BIG BUCK HUNTER

PLAY MECHANIX

INSTALLATION MANUAL

Version 05/01
FEATURES

- Up to Four Players can Hunt in Head-To-Head Competition!
- Traditional Pump-Action Shotgun
- Photo-Realistic Backgrounds
- Over 200 Authentic and Unique 3D Hunting Scenes
- Hunt in Four Regions Across the Country: Midwest, Northeast, South and West
- Hunt in Varying Weather Conditions: Sunlight, Rain, Fog and Snow
- Hunt During Different Times of Day: Early Morning, Afternoon and Night
- Exclusive Expert Level for Experienced Hunters
- Sixteen Exciting Bonus Rounds, Including: Duck Hunt, Skeet, Windmill Mania, Barnyard Bonus, and More
- Operator Selectable Bloodless Mode for FECs

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GETTING STARTED

GAME PACKAGE CONTENTS

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(1) Connecting Wire Harness (JAMMA)
(1) Hard Drive and Interface Assembly
(1) Power Bypass Cable
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(1) Holster Bracket
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(1) Marquee Styrene
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(1) Set Control Panel Labels
(2) Side Decals
(1) Set Installation Templates
(1) Manual

RECOMMENDED TOOLS AND SUPPLIES

• Phillips and Slotted Screwdrivers
• Socket Set, Wire Cutters and Strippers
• Pliers or Channel Locks
• Electric Drill with 3/32", ¼", and 7/16" Bits
• Chassis or Sheet Metal Punch
• Razor Knife and Sharp Blades
• Soldering Iron and 60/40 Resin Core Solder
• Assorted Fastening Hardware
• Heat Shrink Tubing (3/32", 1/8", and 3/16")
• Masking Tape or 4" Wire Ties

IF YOU DO YOUR OWN PAINTING, YOU'LL NEED THESE PAINT SUPPLIES:

• Air Brush or Paint Sprayer
• Paint Brush, Paint Roller and Pan
• Paint (and Primer)
• Sandpaper

INSTALLATION

PREPARATION

BEFORE YOU START.....

1. Checks to see if all the needed parts have been included in your kit or tournament cabinet.
2. Do you have the necessary tools?
3. Do not work with any part of the system plugged in (lights, monitor, or power supply).

THE CABINET

Power Requirements

Make sure the game you have chosen to convert is able to supply all the required voltages for GOLDEN TEE™ FORE!.

+5 VDC  15 amps
+12 VDC  3 amps

WARNING!!!
The output level of many “regulated” switching power supplies actually varies with load. For this reason, the power supply from an old game may not be correctly adjusted for BIG BUCK HUNTER. This makes the existing power supply inappropriate and hazardous to your new game. Therefore, it is very important to adjust the +5 VDC supply WITHOUT connecting the PCB, then readjusting it later, after the PCB has been installed. Measure power on the PCB, on the Boot ROM U15. Damage will occur if the power supply is outside the acceptable limits (between 5.0 and 5.15 VDC.)

Monitor Requirements

BIG BUCK HUNTER requires a monitor in a horizontal mount raster scan with negative composite SYNC. It can be difficult to change the monitor from vertical to a horizontal unit. Therefore, installation will be easier if you choose a horizontal mount cabinet. BIG BUCK HUNTER has been designed for low-res monitors. For best results, choose a cabinet with a lo-res monitor. Consult your monitor for lo-res adjustment.

CAUTION! Monitors are extremely dangerous and can result in severe injury. Make sure you follow and observe all safety precautions as outlined in your monitor’s manual.
**Cabinet Selection**

You can choose either a new cabinet or a used cabinet for your BIG BUCK HUNTER game. Reusing a cabinet is by far the most cost-effective way to maximize the return of your initial investment. In either case, all you need to provide is the cabinet with a power supply, bill acceptor and monitor. We provide the rest. The end result is a new game at a very low cost.

**NOTE:**
It is recommended that a cabinet used for similar types of games be used for your BIG BUCK HUNTER. Large monitors mounted at a right angle work best.

**NOTE:**
The monitor must be mounted perpendicular to the gun for the game to play correctly.

**When selecting a cabinet, keep this in mind:**

A cabinet with a 25” or larger monitor, mounted at a right angle, will produce the best game play results. The monitor must be perpendicular to the gun for the game to play correctly.

1. Remove the following from the cabinet: Main Logic Board(s), Control Panel, Monitor Plexiglas, Marquee, Cabinet Graphics
2. Thoroughly clean out your cabinet. Remove all the old buttons, joysticks and wires from the control panel. DO NOT remove monitor and speaker wires.
3. If your cabinet does not have switches or buttons inside the cabinet, you will need to install them for volume control and access to diagnostics and testing modes.
4. Remove the old graphics and adhesive from the control panel, and the side of the cabinet.
5. For a fresh look, painting is highly recommended. Spray painting gives a better finish, but if an air brush or paint sprayer is unavailable, a roller is second best. Remember to cover all exposed surfaces not to be painted.
6. The “new game look” should always apply to the inside of your game as well. A few wire ties and shrink tubing on your harness, some fastening hardware on your subassemblies, and a sweep with the vacuum cleaner will help ensure that glitches do not occur.

**CONTROL PANEL**

Compare your cabinet’s control panel to the diagram below to determine how to install the graphics and controls. The BIG BUCK HUNTER gun holster is mounted either on the front or side of the cabinet, so your control panel requires very little drilling.

**Button Preparation**

Big Buck Hunter comes with an illuminated Start button. When making the hole for the Start button, use the control panel layout diagram as a guide to where you should drill your new hole, and mark the center of the hole with a pencil.

**START BUTTON HOLE TEMPLATE**

Locate and Mark the center of the control panel. Position and attach the Start Button Hole Pattern Template to your control panel. Be sure that the location you have selected is free from obstructions inside the cabinet. Be sure that the template is oriented correctly.

Carefully drill and deburr the 1” center hole, and the two 3/16” mounting holes.

Use a file to smooth any rough edges on the holes.

Fill any old and unused holes with wood, resin, or a metal plate.

It is recommended that you cover your control panel with Plexiglas. Now would be a good time to cut it to fit while the dimensions and tools are at hand.

Install the control panel graphics and labels, following the instructions found in the manual. Cut away any graphics material from the button holes.
Insert the supplied button into the large hole. Two pins on the lower edge of the button are used to lock the button into position.

Tighten the large plastic nut securely onto the plastic button housing.

Snap the micro-switch and lamp into the button housing.

Attach the button assembly switch and lamp to the main harness connectors. Refer to the manual for correct wiring.

**Volume and Test Switches**

If your cabinet does not have switches or buttons inside the cabinet, you will need to install them for volume control and access to diagnostics and testing modes.

