ULTRACADE™

OPERATION MANUAL

VERSION 3.71

• Read this booklet before use.
• Keep this booklet with machine at all times.
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# ULTRACADE™

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ULTRACADE™

1. LEGAL INFORMATION

1.1 SAFETY NOTICES
The following safety instructions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where applicable. We recommend that you read this page before preparing your ULTRACADE for game play.

Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

• To help avoid damage to the computer, be sure the voltage selection switch on the power supply is set to match the AC power available at the location:
  • 115 volts / 60Hz in most of North and South America and some Far Eastern countries such as Japan, South Korea and Taiwan
  • 230 volts / 50Hz in most of Europe, the Middle East and the Far East
• To help prevent electric shock, plug the system power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3 wire cable with properly grounded plugs.
• To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner or uninterruptible power supply (UPS).
• Be sure nothing rests on the system’s cables and that the cables are not located where they can be stepped on or tripped over.
• Do not spill food or liquid on your system.
• Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
• Keep your computer far away from radiator and heat sources.
• Do not block cooling vents.

1.2 WARNINGS
• Make sure all your connections are correct prior to switching on this product.
• There are no user serviceable devices in this product. Opening the case of the Graphite system will void the warranty.
• This device is static sensitive.
• Power supply is 90~250VAC 7~3A
• Monitor requirement is 4:3 Horizontal VGA

1.3 ENVIRONMENTAL CONDITIONS
ULTRACADE is intended for indoor use only. Be sure to keep dry and maintain operating temperatures of 10-40° Celsius.

1.4 FCC NOTICES (UNITED STATES)
Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of a radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, include computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment. While this computer system has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

• Reorient the receiving antenna
• Relocate the computer with respect to the receiver.
• Move the ULTRACADE away from the receiver
• Plug the ULTRACADE into a different outlet so that the computer and the receiver are on different branch circuits.


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

• This device may not cause harmful interference.
• This device must accept any interference received, including interference that may cause undesired operation.

1.5 LICENSE INFORMATION

1.5.1 JOSHUA OPERATING SYSTEM
The JoshuaOSTM is used under license from Joshua Technology, Inc. Joshua Technology, Inc. retains all rights to the code, trademarks and copyrights. By accepting and operating an ULTRACADE system, the owner/operator of each ULTRACADE system agrees to abide by all copyrights and trademarks and not to attempt to decompile or modify the operating system in
anyway. Questions regarding this operating system should be directed to technical support at www.ultracade.com or support@ultracade.com. JoshuaOS is copyrighted 2001-2004 by Joshua Technology, Inc.

1.5.2 AMIJEN PROPERTIES
AMIJEN™ and the AMIJEN properties are used under license from Gregory J Lima. Gregory J Lima retains all the rights to all properties, trademarks and copyrights. AMIJEN is Copyrighted ©1997-2004 by Gregory J Lima.

1.6 WARRANTY INFORMATION
The ULTRACADE cabinet is guaranteed from manufacturing defects. ULTRACADE parts are guaranteed for 90 days.

1.6.1 WARRANTY SERVICE
If at some point you require warranty service, contact your distributor. If you purchased direct you can contact HyperWare ULTRACADE Technical Support at 1-408-436-8885 or support@ultracade.com. If technical support staff determines that your ULTRACADE is defective, a Return Merchandize Authorization (RMA) number will be issued.

2.  GAME SETUP

2.1 GAME FEATURES
Congratulations on choosing ULTRACADE. ULTRACADE is available in an upright, dedicated cabinet with 27” VGA monitor and dual player control panel or as a kit for installation in existing cabinets. The ULTRACADE game engine can securely store and support hundreds of games. ULTRACADE comes with a pre-installed Game Pack of eighty seven classic games, licensed or owned by Ultracade Technologies, Inc. Additional ULTRACADE Game Packs are also available, each with a collection of popular, classic games licensed from the original manufacturers.

