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 $40.00 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.

- AAMA decal must not be removed from the PCB. Warranty voided if removed.

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 be shipped within 24 hours of receipt or request (subject to availability).

FCC REGULATION COMPLIANCE

This equipment complies 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 uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
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GETTING STARTED

GAME PACKAGE CONTENTS

(1) Printed Circuit Board (PCB) Assembly
(1) Connecting Wire Harness (JAMMA)
(1) Trackball Assembly w/Metal Plate
(1) Trackball Cable Assembly
(3) Button Assemblies
(1) Marquee Styrene
(1) Marquee Plexiglas
(1) Control Panel Overlay
(1) Set of Function Labels
(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
1-3/16" Chassis or Sheet Metal Punch
Small File
Razor Knife and Sharp Blades
Straight Edge
Staple Gun and Staples
Soldering Iron and 60/40 Resin Core Solder
Vacuum Cleaner
Assorted Fastening Hardware
Heat Shrink Tubing (3/32", 1/8", and 3/16")
Masking Tape
3-1/2" or 4" Wire Ties

INSTALLATION PREPARATION

BEFORE YOU START.....

1. Check to see if all the needed parts have been included in your kit (See GAME PACKAGE CONTENTS.)

2. Do you have the necessary tools? (See RECOMMENDED TOOLS AND SUPPLIES.)

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 3-D GOLF.

+5 VDC 5 amps
+12 VDC 2 amps

NOTE:

The output level of many "regulated" switching power supplies actually vary with load. For this reason, the power supply from an old game may not be correctly adjusted for GOLDEN TEE 3-D GOLF. 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, across an I.C. Damage will occur if the power supply is outside the acceptable limits (between 4.8 and 5.5 VDC.)
**MONITOR REQUIREMENTS:**

GOLDEN TEE 3-D GOLF 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.

**NOTE:**

For 33" monitors, a 75 ohm pull-up resistor may be required on the sync line of the video board. The appropriate place to put resistor is across diode D9. The need for the 75 ohm pullup resistor is if you are unable to get a synchronized picture by adjusting the monitor.

---

**CABINET SELECTION:**

You can choose either a new cabinet or a used cabinet for your GOLDEN TEE 3-D GOLF 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 and monitor. We provide the rest. The end result is a new game at a very low cost.

**NOTE:**

It is recommended that a large control panel with a 25" monitor, like those on a 4-player cabinet, be used for your GOLDEN TEE 3D GOLF.

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

A cabinet with a 25" monitor and a large control panel will allow you to mount the trackball farther from the monitor. This prevents players hands from hitting the monitor glass when rolling the trackball forward, and will earn better than a smaller control panel with a smaller monitor.

---

**PREPARING A USED CABINET FOR GOLDEN TEE 3D GOLF:**

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. Remove the old graphics and adhesive from the control panel, and the side of the cabinet. Remove adhesive with solvent.

4. 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.

5. Remember, spending time on the cabinet’s appearance (i.e., marquee, control panel, and cabinet graphics) will raise your profits with the introduction of a new game package, especially if the cabinet looks clean and new.

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 ensure that glitches do not occur.

---

**THE CONTROL PANEL**

Mounting the trackball correctly and securely is very important for the profitability of your new game. Follow these instructions carefully for mounting the trackball to: 1) a metal control panel; 2) a wooden control with routing; 3) or a wooden control panel without routing. (Refer to template inserts found in the back of the manual.)

**NOTE:**

Installing the trackball as far away from the monitor as possible will prevent players hands from hitting the monitor glass when rolling the trackball forward.

---

GOLDEN TEE 3D GOLF - 3
**TRACKBALL PREPARATION:**

When making the hole for the trackball, follow the instructions, starting on the right, for the type of control panel you will be using.

**NOTE:**
When installing the trackball, make sure the trackball is in the correct orientation. (Refer to picture below.)

1. Fill any existing holes in the metal control panel.
2. Place and secure **TEMPLATE #1** to your control panel in the desired location.
   
   **NOTE:** The trackball should be as far away from the monitor as possible.
3. Carefully drill the holes for the ball and the mounting bolts using the template as a guide.
4. Remove template and file down any rough edges.
5. See **THE GRAPHICS OVERLAY** section on page 5 on how to install the graphics.
6. Mount trackball under the metal control panel using the four carriage bolts.
   