Big Buck Hunter requires three external switches to navigate through Operator Mode. Install a Test, Volume Up and Volume Down switch in a convenient location inside your coin door. Volume Up and Volume Down double as scroll up and scroll down when in Operator Mode. Refer to the JAMMA Connections diagram for proper wiring.

**Graphic Overlays**

BIG BUCK HUNTER comes equipped with graphics that will accommodate a variety of existing game cabinets. Remove any old control panel graphics and make sure the panel is clean and free of dirt, grease or adhesives before installing your new graphics.

**Control Panel Overlay Installation**

1. Make sure the control panel is clean and free from dust, grease, metal filings, and sawdust. The background overlay provided with the game is oversized to accommodate most control panel sizes. Center the background overlay on the control panel surface. Be sure to leave enough excess material above and below the control panel in order to trim it evenly.

2. Remove the protective backing from the background overlay. Center the background overlay over the control panel and place down gently, making sure to keep it square. Using your hands, press down firmly, starting from the center and smooth the background overlay outward, making sure all bubbles have been pressed out for a clean, flat surface.

3. Using a sharp razor knife, trim any excess from the background overlay. Carefully pierce through the overlay above the control panel hole that you have marked. Cut out material covering the pre-drilled holes with the razor knife. Be sure to cut and trim the background overlay cleanly and evenly.

**Function Labels Overlay Installation**

Line up the supplied function labels to correspond with the control panel layout on the previous page. Remove the backing and carefully press into place. Be sure they are straight. Refer to the control panel diagram for optimal placement.

It is highly recommended that you protect your control panel with a Plexiglas overlay. Cut it to fit and install now.

Insert the Start button into the control panel and tighten securely. Refer to the Wiring section of this manual for correct button wiring.

**Marquee Installation**

If your cabinet needs a new marquee glass, determine the correct size and cut to fit. Using the old marquee glass as a template, center the Plexiglas on your new marquee, making sure that all the printed images will be visible.

Using a razor knife, score the new marquee deeply, following the edges of the old glass. Carefully break off excess material. Be sure the light behind the marquee works and that the glass is clean on both sides. Now install the marquee graphics and glass securely.

**Cabinet Side Graphics Installation**

Carefully remove the backing from the supplied logo stickers and smooth in place on the side of your cabinet. Refer to the diagram below for optimal placement.
Most BIG BUCK HUNTER games come equipped with a specially designed rifle. To mount the rifle to the cabinet, you need to attach a rifle holster. The rifle holster consists of two high-impact plastic brackets. These brackets can be mounted on the front of your cabinet, or on the side of your cabinet.

1. Determine where you want to mount the holster. The holster should be mounted at a comfortable height near the control panel. Make sure the cable attached to the rifle will reach the PCB when mounted in the proposed bracket position.

2. Use the dimensions on the cabinet diagrams for optimal placement.

For FRONT MOUNTING, center the template on a vertical surface. Be sure the template is oriented correctly. Match the center of the template to the center line of the cabinet. Use only the brackets on the template labeled A and C. The center holes on the brackets should be 18.875” apart.

For SIDE MOUNTING, orient and attach the template to the cabinet at a 30 degree angle. Be sure the template is oriented correctly. Use only the brackets on the template labeled A and B. The center holes on the brackets should be 15.5” apart.

3. Punch or mark the center holes for the appropriate bracket mounting holes with an awl.

4. Remove the template and carefully drill and deburr the four 3/16” mounting holes.

5. Install the brackets using the supplied carriage bolts, flat washers and locking nuts. Fasten the nuts securely inside the cabinet.

Some BIG BUCK HUNTER games are shipped with generic pistols. To mount the pistol to the cabinet, you need to attach a pistol holster. The pistol holster can be mounted in one of two ways. Depending on your cabinet, you can install the holster on the front of the cabinet, or on the side of the cabinet.

Determine where you want to mount the holster. If you want to mount the holster on the front of the cabinet, use the template marked FRONT MOUNT HOLSTER TEMPLATE. If you wish to mount the holster on the side of the cabinet, use the template marked SIDE MOUNT HOLSTER TEMPLATE.

Determine where you want to mount the holster. Use the dimensions above for approximate placement.

Attach the Holster Mounting Template to the desired location on your cabinet. Be sure the template is oriented correctly. The holster should be mounted at a height near the control panel.

Carefully drill and deburr the two ¼” mounting holes.

Install the holster using the supplied carriage bolts, flat washers and locking nuts. Fasten the nuts securely inside the cabinet.

If your cabinet surface is not flush, you may need to use the supplied plastic spacers to offset the holster to clear any obstructions. Be sure the holster is mounted so the gun rests securely.
**Gun Installation**

Insert the gun into the newly mounted holster. The attached gun cable should be hanging freely, with no loops or kinks.

Determine the best location for the gun cable mounting bracket. Players should be able to move the gun freely. Use the dimensions indicated on the cabinet diagrams for approximate placement. Be sure that once installed, the wires from the gun cable assembly will reach the power supply and PCB inside the cabinet.

Position and attach the Gun Cable Mounting Template to the cabinet. Be sure that the location you have selected is free from bracing or wiring inside the cabinet.

Carefully drill and deburr the 1 ½” center hole, and the three .20 mounting holes.

Thread the cable connector and grounding wire through the center hole.

Mount the Gun Cable Mounting Plate using the supplied carriage bolts, flat washers and locking nuts. Make sure the bolts are seated firmly. Attach the grounding wire to any one of the carriage bolts before installing the washer and locking nut.

**Gun Cable Mounting Plate Hole Pattern**

Once the Gun Cable Mounting Plate is mounted securely, Make sure the gun can move freely in all directions.

Inside the cabinet, connect the Cable Connector to the supplied Connecting Harness. The Connecting Harness then connects to GUN 1 connector on the main PCB. See the Wiring section of this manual for more details.

**Wiring and Hardware Assembly**

REMEMBER! DO NOT WORK WITH ANY PART OF THIS SYSTEM PLUGGED IN (Lights, Monitor, or Power Supply).

NOTE: All switch wires used in this game need to be wired to the normally open connection on the switches. Each switch requires a ground wire on the common connector and the appropriate control or switch wire on the other normally open connector of the switch.

**Control Panel Assembly**

1. Install the gun and Start button on the control panel by following the detailed instructions beginning on page 2.

2. If you are using Plexiglas for added protection, don’t forget to place it on the panel before inserting the Start button.

3. Wire the controls using the JAMMA Harness Connection table. Connect the gun using the supplied connecting harness cable into GUN 1 on the main PCB.