ULTRACADE provides the following benefits to operators:

• Consistent earnings from proven, licensed games for all generations and both men and women
• Low purchase price
• Multi-game system with low-cost Game Pack add-ons
• Ultracade Technologies, Inc. reliability
• Easy-to-use operator interface
• Game instructions displayed automatically as the player selects a game

2.2 PRE-GAME INSTALLATION
Remove the game from the shipping container. The 1st set of keys is in the coin return slot. The 2nd set will be hanging on the inside of the coin mech door. Refer to Figure 2-1 for specific locations of each part of the machine. Connect the wall cord to a grounded (3-terminal) AC wall outlet.
<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On / Off Switch on bottom rear of cabinet</td>
</tr>
<tr>
<td>2</td>
<td>Control Panel</td>
</tr>
<tr>
<td>3</td>
<td>Coin Mech Door and Coin Return Slots</td>
</tr>
<tr>
<td>4</td>
<td>Coin Box Door</td>
</tr>
</tbody>
</table>

**TABLE 2-1 CABINET ASSEMBLY**

The following precautions should be followed when installing the game:

- Avoid rough handling of the game, the picture tube is fragile.
- Install the game on a level surface.
- Avoid installing the game where it will receive excessive sunlight or heat, to protect the game from rising internal temperatures.
- Do not install in a damp or dusty location.
- For a short time after connecting the power to the game, the picture may be temporarily distorted.

The monitor’s purity is affected by the Earth’s magnetic field, causing a variation of color. By turning the game on for 10 or 15 seconds and then off for 20 or 30 minutes the automatic degaussing circuit applies a degaussing field around the edges of the monitor. Doing this several times will correct the problem.

Another way to correct the problem is to purchase a degaussing coil or bulk tape eraser at any electronics store. This will help to immediately demagnetize the video tube. Caution must be used with a degaussing coil so that the magnetic field of the degaussing coil is not allowed to become too intense at any one place on the picture tube, thereby causing a localized color distortion.

If you move the game to another location after degaussing the distortion may reappear. Refer to the video monitor manual for details.

**2.3 GAME INSPECTION**

ULTRACADE is shipped ready for operation, but a last visual check should be made to insure the game is in good condition. Please verify the following before turning the game on:

- Inspect the exterior of the game for any shipping damage, chips, dents, or broken parts.
- Open the rear service door and check for any interior damage.
- Check all major assemblies to assure they are mounted securely.
- Make sure there is no damage to the wiring and that all wires are properly connected.
- Open control panel and inspect Graphite system.
- Check for loose foreign objects, especially metal objects which may cause electrical problems.
- Open coin door and check test switch to make sure it is not damaged.

The game monitor is properly adjusted before shipping. If there are any adjustments necessary, refer to the video monitor manual. This manual contains all the manufacturers recommendations for adjusting the video monitor.

**2.4 GAME INSTALLATION**

Power on the game. When the game is fully started open the coin mech door and press the red test button to enter the Operator Setup Menu. This will allow you to configure your ULTRACADE for your specific needs. For more information see section 3. OPERATOR MENU.
3. OPERATOR MENU

3.1 OPERATOR SETUP MENU
All ULTRACADE game audits, adjustments, and diagnostics are options of the Operator Setup Menu. Each option has its own submenu, listing several choices you may act upon as needed. Press the test button behind coin mech door in the cabinet to activate the Operator Setup Menu. Refer to Figure 2-1 and Figure 3-1 for locating the test button.

![FIGURE 3-1 TEST BUTTON LOCATION](image1)

After you press the test button, you will see the operator setup menu which will allow you to access or modify the following: Language, Cabinet Setup, Game Configuration, Accounting Information, Diagnostics, and Exit.

![FIGURE 3-2 OPERATOR MENU](image2)

To choose a menu option, move the arrow or cursor so that the desired option is highlighted. This is done using the player one joystick. When the desired option is highlighted press player one button one to select it and enter that submenu.