   **NOTE:** Be sure the trackball is mounted as shown in the diagram on page 3.
   
   **NOTE:** Do not over-tighten the trackball. It will warp and cause the trackball to not operate correctly.
   
   **NOTE:** The supplied metal plate is not needed with metal control panels.
   
   **NOTE:** Be sure to mount the trackball so as much of the ball is exposed as possible.
7. If using Plexiglas on your control panel, it is highly recommended that a 3-1/2" hole be cut in the Plexiglas for the trackball. This allows for players to use the full height of the trackball. Carefully file and smooth the edges of the hole in the Plexiglas so players do not cut their hands when playing.
1. Fill any existing holes in the wooden control panel.

2. Place and secure TEMPLATE #2 to your control panel in the desired location.

   **NOTE:** The trackball should be as far away from the monitor as possible.

3. Carefully cut the hole for the trackball in the shape indicated on the template.

4. Drill the mounting holes indicated.

5. Next route out the shaded area indicated on TEMPLATE #2, 1/16” deep. Use a 1/2” Rabbiting Bit for best results. This is so the supplied metal plate will be flush with the control panel surface.

6. Remove template and file down any rough edges.

7. See THE GRAPHICS OVERLAY section on page 5 on how to install the graphics.

8. Mount trackball to the metal plate using the four carriage bolts supplied. Then mount the metal plate to the wooden control panel.

   **NOTE:** Be sure the trackball is mounted as shown in the diagram on page 3.

   **NOTE:** Do not over-tighten the trackball. It will warp and cause the trackball to not operate correctly.

   **NOTE:** Be sure to mount the trackball so as much of the ball is exposed as possible.

9. If using Plexiglas on your control panel, it is highly recommended that a 3-1/2” hole be cut in the Plexiglas for the trackball. This allows for players to use the full height of the trackball. Carefully file and smooth the edges of the hole in the Plexiglas so players do not cut their hands when playing.

1. Fill any existing holes in the wooden control panel.

2. Place and secure TEMPLATE #3 to your control panel in the desired location.

   **NOTE:** The trackball should be as far away from the monitor as possible.

3. Carefully cut the hole for the trackball in the shape indicated on the template. The trackball should fit the hole shape exactly.

4. Drill the mounting holes as indicated.

5. Remove template and file down any rough edges.

6. Using the TRACKBALL ORIENTATION TEMPLATE, cut a 3” hole in the Plexiglas overlay to fit over the trackball. Be sure to include holes for the buttons, and all of the mounting bolts.

7. See THE GRAPHICS OVERLAY section on page 5 on how to install the graphics.

8. Insert the trackball into the newly cut hole. Place Plexiglas overlay on top of the control panel. Place the supplied metal plate **under** the trackball and use the carriage bolts to secure it to the control panel. The metal plate below and the Plexiglas above will secure the trackball assembly into position.

   **NOTE:** Be sure the trackball is mounted as shown in the diagram on page 3.

   **NOTE:** Do not over-tighten the trackball. It will warp and cause the trackball to not operate correctly.

   **NOTE:** Be sure to mount the trackball so as much of the ball is exposed as possible.
BUTTON PREPARATION:

1. When making the holes for the buttons, **DO NOT use the Function Labels to outline any new holes.** The Function Labels are designed to fit right over the buttons when installed on the control panel. If the labels are used as a template the holes will be too big, and the buttons will fall through. Instead, use the labels as a guide to where you want to drill your new holes, and then cut a 1-1/8" hole in the center of where the labels are to be placed. **DO NOT** stick the labels to the panel at this time.

2. Drill or punch the holes marked for buttons or bolts. Use a chassis or sheet metal punch for best results on button holes.

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

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

5. 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.

FUNCTION LABELS Overlay Installation:

Line up the supplied function labels with the corresponding control panel holes. Remove the backing and carefully press into place. Be sure they are straight. Attach the **HOOK/SWING Reference diagram** above the trackball label. If your control panel is too narrow to fit the reference diagram, mount the diagram under the monitor glass on the bezel. Refer to the diagrams below.