**Printed Circuit Board (PCB)**

BIG BUCK HUNTER Uses a hard drive to store its game data. Make sure you mount your PCB in such a way as to allow easy connections to the hard drive cables. Refer to the next section for suggested mounting positions.
PCB and Hard Drive Installation

The hard drive is shipped with a mounting bracket already attached. The bracket allows installation with a minimal number of steps and protects the electronics from damage due to improper handling. DO NOT REMOVE the bracket, as it may cause damage to the hard drive. Use the diagram shown below for positioning the hard drive assembly in different types of cabinets. Make sure to position the game board and the drive close enough for the two supplied cables to reach.

A data cable is supplied for the hard drive and is required for proper operation. Test fit the cable supplied for the hard drive before securing to the mounting surface. Use the Power Bypass Cable to supply power to the hard drive. See the insert for installation details. The supplied ribbon cable is for data transmission. Connect one end of this cable to the keyed connector at J21 on the game board, and the other end into the keyed connector on the hard drive.

CAUTION!

Hard drives are sensitive to both physical and electrical shock. DO NOT DROP OR KNOCK OVER the hard drive. Avoid shocks and other electrical discharges. DO NOT REMOVE the mounting bracket from the hard drive. Removal may cause damage to the hard drive and will void the warranty. Keep the supplied padded box for shipping any returns. Failure to use the supplied shipping box will void the warranty.

![Diagram of installation](image)

Installation in Lower Cabinet

1. Install the CPU Board on the inside wall of the cabinet (left or right), approximately 1 ½” above the cabinet floor.
2. Locate the Hard Drive on the cabinet floor, approximately 2” from the cabinet wall, and directly in line with the JAMMA connector. Attach with 4 #8X ¾” wood screws (supplied). See figure 2. Avoid jarring or vibrating the hard drive with power tools during installation.
3. Connect the supplied Power Bypass Cable to the Hard Drive as shown on the Cable Instruction insert.
4. Connect the keyed Hard Drive ribbon cable to J21 on the CPU board, as shown in figure 2.

Returns

In kit games, the hard drive is shipped in a special padded box. In a dedicated cabinet, the shipping box is fastened to the inside bottom of the cabinet. Be sure to keep this box, in case you need to ship the hard drive. Ship the bracket with the hard drive. Do not remove the bracket from the hard drive. Failure to use the supplied box, or removal of the bracket, will VOID THE WARRANTY on the hard drive.
**Wire Harness**

1. If you are installing BIG BUCK HUNTER into a cabinet with a pre-installed JAMMA harness, it may not have a wire for the test switch. You will have to add a contact to the edge connector at the proper position (position 15). Some cabinets have only one coin switch input and the coin switches are wired together. Connect the designated wires to the coin switches separately.

2. Attach the wire harness connector to the PCB. Be sure it is mounted correctly.

**WARNING!**

Make sure you have identified PIN 1 on the connector before powering up. Plugging the JAMMA connector in backwards will cause damage to the PCB.

3. It is best to use connectors (not supplied) whenever joining a set of harness wires to a subassembly. If you choose to solder wires together, follow this procedure:

4. Strip off about ½” of insulation from the wire.

5. Slide a piece of heat-shrink tubing over the end.

6. Do not leave a lot of excess wire spooled up in your cabinet. Cut the wires to the length you need plus a few extra inches. Leave enough for proper cable dressing. Do not make it stretch across the inside of the cabinet.

7. Solder the new wire to the original wire. Use a straight in-line splice.

**Power Wires**

Because of current consumption, your Big Buck Hunter machines will perform best if power is safely re-routed around the JAMMA connector.

**Instructions for Most Power Supplies with Screw Terminals:**

Please follow the instructions below to properly install the new Power Bypass Cable to a Power Supply with Screw Terminals:

1. Turn power to the cabinet and power supply completely off.

2. Disconnect the +5, +12 and GND wires going from the Power Supply to the JAMMA Connector. Do not disconnect any wires used for lights and meters.

3. Connect the supplied Inter-Cable to the Power Supply. Connect the 2 red wires to +5, the 2 black wires to GND and the Orange wire to +12 on the Power Supply.

4. Connect the 9-pin Connector on the Inter-Cable to the 9-Pin Connector on the Power Bypass Cable.

5. Locate the two plugs labeled “TO BOARD” on the new Power Bypass Cable. Connect them to the connectors labeled J50 and J5 on the Logic Board.

6. Locate the plug labeled “TO HARD DRIVE” on the new Power Bypass Cable. Connect this to the Hard Drive.

7. The Cable labeled “TO CD ROM” on the new Power Bypass Cable remains unused. This is meant for future use to perform updates with a CD ROM drive.

8. Turn power on and enter Service Mode. Go to System Tests/Motherboard Tests/Voltage Adjustment. Adjust the Power Supply using the potentiometer to the highest Acceptable Range. This setting should measure approximately 5.10 volts when measured across Pins 16 and 32 of the U15 EPROM.

**Instructions for Most Power Supplies with 9-Pin Molex Connectors:**

1. Turn power to the cabinet and power supply completely off.

2. Disconnect the two 9-pin Power Output Connectors from the Power Supply. On most Peter Chou and compatible power supplies, there are two 9-pin Molex connectors. Disconnect them both.

3. Connect the new Power Bypass Cable to the FULLY POPULATED 9-pin Power Output Connector on the Power Supply. Be sure you use the one that has 3 red wires, 3 black wires, and the last 3 are white, yellow and blue.

4. Connect the remaining 9-pin Power Connector. The Connector from the supply has 4 wires and a red loop. The mating connector is for powering lights, meters and other non-PCB devices.

5. Locate the two plugs labeled “TO BOARD” on the new Power Bypass Cable. Connect them to the connectors labeled J50 and J5 on the Logic Board.
6. Locate the plug labeled “TO HARD DRIVE” on the new Power Bypass Cable. Connect this to the Hard Drive.

7. The Cable labeled “TO CD ROM” on the new Power Bypass Cable remains unused. *This is meant for future use to perform updates with a CD ROM drive.*

8. Turn power on and enter Service Mode. Go to System Tests/Motherboard Tests/Voltage Adjustment. Adjust the Power Supply using the potentiometer to the highest Acceptable Range. *This setting should measure approximately 5.10 volts when measured across Pins 16 and 32 of the U15 EPROM.*

Install a test switch somewhere convenient inside the coin door area. This switch allows you to enter adjustables, run diagnostics, and see or clear audits. Make it readily accessible through the coin door. Wire it to the Test wire on the JAMMA Harness.

Install a service switch (not included) somewhere convenient inside the coin door area. This switch allows you to give credits to players without affecting the game’s credit audits or coin meters. Example: A player puts in a coin and gets no credit, the operator can then push the service button and a credit is given to the player without affecting the game’s audits and coin meter.