In this manual the term “highlight” will mean to position the arrow over the desired option. The term “select” will mean to press player one, button one. The exit option on all menus will always go back to a previous menu.

3.2 LANGUAGE SETTING
ULTRACADE now supports multiple languages. To change the language of the operator menus move the player one joystick either left or right. Supported languages are: English, French, German, Italian, Spanish, and Dutch.

3.3 CABINET SETUP
The Cabinet Setup menu allows you to custom configure your ULTRACADE.

![FIGURE 3-3 CABINET SETUP](image3)

3.3.1 CABINET TYPE
This option will set what type of cabinet you have. To change the settings highlight and move the joystick left or right.

- **UPRIGHT**: Standard upright cabinet with two joysticks and one trackball. This is the default setting.
- **UP-2BALL**: Standard upright cabinet with two joysticks and two trackballs.
- **COCKTAIL**: Cocktail cabinet with two joysticks, two trackballs, and opposing players.
- **SINGLE**: Standard upright or cocktail cabinet with only one joystick and one trackball.

3.3.2 DISPLAY SETTINGS
The display settings will allow you to adjust the screen orientation and CGA interlace tuning.

![FIGURE 3-4 DISPLAY SETTINGS](image4)
SCREEN ORIENTATION
This option rotates the screen by 90°. Highlight and move joystick right or left to change among the different settings.

FIGURE 3-5 SCREEN ORIENTATIONS

CGA INTERLACE
This option will turn the cga interlacing on and off. Move th joystick right or left to change the setting.

CGA INTERLACE TUNING
This option allows operator to set CGA Interlacing to its most clear value. The range is 0-128. To change the setting, highlight CGA Interlacing Tuning on the Cabinet Configuration Menu (Fig. 3-10) and move joystick left or right until desired value appears. Note: This will not work with EGA and VGA monitors.

3.3.3 SOUND SETTINGS
The sound settings menu will allow you to adjust the overall game volume and turn the attract mode sounds on or off.

FIGURE 3-6 SOUND SETTINGS

SOUND VOLUME
This menu option allows you to set the Sound Volume level between one and ten. To adjust move the joystick to the left or right. Sound for the entire system can be turned off by setting the value to “0”.

ATTRACT MODE VOLUME
This option allows the operator to turn the Attract Mode Volume on or off. When set to “ON” all attract mode sounds will play. When set to “OFF” the full screen and windowed game attract mode sounds will not play. To change the values of this option highlight and move the joystick left or right.

Note: Some games naturally do not play any sound while in attract mode.

3.3.4 CREDIT/COIN SETTINGS
The credit/coin settings menu is used to set how much a play on your ULTRACADE costs, to turn on or off freeplay, to turn on or off the bonus credit and to turn on or off the free menu control.

FIGURE 3-7 CREDIT/COIN SETTINGS

CREDITS PER COIN MECH A AND B
This option allows the operator to set the number of credits given per coin drop on each coin mech. i.e. When set to 2, a player will receive two credits for one coin drop. Move the joystick left or right to set the values.

CREDIT COST FOR EACH PLAY
This option allows the operator to set the price to play a game. When set to 1, it will cost one credit for each play. When set to 2, it will cost 2 credits (fifty cents or two tokens) for each play. Move the joystick left or right to set the values.

BONUS CREDIT
This option will give a player a fifth free credit after four consecutive coin drops.

FREEPLAY
Sets the game to freeplay. This will make all the games free to play.

FREE MENU CONTROL
When this option is turned on players will be able to scroll through the main interface games without having to put a credit in. When turned off a player will have to put a credit in before scrolling through the main interface games.
3.3.5 TOURNAMENT SETTINGS
The tournament settings menu is used to set the location of that specific ULTRACADE machine and to access the high scores menu.