THE GRAPHICS Overlay

GOLDEN TEE 3-D GOLF comes equipped with graphics that will accommodate a variety of existing game cabinets.

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 each control panel hole that you have marked. Cut out material covering the pre-drilled holes with the razor knife. Be sure to cut the background overlay above each hole and trim cleanly and evenly.

or put the **HOOK/SWING Reference diagram** on the bezel.
MARQUEE INSTALLATION:

If your cabinet needs a new marquee glass, determine the correct size and cut the Plexiglas (supplied) to fit. Using the old marquee glass as a template, center the Plexiglas on your new marquee graphics, 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 the styrene. 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.

PRINTED CIRCUIT BOARD (PCB):

Mount the PCB to the side of the cabinet with the connector toward the top of the drawer. This will keep the wire harness from slipping off due to vibration. Mark and drill pilot holes (3/32") onto the cabinet side, being careful not to drill through to the outside. Attach the PCB standoffs to the cabinet using wood screws and spacers, snug but not too tight or the board may warp or crack. Be sure the board is not being flexed in any way.

WIRE HARNESS:

1. If you are installing GOLDEN TEE 3-D GOLF into a Dynamo cabinet with a pre-installed JAMMA harness, you will notice that it does 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 (Dynamo included) 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.

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:
   - Strip off about ½" of insulation from the wire.
   - Slide a piece of heat-shrink tubing over the end.
   - 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.

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

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 trackball and buttons on the control panel by following the detailed instructions beginning on page 3. The two red buttons are used for FACE LEFT and FACE RIGHT. The white button is used as the START button. PLEASE NOTE: If you want your new game to earn money, you must install the trackball correctly.

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

3. Wire the trackball and buttons using the JAMMA Harness Connection table on page 26. Connect thetrackball using the supplied trackball cable into PLAYER 1 on the Memory Board.
POWER WIRES:

1. Connect the wires that are designated for your power supply. You will need a supply of +5 vdc, and +12 vdc. The +5 vdc must be regulated to within 5% (+ or - 0.25). The +12 vdc may be unregulated but should not stray too far or the sound may be affected. If the cabinet’s supply does not provide these voltages, it will have to be replaced. A switching-type supply is recommended.

2. You will notice that you have more than one wire for each voltage. Use all wires supplied on the harness. This will ensure better power transmission and prevent overloading of the edge connector pads.

3. Tin all power supply wires before connecting them to the power supply. Loose strands may short out the supply. For best results, connect spade lugs to the ends of the power wires and attach to the screw terminals of the power supply.

MONITOR WIRES:

You will be connecting the RED, GREEN, and BLUE video drives along with the composite SYNC and video GROUND wires.

SPEAKER WIRES:

Connect the speaker wires paying attention to their polarity.

NOTE:
If your cabinet has two speakers, connect both. If they are 8 or 16 ohm speakers, connect them in parallel, if they are 4 ohm, connect them in series.

NOTE:
Examine the speaker carefully. Is it really up to the high standards you wish to maintain at your location? Unfortunately, many arcade speakers are inadequate for reproduction of good game sounds. Remember, this is not just a video game -- it is a video/audio game investment. Far more effort was put into the sounds of this game than is put into most other arcade games. If the speakers are not up to it, replace them. A small investment in good speakers can make a world of difference in profits. Competent and reasonably priced speakers can be obtained from stores such as Radio Shack.

Position speakers as far from the monitor as possible. If placed too close, the speaker’s magnet may deflect the monitor and cause strange coloration, which can usually be corrected by degaussing the monitor. Make sure everything else in the cabinet is attached securely for the same reason.

SYNC:

This is the recommended approach for a Wells-Gardener 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 WIRING:

1. Wire the coin doors and the test / service switch(es) as per the JAMMA Harness Connection table on page 26.

2. Connect the door lamps to the +12 vdc supply. Some games have separate power supply outputs for the lamps.

3. 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.

4. 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.
5. GOLDEN TEE 3D GOLF has the ability to adjust volume at any time during a game. Install 2 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 diagram on page 26.