BIG BUCK HUNTER has the ability to adjust volume at any time during a game. Install two push button switches (not included) inside the coin door for easy access. Connect the switches to the JAMMA harness. Refer to the JAMMA Harness Connection table on page21.

**Final Check**

Check the game inside and out for any imperfections. Secure any loose wiring or fastening hardware.

Make sure the coin door is tight and the coin mechs are well adjusted.

---

**DIP SWITCH SETTINGS**

The **SW51-Dip switches** can be found on the main PCB near the JAMMA connector.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dip switch 1</td>
<td>Normal Play (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 1</td>
<td>OPERATOR MODE</td>
</tr>
<tr>
<td>Dip switch 2</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 3</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 4</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
</tbody>
</table>

The **SW5-Dip switches** can be found near the flashing green LED. These are used to adjust monitor resolution.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dip switch 1</td>
<td>Low Resolution (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 2</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 3</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
<tr>
<td>Dip switch 4</td>
<td>Always “ON” (DEFAULT)</td>
</tr>
</tbody>
</table>

---

**SYNC**

This is the recommended approach for a Wells-Gardner monitor and should work with some others as well.

If your monitor does not have a composite SYNC input but has separate horizontal and vertical SYNC inputs, try connecting the composite SYNC signal from the PCB to the negative horizontal SYNC signal on the monitor. This should produce a satisfactory result, although some adjustment of the monitor’s SYNC controls may be necessary.

**Coin Doors, Test Switch, Service Button, and Volume Control Panel**

Wire the coin doors and the test / service switch(es) as per the JAMMA Harness Connection table on page 21. Connect the door lamps to the +12 vdc supply. Some games have separate power supply outputs for the lamps.

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**NOTE:**

Make sure all assemblies are firmly attached. Anything that is not mounted securely will rattle when the game is played. This game makes use of low frequency sounds which can cause any loose joints to rattle.

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Be sure to check your JAMMA connector and make sure it is tightly connected. Detailed instructions and photos of this installation can be viewed on the Operator Services section of the IT web site, [www.itsgames.com](http://www.itsgames.com).
**PCB Connections**

1. Big Buck Hunter! Main PCB
2. Video Card
3. JAMMA Connector
4. Hard Drive Data Connector
5. Power Bypass Connector
6. CD-ROM Drive Data Connector
7. Power Bypass Connector
8. Boot ROM
9. Card Reader Connector
10. Processor with Heat Sink
11. Gun 1 Connector
12. Trackball Connector (not used)
13. Red LED (D2) shows IDE activity
14. Green LED (D20) Status 1
15. Green LED (D5A) Status 2

**Figure 1**

---

**INITIAL POWER-UP**

1. Connect the JAMMA Harness.

   **WARNING!**
   Make sure the JAMMA harness, hard drive, and all other connections are plugged in correctly. Damage to the PCB will occur if the JAMMA connector is plugged in wrong.

2. Plug in the game and turn it ON.

3. Look and smell for smoke (TURN IT OFF IMMEDIATELY IF ANY IS NOTICED).

   **NOTE:**
   Use the Voltage Adjust Test to adjust your power supply. The ideal reading should be 5.0 to 5.15 volts on the circuit board. This is very important for your game to perform correctly. The voltage should be checked and adjusted regularly for best game performance.

4. Make sure the LED’s on the PCB are flashing. If not, something is wrong, turn off the game.

5. Listen for sound. Sounds should be heard in the attract mode if it is a new game on for the first time.


   **NOTE:**
   Check your monitor manual to make adjustments. Some test patterns are available through the game’s system tests by pressing the Test switch. Use them when making any adjustments. (See System Tests Menu on page 23). Proper monitor adjustment is very important.

7. Try all coin switches. Drop quarters or tokens through to check the coin mechs. Insert a dollar bill into the bill validator and listen for the credits to ring up. Make sure the game is adding credits. You can use the PLAYER CONTROL TEST by pressing the test switch and entering the SYSTEM TESTS MENU on page 17. Do all of the controls work? Try playing the game with the volume up and listen for rattling as you play. Tighten anything that is making noise.

8. Upon initial power-up, the game will initialize to factory default settings. These settings affect game elements such as number of credits per coin, difficulty settings, etc. The OPERATOR ADJUSTABLES MODE section will describe how to alter these settings and view the system audits or run system tests.

9. If you wish to automatically run a series of system tests, hold down the START button when you power up the game cabinet. The game will automatically perform the MAIN MEMORY, VIDEO MEMORY, PLAYER CONTROL, SOUND TEST and HARD DRIVE tests. This is a good, quick way to check the integrity of your PCB.
APPENDIX A

OPERATOR TEST MODE

Enter Operator Test Mode by pressing the Test Button inside the coin door, or by flipping SW51-DIP Switch 1 to the OFF position. Be sure the DIP Switch is returned to the ON position to return to the game. Test Mode allows you to adjust certain game settings and track valuable audits and bookkeeping information. Use the gun or test buttons to navigate through the various menus.

<table>
<thead>
<tr>
<th>Action</th>
<th>Gun Control</th>
<th>Switch Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scroll Down</td>
<td>Gun Trigger</td>
<td>Volume Down</td>
</tr>
<tr>
<td>Scroll Up</td>
<td>Gun Pump</td>
<td>Volume Up</td>
</tr>
<tr>
<td>Select</td>
<td>Start Button</td>
<td>Test</td>
</tr>
</tbody>
</table>

The first screen displayed in Operator Test Mode is the Main Menu. The Main Menu displays the various selections available to the operator.

BIG BUCK HUNTER VER 1.00 SERIAL NUMBER 00026812

The Game Serial Number is displayed at the top of every menu.

MAIN MENU

Use Trigger and Pump to move, Use Start Button to Select

- SYSTEM TEST MENU
- VIEW GAME AUDITS
- VIEW COIN AUDITS
- GAME ADJUSTMENTS
- COINAGE ADJUSTMENTS
- CLEAR AUDITS
- ITNET OPTIONS
- GUN CALIBRATION
- EXIT

Local Time 11/06/2000 05:41:31 PM
Next ITNet Call 11/07/2000 03:12:00 AM
1st Attempt 11/05/2000 01:01:24 PM

The System Tests Menu displays various tests that you can perform on your machine.

- SWITCH INPUT TEST
- GUN CALIBRATION RESULTS/INPUT TEST
- VIDEO SCREEN TESTS
- SOUND TESTS

Test your gun, cabinet and coin switches here.
Check the accuracy of the gun.
Adjust screen color and position.
Check the sounds on your cabinet.
The **Game Audits** menu is divided into 8 screens. Select NEXT PAGE and press the Test button to sequence through the screens.