FIGURE 3-8 TOURNAMENT SETTINGS

3.3.5.1 LOCATION ENTRY
This option allows the operator to name individual cabinets for the purpose of accounting identification. When you are ready to identify your ULTRACADE cabinet, follow these instructions:

- Highlight “DEL” (delete) and select it to erase the factory naming.
- Highlight each desired letter in turn and select to spell the cabinet name.
- When completed highlight “USE” and select it to make the name change official.

FIGURE 3-9 LOCATION ENTRY SCREEN

3.3.5.2 HIGH SCORE MENU
This menu option allows you to dump all high scores to disk, get high scores from disk, and delete high scores.

FIGURE 3-10 HIGH SCORE MENU

DUMP HIGH SCORES TO DISK
This option allows you to dump all high scores to a floppy disk. To dump scores; place a disk into the floppy drive and select this option. If this action is successful, “OK” will appear in the output window to the right. If this action is unsuccessful, “FAIL” will appear in this window.

GET HIGH SCORES FROM DISK
This option allows you to transfer high scores stored on a floppy disk to your ULTRACADE system. To get scores; place a disk into the floppy drive and select this option. If this action is successful, “OK” will appear in the output window to the right of the tab. If this action is unsuccessful, “FAIL” will appear in this window.

Note: Dumping and retrieving high scores from disk is only possible between two ULTRACADE games with matching versions.

DELETE HIGH SCORES
This option will reset all high scores to their factory defaults.

3.3.6 TIMERS SETTINGS
The timers settings menu allows you to set various timers in ULTRACADE.

FIGURE 3-11 TIMERS MENU
**BOOT SCREEN DISPLAY TIME**

When ULTRACADE powers on it displays a boot screen and gives a software version number. This timer sets the length this screen will display.

**EXIT GAME AFTER NO INPUT**

If a game is running and no joystick or button inputs are received the game will time out to the exit menu. This sets how long the game will run without receiving any input.

**EXIT MENU DEFAULT POSITION**

The exit menu default position setting effects the exit screen which comes up when a player is exiting a game. The setting can be set to “No” or “Yes” and the arrow on the exit menu will default to the corresponding setting.

**FACTORY DEFAULTS**

Selecting this option from the cabinet setup menu (Fig. 3-3) will reset all operator settings to their factory defaults. “OK” will appear in the Factory Defaults window when this action is completed.

**GAME CONFIGURATION**

The game configuration menu allows the operator to install new games, adjust individual games, and to set the Intelli Settings.

**INTELLI SETTINGS**

The Intelli Settings consist of Intelli-Earn, Intelli-Sort, and Intelli-Tune. These are special features only found in ULTRACADE and will help the operator get the most earnings from their ULTRACADE machine. In depth descriptions of each Intelli Setting can be found below in their specific section.
which are settable for Intelli-Sort™ are as follows:

- **INTELLI-SORT STATUS**: Turns Intelli-Sort™ on and off.
- **MAX GAMES**: Set the amount of games which are displayed on the main front screen. The recommended default setting is twenty.
- **SWAP GAMES**: Sets the amount of games which will be swapped out after an update cycle has been completed. Only the lowest earning games will be swapped out. The recommended default setting is five.
- **UPDATE CYCLE (DAYS)**: Sets how many days an ULTRACADE machine will run for, before it swaps out any games. The recommended default setting is seven days.

### 3.4.1.3 INTELLI-TUNE™

The Intelli-Tune™ option is way for operators to automatically manage the difficulty of games installed on an ULTRACADE machine.