6. GOLDEN TEE 3D GOLF is also capable of running a Mars Light or other external signal, which will be activated if the game is running a special Hole-in-One contest.

MARS LIGHT HOOKUP

Equipment required. A mars light police beacon and a 3 amp 120 volt AC solid state relay with a 2.5 to 8 volt control line.

1. Connect a wire from pin 2 of the sound boards ticket connector to the positive control line of the Relay.

2. Connect a wire from pin 3 of the sound boards ticket connector to the negative control line of the Relay.

3. The hot AC line in should connect to one side of the light and the return should connect to the AC input of the relay.

4. From the AC output of the relay, connect a wire to the other side of the light.

5. The hole-in-one contest turned on in operator adjustables in order for the light to activate when a hole-in-one is made.

NOTE:

Mars Light will only work for sound PROMS 1.2 and above.

FINAL CHECK:

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

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

3. 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.

INITIAL START-UP

1. Attach JAMMA Harness. Plug in the game and turn it on.

WARNING! - Make sure the harness is plugged in correctly. Damage to PCB will occur if JAMMA connector is plugged in wrong.

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

NOTE:

Readjust the +5 Volt supply. Adjust the +5 Volt supply so that you read 5.2 Volts across an I.C. on the circuit board. If measured at the power supply, the reading will be higher at the power supply outputs.

3. Make sure the yellow LED on the Sound PCB is flashing. If not, something is wrong, turn off the game.

4. Listen for sound. Sounds should be heard in the attract mode.

5. If you do not hear any sounds and the yellow LED is flashing, try turning up the volume and check the speaker connections. Dropping a coin through a coin switch should cause a sound.

6. How is the picture? Is it centered or is it too bright or too Is it in focus? Adjust your monitor to get the best picture possible.

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 information on page 12. Proper monitor adjustment is very important.)
7. Try all coin switches. Drop quarters or tokens through to check the coin mechs. Make sure the game is adding credits. You can use the Player Control Tests by pressing the test switch and entering the SYSTEM TEST MENU. 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.

DIP SWITCH SETTINGS

The main dip switches can be found on the main board near the fuse.

<table>
<thead>
<tr>
<th>Dip switch</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (ON)</td>
<td>Always &quot;ON&quot; (DEFAULT)</td>
</tr>
<tr>
<td>4 (OFF)</td>
<td>*** NOT USED ***</td>
</tr>
<tr>
<td>3 (ON)</td>
<td>Trackball normal (DEFAULT)</td>
</tr>
<tr>
<td>3 (OFF)</td>
<td>Trackball mounted at 45° angle.</td>
</tr>
<tr>
<td>2 (ON)</td>
<td>One Trackball (DEFAULT)</td>
</tr>
<tr>
<td>2 (OFF)</td>
<td>Two Trackballs</td>
</tr>
<tr>
<td>1 (ON)</td>
<td>Normal Game Play (DEFAULT)</td>
</tr>
<tr>
<td>1 (OFF)</td>
<td>Operator Mode Menu</td>
</tr>
</tbody>
</table>

There are also dip switches on the memory board near the green LED. Switches #1 and #2 must be "ON" and switches #3 and #4 must be "OFF".

OPERATOR MODE

To enter the OPERATOR MODE MENU, press the Test Button, located just inside the coin door. When the Test Button is pressed or DIP Switch 1 is flipped to the OFF position, the screen displays the OPERATOR MODE MENU.

NOTE:
If you used DIP switch 1 to enter the OPERATOR MODE MENU, you will need to flip DIP switch 1 back to the ON position in order to return to the game.

The OPERATOR MODE MENU allows you to enter into four different areas:

VOLUME SETTINGS is used to adjust the volume of your game for your location.

OPERATOR ADJUSTABLES is used for customizing your game for your location. Some of the features in Operator Adjustables are number of coins per game, sounds on or off when no one is playing, difficulty settings, etc.

GAME AUDITS allows you to check your game’s overall earnings, game times, game scores, etc. The Audits can be reset through this menu as well.

SYSTEM TESTS verifies the operation of the hardware, controls, and monitor through easy and automatic procedures accessed through these menus.
Menu items can be highlighted using the trackball or FACE LEFT and FACE RIGHT buttons. When using the trackball, menu items are highlighted by rolling the trackball up or down. To select a highlighted item, press the START button.