**Page one lists the following totals/averages information:**

- **UP TIME H:M:S** 11:01:01  How long the machine has been turned on, in hours, minutes and seconds.
- **NUMBER OF GAMES** 0  Number of total games, from the time one or more players starts, until the final game over occurs.
- **TOTAL GAME TIME** 11:01:01  How long the game has been in play (i.e. not in attract mode).
- **AVG TIME PER GAME** 11:01:01  How long the average game lasts.
- **TOTAL PLAYS** 0  All game starts and buy-ins are counted here.
- **AVG TIME PER PLAY** 11:01:01  How long the average player plays per start or buy-in.
- **AVG PLAYS PER GAME** 0  Average number of starts or buy-in per player per game.
- **CONTINUES OFFERED** 0  Average number of continues offered per game.
- **AVG CONTINUES** 0.0  Overall rate at which players continue.

**Page two lists the following player/game count information:**

- **1 PLAYER GAMES** 0  Total number of games started with one player.
- **2 PLAYER GAMES** 0  Total number of games started with two players.
- **3 PLAYER GAMES** 0  Total number of games started with three players.
- **4 PLAYER GAMES** 0  Total number of games started with four players.
- **PLAYER STARTS** 0  Total number of game starts.
- **PLAYER ENDS** 0  Total number of game continues.
- **GAME TYPE SINGLE** 0  Total number of single player games.
- **GAME TYPE MULTI** 0  Total number of multi-player games.
- **GAME OVERS** 0  Total number of ended games.
- **GAME WINS** 0  Total number of game completions.

**Page three lists the following regional information:**

- **MIDWEST SELECTED** 0  Number of times region 1 (Midwest) was selected.
- **NORTHEAST SELECTED** 0  Number of times region 2 (Northeast) was selected.
- **SOUTH SELECTED** 0  Number of times region 3 (South) was selected.
- **WEST SELECTED** 0  Number of times region 4 (West) was selected.
- **MIDWEST WON** 0  Number of times region 1 (Midwest) was completed.
- **NORTHEAST WON** 0  Number of times region 2 (Northeast) was completed.
- **SOUTH WON** 0  Number of times region 3 (South) was completed.
- **WEST WON** 0  Number of times region 4 (West) was completed.

Pages four through seven list the number of times each state in a region has been selected. For reference, **BG = Background, 1 = Midwest, 2 = Northeast, 3 = South, 4 = West, A = State 1, B = State 2, C = State 3, D = State 4, and BB = Big Buck sighting.**

**Page four lists the following Midwest Stand information:**

<table>
<thead>
<tr>
<th>Stand</th>
<th>TRIES</th>
<th>KILLS</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG1A</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1ABB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1B</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1BBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1C</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1CBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1D</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG1BBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Page five lists the following Northeast Stand information:**

<table>
<thead>
<tr>
<th>Stand</th>
<th>TRIES</th>
<th>KILLS</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG2A</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2ABB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2B</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2BBBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2C</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2CBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2D</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
<tr>
<td>BG2DBB</td>
<td>00</td>
<td>00</td>
<td>0.0</td>
</tr>
</tbody>
</table>
## Operator Test Mode (continued)

<table>
<thead>
<tr>
<th>South Stand Information</th>
<th>West Stand Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BG3A</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4A</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3ABB</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4ABB</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3B</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4B</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3BBB</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4BBB</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3C</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4C</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3CBB</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4CBB</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3D</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4D</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
<tr>
<td><strong>BG3DBB</strong> TRIES: 00 KILLS: 00 0.0</td>
<td><strong>BG4DBB</strong> TRIES: 00 KILLS: 00 0.0</td>
</tr>
</tbody>
</table>

Page eight lists the following resets/cleared information:

| **WATCHDOG** | 11/11/2000 2:00:00 PM |
| **FACTORY RESET** | 11/11/2000 2:00:00 PM |
| **ADJUSTMENTS RESET** | 11/11/2000 2:00:00 PM |
| **AUDITS CLEARED** | 11/11/2000 2:00:00 PM |
| **COINS CLEARED** | 11/11/2000 2:00:00 PM |
| **CREDITS CLEARED** | 11/11/2000 2:00:00 PM |
| **HIGH SCORES RESET** | 11/11/2000 2:00:00 PM |

**Coin Audits** displays the number of coins that have passed through the coin mechs.

- **COIN1**: 0
- **COIN2**: 0
- **COIN3**: 0
- **PAID CREDITS**: 0
- **TOTAL COLLECTION**: $00.00
- **LIFETIME COIN COUNT**: 00

**Game Adjustments** can be used to customize the game to a location.

- **DIFFICULTY**: EASY/MEDIUM/HARD
- **VIOLENCE**: NO BLOOD/NORMAL/TAGGING ONLY

  - Tagging removes all mention of killing from the game, including screen modification and sound calls.

- **MINIMUM VOLUME**: 0-255 Default is 30
- **GAME VOLUME**: 0-255 Default is 220
- **ATTRACT VOLUME**: 0-255 Default is 120

**Coinage Adjustments** can be used to determine the value of each coin.

- **COINAGE MODE**: USA 1.00/1.00 Select from a variety of countries and coin values. Default is USA 75/75.
- **FREEPLAY**: NO/YES

**Clear Audits** Allow you to clear or reset audits and bookkeeping.

- **CLEAR CREDITS**: NO/YES Clears all credits.
- **CLEAR COIN COUNTERS**: NO/YES Clears all coin counters
- **CLEAR GAME AUDITS**: NO/YES Clears all Game Audits.
- **RESET HIGH SCORES**: NO/YES Resets High Scores Only.
- **DEFAULT ADJUSTMENTS**: NO/YES Resets Operator Adjustable settings to factory defaults.
- **FACTORY SETTINGS**: NO/YES Resets all.
**OPERATOR TEST MODE (CONTINUED)**

**ITNet Options** allows you to customize your machine to accommodate a phone connection. Currently Big Buck Hunter does not use this menu.

**ITNET CALLING** | **ENABLED/DISABLED**  
--- | ---  
Default is enabled. Machine will not try to call if disabled.

- **DIALING PREFIX** | **NONE-9**  
Default is NONE. Select if you need to dial a number for an outside dial tone.

- **DIALING PAUSE** | **2/4/6/8**  
Default is 2. Add a longer delay if your connection requires more time to acquire a dial tone.

- **DIALING MODE** | **TON/PULSE**  
Default is TONE. If your phone uses pulse dialing, select PULSE.

- **DIALTONE DETECT** | **YES/NO**  
Default is NO. Some digital phone systems will connect if the modem ignores the dial tone.

- **FORCE CALL** | **NO/YES**  
Default is NO. Select YES if you want the machine to make an immediate call.

**Gun Calibration** is used to adjust the sighting and accuracy of the gun.

Follow the onscreen instructions to correctly format your gun.