**FIGURE 3-16 INTELLI-TUNE™ SETTINGS**

When Intelli-Tune™ is turned on your ULTRACADE machine will check the average playtime per credit of any game installed on the machine which has had an X number of plays. If the average playtime falls below an X amount of time than ULTRACADE will automatically adjust the dipswitches for that game to make it slightly easier. If the average playtime goes above an X amount of time than ULTRACADE will automatically adjust the dipswitches for that game to make it slightly more difficult. If the average playtime falls between the two ranges than no action will be taken by ULTRACADE. The different settable options for Intelli-Tune™ are as follows:

- **INTELLI-TUNE STATUS**: Turns Intelli-Tune™ on and off.
- **MIN TIME/CREDIT**: This sets the minimum average playtime in minutes and seconds a game must be. If the average playtime falls below this value then the game will be made easier.
- **MAX TIME/CREDIT**: This sets the maximum average playtime in minutes and seconds a game must be. If the average playtime goes above this value then the game will be made more difficult.
- **UPDATE CYCLE (PLAYS)**: This sets the number of times a game must be played before ULTRACADE will check to see if the dipswitches need adjusting.

### 3.4.2 INDIVIDUAL GAME SETTINGS

This menu allows you to choose which games you wish to display on the main interface selection screen, to set the dipswitch settings for each game, and to uninstall a particular game.

The game configuration menu consists of two parts. The left column contains the game list. On the right is the AAMA ratings system. Use the following system for navigating this setup menu:

**Joystick (Player One):**
- **Up/down** moves left column cursor up or down
- **Left/right** pages left column cursor up or down

**Buttons (Player One):**
- **Button 1** executes choice or disables/enables a game
- **Button 2** advances AAMA ratings cursor
- **Button 3** disables/enables all games with the currently selected AAMA rating
- **Button 6** enters dipswitch menu for highlighted game

**FIGURE 3-17 INDIVIDUAL GAME SETTINGS**

**THE GAME LIST**

The ULTRACADE game list contains the game title on the left and the game version on the right. The list is also color coded by the AAMA rating. To check a game’s exact AAMA rating highlight the chosen game and a Title Rating icon will appear on the right side over the correct sticker. To enable or disable a game simply highlight it with the cursor and press button one. A is disabled when it becomes greyed out and reads “OFF” instead of a version number.

**AAMA RATINGS SYSTEM**

The AAMA ratings system can be used to disable or enable a group of games with the same AAMA rating. Use button two to cycle the AAMA cursor until it is over the correct rating. Press button three to disable or enable all games installed on the ULTRACADE with that rating. A disabled icon will appear over the rating when it is currently disabled.

**DIPSWITCH SETTINGS**

Each installed game comes set to its original factory default dipswitch settings. To change a game’s settings highlight it in
the left column and press button six. This will enter you into that game’s unique dipswitch menu. To change a dipswitch setting highlight it and move the joystick either left or right to adjust the setting. To restore the settings to factory defaults highlight factory defaults and select the cursor and press button one.

3.4.3 ADD NEW GAMES
The Add New Games Menu allows you to add new games to your ULTRACADE via Game Packs. When you are ready to install a new Game Pack, enter the Add Games Menu and follow these directions:

- Open the control panel and insert the new Game Pack CD
- Record the Machine ID number (MCID) in the center of the Add Game Menu.
- Call, fax, or email ULTRACADE technical support with your MCID and the CD serial number found on the back of the CD packaging. You will receive your Game Pack ID number (GPID). This number is unique to your ULTRACADE system and is essential to the successful installation of the Game Pack. You may also now go to www.ultracade.com and generate unlock codes for your gamepacks online.
- Record the GPID and save this with your Game Pack CD. If your Game Pack ever needs to be reinstalled you will need to enter this number again.
- Enter the GPID by highlighting the appropriate letters and numbers and selecting them. When completed highlight “Use” and select it. The Game Pack will now install.
- When the install is completed you may exit the Add Game Menu. The new games will now appear in your Game Configuration game list.
- Open the control panel and remove the CD.

3.5 ACCOUNTING INFORMATION
The Accounting Information Menu allows you to view and manipulate a report of current and lifetime coin totals for each game installed on your ULTRACADE.