To exit any of these tests and return the game to its normal state, use the trackball or FACE LEFT and FACE RIGHT button to highlight the line that says EXIT, and press the START button.

**COLOR KEY NOTE:**
For easy identification, all test screens have been color coded. Items displayed in GREEN are the Menu titles. This is the name of the menu that is currently displayed. Items appearing in YELLOW are the menu's instructions. The Light BLUE items are choices available in this menu. The PURPLE item is the selection that is currently highlighted. If RED is ever displayed, there is a problem with that item and it should be corrected.

**VOLUME SETTINGS**
The **VOLUME SETTINGS** screen is used to adjust the sounds that are heard during game play.

When this screen appears, music will play. Move the trackball to the right to increase the game's sounds and music. Rolling the trackball to the left will make the game sounds softer. When you have adjusted the sounds to the appropriate volume, press the START button to exit back to the main menu.

The volume can also be set using optional volume up/down push button switches. See page 8 for more information on this feature.

**OPERATOR ADJUSTABLES**
The **OPERATOR ADJUSTABLES MENU** is accessed through the **OPERATOR MODE MENU**. From the **OPERATOR MODE MENU**, roll the trackball down or up to highlight the words **OPERATOR ADJUSTABLES MENU** which will then appear in purple letters. Now press the START button, and the **OPERATOR ADJUSTABLES MENU** will appear on the screen.

As you can see, there are many possible customizing procedures that you can control. Below is a brief description of each adjustable function and what the screen looks like when displayed. Remember, to select an item from any menu, using the trackball to highlight the item in purple, and then press the START button.

**GAME MODE SELECTION:**
This menu allows you to place the game in standard Coin Mode, or choose Free Play.

In COIN MODE, the game will only work if coins are deposited into the game.
In FREE PLAY, coins are not needed for play, and the START button is always active.

GAME RESETS:

The GAME RESETS menu will cancel or zero out any custom features or bookkeeping figures that are no longer wanted.

RESET ALL TO FACTORY SETTINGS will change the game back to the way the game was preset when new. Any custom features such as Free Play and Skill Levels will be changed back to the original settings set at the factory.

RESET HIGH SCORES ONLY is used to erase all of the high scores stored in memory.

RESET AUDITS ONLY is used when all of your bookkeeping and statistics have been gathered from the Audits section, and are no longer needed. If you like to gather all of your accounting information each week, or after each collection, it is a good practice to reset all of the audits so your coin count will match the audit information.

ATTRACT MODE SOUNDS:

This menu is used to adjust the sounds that are heard while no one is playing the game.

ALL ATTRACT MODE SOUNDS ON will play sounds during every attract cycle.

OCCASIONAL ATTRACT MODE SOUNDS plays sounds about every ten to twelve times the attract mode is repeated.

ALL ATTRACT MODE SOUNDS OFF will not allow any sounds to be played during the attract mode.

CREDITS AND COIN DOOR SETTINGS:

This menu allows you to change the number of coins needed to play GOLDEN TEE 3-D GOLF.

You can set each door to different coins values by highlighting: DOOR 1 COIN VALUE for coin door 1, DOOR 2 COIN VALUE for coin door 2, etc.. Moving Trackball left or right will change the number of credits that each coin represents.

COINS NEEDED FOR ONE CREDIT.....To award a game credit, the player will need to insert an adjustable number of coins.

HOLES PLAYED PER CREDIT.....This defines the number of holes the player is given for each credit. This value can range from 1 to 3 holes.

COINS NEEDED TO PLAY 18 HOLES.....To play an entire 18 holes at a reduced cost to the player, you can set this value to something less than the cost of buying holes as described above. The default is 10 coins for 18 holes. This is a savings of 2 coins, at a rate of 2 coins for 3 holes. The player will need to insert all 10 coins at the start of a game to take advantage of this.
**DELAY TIME ADJUSTMENT:**

This option allows for changing the delay of game time.