**Sighting the gun:** Stand approximately 3 feet away from the cabinet and be sure the gun is positioned in the center of the screen.

A red dot will appear. Using the sight on the gun, position the red dot in the center of the gun’s cursor and slowly pull the trigger.

**Sight verification:** Next, verify the degree of accuracy in relation to the gun sight by positioning the red dot in the center of the bulls eye target on screen. If the position is centered correctly, exit test to save the settings.

**AUTOMATIC STARTUP TEST AND SWITCH TESTS**

Big Buck Hunter offers a quick startup test for game diagnostics integrity and switch testing. To initiate the Startup Test, press and hold down the Start button during power-up to the machine.

The Startup Test will run through a series of diagnostics tests, and stop on the Switch Test. Activating the various switches will change the displayed text to white. To exit and continue the Integrity Test, press the Gun Trigger and Gun Pump simultaneously. You may have to wait until the modem, sign and card reader tests are complete.

**NOTE:** The Startup Test checks for modem, card reader and LED sign connections, which are not available on this version of Big Buck Hunter. Due to this, the Startup Test will report a test failure. Look at the screen to note the color of the text for each test. If all other tests are displayed in White text, the test was successful.
## Video Problems

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No picture</td>
<td>Dip switches set incorrectly.</td>
<td>Make sure SW-5 switches are all in the ON position.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low-res monitor only.</td>
</tr>
<tr>
<td>Power Bypass Cable not installed correctly.</td>
<td>Make sure the Power Bypass Cable is installed correctly. Refer to pages 10-11 in this manual.</td>
<td></td>
</tr>
<tr>
<td>Bad cable connection.</td>
<td>Make sure there are good connections from the board's video outputs to the monitor's video inputs. Make sure the video card cable is connected to the main PCB.</td>
<td></td>
</tr>
<tr>
<td>No Picture</td>
<td>Hard Drive connected improperly.</td>
<td>Run the power-up test by holding the START button during power-up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check all hard drive connections.</td>
</tr>
<tr>
<td>Monitor.</td>
<td>Make sure the monitor is operating correctly. (Check it with another compatible logic board).</td>
<td></td>
</tr>
<tr>
<td>Voltage too high/low.</td>
<td>Check all power supply voltages. Adjust from 5.0 to 5.2 volts. At the Boot ROM.</td>
<td></td>
</tr>
<tr>
<td>JAMMA Harness connected improperly.</td>
<td>Identify Pin 1 on the JAMMA connector and on the PCB. If installed incorrectly, damage to the PCB may have occurred.</td>
<td></td>
</tr>
<tr>
<td>Scrambled Picture</td>
<td>Missing sync connection or misadjusted monitor.</td>
<td>Check the sync connection - Adjust monitor.</td>
</tr>
<tr>
<td></td>
<td>Dip SW-5 set in the wrong resolution.</td>
<td>Make sure SW-5 switches are all in the ON position.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low-res monitor only.</td>
</tr>
<tr>
<td>Missing colors or washed out color</td>
<td>Bad video connections or misadjusted monitor.</td>
<td>Check the video red, green, and blue connections. Adjust the monitor</td>
</tr>
<tr>
<td>Bright, blurry, or rolling picture</td>
<td>Misadjusted monitor.</td>
<td>Adjust the monitor, not the board. (Refer to your monitor manual).</td>
</tr>
<tr>
<td>Picture too large, too small, or off center</td>
<td>Misadjusted monitor.</td>
<td>Adjust the monitor, not the board. (Refer to your monitor manual).</td>
</tr>
<tr>
<td>Video image is flipped</td>
<td>Misadjusted monitor.</td>
<td>Reverse the monitor's convergence wires or flip the monitor 180°. (Refer to your monitor manual).</td>
</tr>
<tr>
<td>Diagonal white lines</td>
<td>GND problem.</td>
<td>Earth and Logic GND's should be connected at the power supply.</td>
</tr>
</tbody>
</table>
## Control Problems

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Button does not work or is partly inoperable. Or the selections keep scrolling on Operator Mode menus.</td>
<td>Switches not properly connected.</td>
<td>Make sure that the common post of the switch is connected to ground.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure each individual switch is working by doing the Control Panel Test found in the SYSTEM TESTS section.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure that the signal wire for that particular switch is connected to the normally open post of the switch.</td>
</tr>
<tr>
<td></td>
<td>JAMMA Harness connected improperly.</td>
<td>Identify Pin 1 on the JAMMA connector and on the PCB. If installed incorrectly, damage to the PCB may have occurred.</td>
</tr>
<tr>
<td>Coin counter not working</td>
<td>Miscellaneous.</td>
<td>Make sure that the signal wire has a connection from the counter to the board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure counter has correct voltage supply connected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify that the counter is good.</td>
</tr>
<tr>
<td>Gun does not work</td>
<td>No +5 voltage.</td>
<td>Bad inductor (L52) or bad connection to Gun.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for +5V on J52 Pin 1.</td>
</tr>
<tr>
<td></td>
<td>Bad gun or gun cable.</td>
<td>Change with known, good gun and/or gun cable.</td>
</tr>
<tr>
<td></td>
<td>Gun not connected to gun connector J52.</td>
<td>Connect gun cable to J52 Gun 1.</td>
</tr>
<tr>
<td>Gun fails to hit targets</td>
<td>Sun or glare on monitor</td>
<td>Darken room or re-position machine.</td>
</tr>
<tr>
<td></td>
<td>Gun out of adjustment</td>
<td>Use game software to adjust gun calibration.</td>
</tr>
<tr>
<td></td>
<td>Black level may be out of adjustment</td>
<td>Adjust screen’s Black Level so black looks black. Re-adjust brightness and contrast as needed.</td>
</tr>
<tr>
<td>Intermittent or non-functioning gun, normal game starts</td>
<td>Dirty Optics</td>
<td>Clean dirt and debris from gun. Do not apply cleaning fluids into the gun barrel.</td>
</tr>
</tbody>
</table>