3.5.1 SORT REPORTS BY
The operator has different options to list the games on the earnings and time reports. Highlight Sort Report By and move the joystick left or right. The output window to the right will cycle through the following options:

- **name** - sort by name
- **mnfr** - sort by game manufacturer
- **Scurr** - sort by ascending current coin drop
- **Slife** - sort by ascending lifetime coin drop
- **fcurr** - sort by current ascending freeplays
- **flife** - sort by lifetime ascending freeplays

3.5.2 VIEW EARNINGS REPORT
When you choose View Earnings Report you will be given a screen consisting of five columns. The last reset date will be listed in the window at the top of the screen. The left hand column lists the games by name. The next two columns list
current coindrops and freeplays since the last reset of data respectively. The last two columns list lifetime coindrops and freeplays of each game respectively. The total earnings row (at bottom of report) lists the cumulative of each column.

The joystick can be used to scroll the window up or down if the game list is too long to display on the screen. Up and down will scroll one game at a time while left and right will scroll one page at a time. To enter a games’ dipswitch settings press button 6 and to exit the earnings report screen press button one.

<table>
<thead>
<tr>
<th>Earnings Report</th>
<th>Since: 2/9/04</th>
<th>Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game</td>
<td>COIND/FREEPLAY</td>
<td>COIND/FREEPLAY</td>
</tr>
<tr>
<td>1941</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1943</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1945</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asteroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amoreado Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amoreado Combat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astro Invader</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astro Man</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averaging Spirit Iron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bombay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banzai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bezerk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Tide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bomb Jack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bomb Jack Twin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calipso</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calipso Commander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrier Air Wing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmic Averager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark Stalkers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demon’s World</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Run Run</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Earnings:</strong></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

FIGURE 3-21 EARNINGS REPORT SCREEN

### 3.5.3 VIEW TIME REPORT

Like the earnings report, when you select this option you will be given a new screen consisting of five columns. The last reset data will be listed in the window at the top. The first column will list the games by name. The next two columns will give current time report data since the last reset. The one entitled “Average” displays the average amount of time it takes to play a game (one credit). This column displays in minutes and seconds. The column entitled “Total” displays the total amount of time that that game has been played in hours and minutes. The next two columns are reserved for the lifetime time reporting, one for the average time played and one for the total play time respectively.

The same control scheme is used in both the Earnings Report and Time Report screens. Refer to section 3.5.3 VIEW EARNINGS REPORT for instructions.

<table>
<thead>
<tr>
<th>Time Report</th>
<th>Since: 2/9/04</th>
<th>Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game</td>
<td>AVERAGE/TOTAL</td>
<td>AVERAGE/TOTAL</td>
</tr>
<tr>
<td>1941</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1943</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1945</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44th Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asteroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amoreado Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amoreado Combat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astro Invader</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astro Man</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Averaging Spirit Iron</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bezerk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Tide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bomb Jack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bomb Jack Twin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calipso</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calipso Commander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrier Air Wing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmic Averager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark Stalkers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demon’s World</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Run Run</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Playtime:</strong></td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

FIGURE 3-22 TIME REPORT SCREEN

### 3.5.4 RESET REPORT DATA

To reset current accounting data, coin bookkeeping table records, and current time reporting data; highlight Reset Report Data and select it. This will reset current game play counters and time reporting to zero (lifetime totals will remain). When this action has been successfully completed, “OK” will appear in the output window to the right.

### 3.5.5 COPY CURRENT / LIFETIME REPORT

This feature allows you to copy either the current or lifetime accounting information of each game to a disk. This allows you to track gameplay and coindrop totals on a daily, weekly or monthly basis. In addition, if you should uninstall a game and at a future date reinstall it, the game will maintain lifetime play totals in the accounting information. You will need a formatted 3.5inch floppy disk to utilize this function.

To copy accounting information to a disk, insert a formatted 3.5 inch floppy disk into the floppy drive on the computer rear panel. Highlight the desired copy option and select. If this action is successful, “OK” will appear in the corresponding output window to the right. If this action is unsuccessful, “FAIL” will appear in the output window. This indicates a bad disk or a drive failure. You can attempt to solve this problem by inserting a new disk.

