5X1NKr | 1NKr | 1NKr | | | |
| DENMARK | 2 | 2 | 1/2X1DKr, 3/5DKr, 7/2X5DKr | 1DKr | 5DKr | | | |
| ANTILLIES | 2 | 2 | 1/25¢, 4/1G | .25¢ | 1G | | | |
| HUNGARY | 2 | 2 | 1/2X10Ft, 3/2X20Ft | 10Ft | 20Ft | | | |