**NOTE:** Bright overhead lights, direct sunlight or neon lighting may interfere with the optical gun operation. Reduce the light levels, re-position cabinet and/or adjust the screen brightness to reduce this interference.
**Gun Problems Continued**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermittent or non-functioning gun, normal game starts (continued).</td>
<td>Loose or missing parts</td>
<td>Inspect gun for repair or replacement requirements.</td>
</tr>
<tr>
<td>Faulty switches</td>
<td></td>
<td>Use the Control Tests menu in software to verify switch operation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for loose wires or debris caught in switch contacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check the continuity at each switch position.</td>
</tr>
<tr>
<td>Faulty gun interface</td>
<td>Check inductor L52 at Gun Connector</td>
<td>5V on both sides.</td>
</tr>
<tr>
<td>Faulty wiring</td>
<td>Check for wires caught in door hinges, latches or switch contacts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make sure the harnesses connectors are seated properly and securely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make sure the cabinet wiring is correct for this game, and all switches are free and working.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make sure the gun switch wires are connected securely into the gun connector. Make sure the connector is connected securely to the cable and PCB.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check the continuity of the gun wires to the Main Board.</td>
<td></td>
</tr>
<tr>
<td>Misc.</td>
<td>Remove screws from gun and carefully separate gun halves. Be aware that the pump and trigger are spring loaded, so take care not to unseat them. Carefully clean the lens and gun components. Reassemble gun and verify that it is in working condition.</td>
<td></td>
</tr>
</tbody>
</table>
## Power-Up Problems

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No reaction when game is turned ON</td>
<td>Voltage too high or too low.</td>
<td>Adjust Power supply. Power should be between +5.0v &amp; 5.2v. (Measured on the circuit board). At the Boot ROM</td>
</tr>
<tr>
<td>Power Bypass Cable not installed correctly.</td>
<td>Make sure the Power Bypass Cable is installed correctly. Refer to pages 10-11 in this manual.</td>
<td></td>
</tr>
<tr>
<td>Cabinet is not connected to earth ground.</td>
<td>Cabinet is not connected to earth ground. (All metal should be connected to the earth ground).</td>
<td></td>
</tr>
<tr>
<td>Short between power and ground.</td>
<td>Short between power and ground. Check for foreign material.</td>
<td></td>
</tr>
<tr>
<td>Disconnect the harness and measure the resistance between power and ground. It should read around 600 ohms. (0 ohms is a dead short).</td>
<td>Disconnect the harness and measure the resistance between power and ground. It should read around 600 ohms. (0 ohms is a dead short).</td>
<td></td>
</tr>
<tr>
<td>Make sure the harness is not shorting to anything, such as bare or frayed wires shorting out each other or hitting bare metal.</td>
<td>Make sure the harness is not shorting to anything, such as bare or frayed wires shorting out each other or hitting bare metal.</td>
<td></td>
</tr>
<tr>
<td>No power from the power supply.</td>
<td>Replace power supply.</td>
<td></td>
</tr>
<tr>
<td>Short on the board.</td>
<td>Check for loose or foreign material on the board.</td>
<td></td>
</tr>
<tr>
<td>Hard drive connected improperly.</td>
<td>Run the power-up test by holding down the START button during power-up.</td>
<td></td>
</tr>
<tr>
<td>JAMMA Harness connected improperly.</td>
<td>Identify Pin 1 on the JAMMA connector and on the PCB. If installed incorrectly, damage to the PCB may have occurred.</td>
<td></td>
</tr>
<tr>
<td>Open on socketed IC’s</td>
<td>Check for bent pins on socketed parts. Make sure that all IC’s are seated in their sockets properly.</td>
<td></td>
</tr>
</tbody>
</table>
## General Troubleshooting (continued)

### Sound Problems

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No sound</td>
<td>+12 vdc power supply is bad</td>
<td>Try another +12 vdc power supply.</td>
</tr>
<tr>
<td>Bad connection to the board.</td>
<td>Check for +12 vdc power on the board.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check for +5 vdc power on the board.</td>
<td></td>
</tr>
<tr>
<td>Sound adjustment in Operator</td>
<td>Check the volume setting in the OPERATORS ADJUSTABLE section of the Operator Mode.</td>
<td></td>
</tr>
<tr>
<td>Adjustables</td>
<td>All of the attract mode sounds are “OFF”.</td>
<td></td>
</tr>
<tr>
<td>JAMMA Harness connected improperly</td>
<td>Check the speaker connection.</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Identify Pin 1 on the JAMMA connector and on the PCB. If installed incorrectly, damage to the PCB may have occurred.</td>
<td></td>
</tr>
<tr>
<td>Hard drive connected improperly.</td>
<td>Run the power-up test by holding down the START button during power-up.</td>
<td></td>
</tr>
</tbody>
</table>

### Miscellaneous Problems

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green LED not blinking (D5A or D20)</td>
<td>Program not running.</td>
<td>Make sure all socketed IC’s are seated correctly. Look for bent pins.</td>
</tr>
<tr>
<td>Power Bypass Cable not installed correctly.</td>
<td>Make sure the Power Bypass Cable is installed correctly. Refer to pages 10-11 in this manual.</td>
<td></td>
</tr>
<tr>
<td>Bad connections.</td>
<td>Make sure you have continuity from PCB to power supply.</td>
<td></td>
</tr>
<tr>
<td>Sounds Bad</td>
<td>Miscellaneous</td>
<td>Check the speaker connections.</td>
</tr>
<tr>
<td>On power up the game goes through a long test ending with the Player Control Test</td>
<td>Start switch is stuck or the signal wire is connected to the normally closed post.</td>
<td>Fix the Start switch. Put the signal wire on the normally open post.</td>
</tr>
</tbody>
</table>
## JAMMA Harness and Gun Connections

### JAMMA Harness Connection

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Solder Side</th>
<th>Part Side</th>
<th>Wire Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>*</td>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>Black</td>
<td>*</td>
<td>B</td>
<td>Black</td>
</tr>
<tr>
<td>Red</td>
<td>*</td>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>Red</td>
<td>*</td>
<td>D</td>
<td>Red</td>
</tr>
<tr>
<td>Orange</td>
<td>*</td>
<td>F</td>
<td>Orange</td>
</tr>
<tr>
<td><strong>KEY</strong></td>
<td></td>
<td>H</td>
<td><strong>KEY</strong></td>
</tr>
<tr>
<td>Yellow-Green</td>
<td>Left Speaker (-)</td>
<td>J</td>
<td>Coin Counter</td>
</tr>
<tr>
<td>Green-Black</td>
<td>Video Green</td>
<td>K</td>
<td>Video Red</td>
</tr>
<tr>
<td>White</td>
<td>Video Sync</td>
<td>L</td>
<td>Video Blue</td>
</tr>
<tr>
<td>Orange-Black</td>
<td>Service</td>
<td>M</td>
<td>Video GND</td>
</tr>
<tr>
<td>Green-Blue</td>
<td>Coin2</td>
<td>N</td>
<td>Test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>Coin1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q</td>
<td>Start 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>U</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Orange-Yellow</td>
<td>Volume Down</td>
<td>W</td>
<td>Volume Up</td>
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<td></td>
<td>X</td>
<td>Coin 3</td>
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</tbody>
</table>

* Power is now routed through the Power Bypass cable and not the JAMMA connector. Refer to pages 10-11 for correct installation instructions.