When completed, all current or lifetime accounting information will be transferred to your disk. The accounting information text can be displayed in any text editor and easily imported into a spreadsheet application.

**Note:** Copying accounting information does not record the current day’s totals, it records only previous days.

### 3.6 DIAGNOSTICS

The diagnostics option will enter you into a sub-menu displaying the different diagnostics you can run on your ULTRACADE.

**FIGURE 3-23 DIAGNOSTICS**

#### 3.6.1 CONTROL TEST

This test is used to check the functionality of the player controls. Operate each player control in turn. Each button press or joystick direction will light when activated. If any controls are not functioning, go to the trouble shooting section. To exit the con-

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3.6.2 TRACKBALL & DIAL TEST

This test is used to check the functionality of any trackballs or dials which may be installed in the ULTRACADE machine. When any trackball or dial is moved an arrow should appear next to the corresponding control and point in the direction that the trackball or dial was moved. If your ULTRACADE is only configured for one trackball then when it is moved arrows will appear next to both trackballs on this screen. To exit the control test press both player one and player two start buttons.

3.6.3 JAMMA TEST

The JAMMA Test is similar to the Control Test but it is expanded to encompass the entire JAMMA harness and connector. Operate each player control in turn through the JAMMA Test screen and check that it lights up on the screen. This process confirms the proper working order of the test button, coin drop, and wiring features. To exit the JAMMA Test press both player one and player two start buttons or wait fifteen seconds for the test to timeout and exit.

3.6.4 SOUND TEST

This feature tests the stereo speakers. You will hear for each test the following:

- **Left Channel**: You will hear the voice coming from the left speaker.
- **Right Channel**: You will hear the voice coming from the right speaker.
- **Stereo**: You will hear the voice coming from both speakers.
- **High Frequency**: You will hear a high pitched sound coming from both speakers.
- **Low Frequency**: You will hear a low pitched sound coming from both speakers.

3.6.5 VIDEO TEST

This feature is a utility to use when making adjustments to the video monitor. When started, the test will cycle through the following screens:

- **Red**
- **Green**
- **Blue**
- **Color Bars**
4. TROUBLESHOOTING

4.1 OS RE-INSTALLATION
The ULTRACADE Operating System comes pre-installed but if for any reason you need to reinstall your ULTRACADE operating system, follow these steps:

- Power ULTRACADE on.
- Open control panel and insert the system CD supplied with your ULTRACADE.
- Cycle the power (Turn off then on again).
- On reboot you will see the installation menu.
- HighlightFormat and Install and select it. **Note: Do not select Upgrade Only** as this option is only for operators who wish to upgrade a previous version of ULTRACADE.
- When the install is complete open the control panel and remove the system CD.
- After the OS has been reinstalled no games will be loaded on the system. Please refer to section 3.4.3 ADD NEW GAMES for details on Game Pack installation.

![FIGURE 3-26 VIDEO TEST](image)

![FIGURE 4-1 INSTALLATION MENU](image)

4.2 TECHNICAL SUPPORT
Free telephone, email and online support are provided for ULTRACADE Systems during the warranty period. In addition to helping with trouble shooting and diagnosing defective parts, technical support is prepared to help you with questions about the operation of ULTRACADE.

When you contact technical support at Ultracade Technologies, Inc. please provide the following background information to aid our technical support process:

- Your mailing address and telephone number
- A summary of the question or a description of the problem with your ULTRACADE

Technical Support is available from 9:00-5:00 PST, Monday through Friday. Call 1-408-436-8885 to reach a technical support staff member. Email support is available if you email support@ultracade.com. Ultracade Technologies, Inc. has online technical support resources including FAQs at [http://www.ultracade.com](http://www.ultracade.com).