### Gun Harness Connection

<table>
<thead>
<tr>
<th>Main Board Connector</th>
<th>Gun Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIN WIRE #6 - Black</td>
<td>PIN WIRE #1 - Black</td>
</tr>
<tr>
<td>PIN WIRE #1 - Red</td>
<td>PIN WIRE #2 - Red</td>
</tr>
<tr>
<td>PIN WIRE #2 - Yellow</td>
<td>PIN WIRE #3 - Yellow</td>
</tr>
<tr>
<td>PIN WIRE #3 - Green</td>
<td>PIN WIRE #4 - Green</td>
</tr>
<tr>
<td>PIN WIRE #5 - Blue</td>
<td>PIN WIRE #5 - Blue</td>
</tr>
<tr>
<td>PIN WIRE #4 - Purple</td>
<td>PIN WIRE #6 - Purple</td>
</tr>
</tbody>
</table>

**NOTE:** Remember to connect the Gun cable to J52 of the Main Board (Labeled as Gun 1).
APPENDIX D

WARRANTY INFORMATION

Warranty, Repair and Return Policy

- 90-day warranty on all electronic components. All warranty periods begin on the date of purchase from Incredible Technologies, Inc.
- There is a minimum $55.00 service charge for all non-warranty repairs or returns.
- For all servicing, return to Incredible Technologies, Inc.
- ANY non-factory repair or attempted repair voids warranty.

Return Merchandise Authorization

- All returned merchandise must have a Return Merchandise Authorization (RMA) number marked clearly on the outside of the package.
- You must obtain all RMA numbers from your authorized Incredible Technologies, Inc. distributor. Please have your Incredible Technologies, Inc. serial number available when calling for an RMA number.
- Merchandise returned without an RMA number will not be accepted.
- Advance replacement boards will be shipped to distributors or, at the distributor’s request, will be shipped directly to the operator.
- Advance replacement boards will be billed to the distributor until Incredible Technologies, Inc. receives the returned board, at which time a credit will be issued.
- All repairs and/or replacements will ship as soon as possible after receipt or request (subject to availability).

If the original purchaser discovers any physical defect in the media (disk, EPROM, tape) on which the software is distributed or in the documentation, which in the opinion of Incredible Technologies, Inc. (IT) prevents the product from being used as reasonably intended, IT will replace the media or documentation at no charge. The purchaser must return the item to be replaced, with proof of purchase, to IT within 90 days after taking delivery of the software.

IT warrants to the original purchaser that the hardware product is in good working condition for a period of 90 days from taking delivery of the product. Should this product, in IT’s opinion, malfunction within the warranty period because of a defect in design, materials, or workmanship, IT will repair or replace this product without charge under the terms as follows. Replacement of either the hardware product or its component parts will be only on an exchange basis. Any replaced parts or components become the property of IT. This warranty does not apply to those products that have been damaged due to accident, abuse, improper installation, natural disaster, or unauthorized repairs or modifications.

IT excludes any and all implied warranties, including warranties of merchantability and fitness for a particular purpose, and limits the purchaser's remedy to returning the software, hardware, or documentation to IT for replacement.

IT makes no warranty or representation, either express or implied, with respect to this software, hardware, or documentation, their quality, performance, merchantability, or fitness for a particular purpose. This software, hardware, and documentation are licensed “as is,” and the purchaser/licensee assumes the entire risk as to their quality and performance.

In no event will IT be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the software, hardware, or documentation, even if advised of the possibility of such damages. The warranty and remedies set forth above are exclusive and in lieu of all others, oral or written, express or implied. No person, seller, dealer, agent, or employee is authorized to make any modification or addition to this limited warranty.

Some states do not allow the exclusion of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

- INCREDIBLE TECHNOLOGIES, INC  Ver. 11/00
INDUSTRY CANADA (IC) NOTICE

NOTICE: The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The department does not guarantee the equipment will operate to the user’s satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations.

A representative designated by the supplier should coordinate repairs to certified equipment. Any repairs or alterations made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all devices not exceed 5.

REN: 1.0B

WARRANTY AND REPAIR SERVICE:
Incredible Technologies, Inc.
1600 Hicks Road
Rolling Meadows, IL 60008-1240
(847) 870-7027 • (847) 870-0120 Fax
http://www.itsgames.com

FCC Regulation Compliance

• This equipment complies with Part 68 of the FCC Rules. On the back of this equipment there is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company. (NOTE: REN is not required for some types of analog or digital facilities.)

• This equipment uses RJ11.

• FCC compliant telephone cord and modular plugs are provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is part 68 compliant. See installation instructions for details.

• The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN’s of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area. (NOTE: REN are associated with loop-start and ground-start ports. Do not use for E&M or digital ports.)

• If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

• Your telephone company may make changes in its facilities, equipment, operations and procedures that could affect the operation functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

• If you experience trouble with this telephone equipment, please contact Incredible Technologies technical department at 847-870-7027 for information on obtaining service or repairs. The Telephone Company may ask you to disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

• No user serviceable parts are contained in this equipment.

• This equipment may not be used on coin service provided by the Telephone Company. Connection to party lines is subject to tariffs.
ITNet SALES AND SERVICE

Contact the following for more information on ITNet and Big Buck Hunter!

ITNet Sales Information:
Check the IT web site at www.itsgames.com for an Authorized Distributor near you.

Sales Manager
Marguerite Kirby
Incredible Technologies, Inc.
425-898-1555
425-898-1557 Fax
mkirby@itsgames.com

Sales Coordinator
Debi Bott
Incredible Technologies, Inc.
(847) 870-7027 x130
(847) 870-0120 Fax
dbott@itsgames.com

ITNet Service Information

Technical Information:
Incredible Technologies, Inc.
847-870-7027 x 121

Warranty and Repair:
Incredible Technologies, Inc.
847-870-7027 x 121

ITNet Accounting
Incredible Technologies, Inc.
847-870-7027 x 117

Mars Bill Acceptors:
Mars Technical Service
Phone: 800-345-8172

Wells-Gardner Monitors:
Wells-Gardner
Phone: 800-336-6630
Fax: 773-252-8299

Imperial Power Supplies
Imperial
Midwest: 800-386-7040
East Coast: 800-526-6261
West Coast: 800-423-2753

Happ Controls
Happ Controls
Phone: 800-BUY-HAPP

Replacement Part Numbers

Please refer to these IT part numbers when placing orders.

900000234  Big Buck Hunter Non-tournament Main board, U.S. Version
890000050  Big Buck Hunter Shotgun
900075234  Big Buck Hunter Hard Drive
820000234  Big Buck Hunter Marquee
825000234  Big Buck Hunter Control Panel Overlay
835000234  Big Buck Hunter Control Panel Labels