<table>
<thead>
<tr>
<th>GOLDEN TEE 3-D GOLF V1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACKBALL UP TO MOVE UP</td>
</tr>
<tr>
<td>TRACKBALL DOWN TO MOVE DOWN</td>
</tr>
<tr>
<td>PRESS START TO CHOOSE</td>
</tr>
<tr>
<td>DELAY TIME ADJUSTMENT</td>
</tr>
<tr>
<td>EXIT DELAY TIME ADJUSTMENT</td>
</tr>
<tr>
<td>DELAY OF GAME TIMEOUT 0:25</td>
</tr>
<tr>
<td>DELAY OF GAME TIMEOUT ON/OFF</td>
</tr>
<tr>
<td>TO CHANGE VALUES MOVE TRACKBALL LEFT TO DECREASE</td>
</tr>
<tr>
<td>MOVE TRACKBALL RIGHT TO INCREASE</td>
</tr>
</tbody>
</table>

**BUTTON CONFIGURATIONS SCREEN**

DELAY OF GAME TIMEOUT (1).....The game will give the player a penalty stroke if they have not swung the club after this amount of time.

DELAY OF GAME TIMEOUT (2).....The timeout can be disabled by selecting "OFF" - The default is "ON". We recommend leaving this "ON" so the game will return to the attract mode if a player walks away from a game in progress.

**SKILL LEVEL ADJUSTMENT:**

GOLDEN TEE 3-D GOLF allows for changing the level of skill needed to play the game. This feature is good for locations with younger or novice players who are less skilled at the game, or expert or accomplished players who demand a greater challenge.

<table>
<thead>
<tr>
<th>GOLDEN TEE 3-D GOLF V1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACKBALL UP TO MOVE UP</td>
</tr>
<tr>
<td>TRACKBALL DOWN TO MOVE DOWN</td>
</tr>
<tr>
<td>PRESS START TO CHOOSE</td>
</tr>
<tr>
<td>SKILL LEVEL ADJUSTMENT</td>
</tr>
<tr>
<td>SKILL LEVEL 1 - EASIEST</td>
</tr>
<tr>
<td>SKILL LEVEL 2</td>
</tr>
<tr>
<td>SKILL LEVEL 3</td>
</tr>
<tr>
<td>SKILL LEVEL 4</td>
</tr>
<tr>
<td>SKILL LEVEL 5 - HARDEST</td>
</tr>
</tbody>
</table>

**SKILL LEVEL ADJUSTMENT SCREEN**

To set the game to an easy skill level, highlight...SKILL LEVEL 1 - EASIEST.

To set the game to a difficult skill level, highlight...SKILL LEVEL 5 - HARDEST.

**HOLE IN ONE CONTEST MODE**

The **HOLE IN ONE CONTEST MODE** can be used if your location wants to give away prizes for a hole-in-one.

<table>
<thead>
<tr>
<th>GOLDEN TEE 3-D GOLF V1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACKBALL UP TO MOVE UP</td>
</tr>
<tr>
<td>TRACKBALL DOWN TO MOVE DOWN</td>
</tr>
<tr>
<td>PRESS START TO CHOOSE</td>
</tr>
<tr>
<td>HOLE IN ONE CONTEST MODE</td>
</tr>
<tr>
<td>NO HOLE IN ONE CONTEST</td>
</tr>
<tr>
<td>HOLE IN ONE CONTEST - WIN IMMEDIATELY</td>
</tr>
<tr>
<td>HOLE IN ONE CONTEST - QUALIFY TO WIN</td>
</tr>
</tbody>
</table>

**HOLE IN ONE CONTEST MODE SCREEN**

Setting the HOLE-IN-ONE CONTEST "ON" will cause a loud siren and fanfare to go off if a hole-in-one is made. The hole-in-one message can be altered depending on your type of contest.

HOLE IN ONE CONTEST - WIN IMMEDIATELY will display a "YOU HAVE WON" message.

HOLE IN ONE CONTEST - QUALIFY TO WIN will display a "YOU HAVE QUALIFIED" message.
The **GAME AUDITS** MENU will supply you with a detailed accounting of helpful and informative bookkeeping and statistics. To enter the **GAME AUDITS MENU**, first go to the **OPERATOR MODE MENU** by pressing the test switch located just inside the coin door of the cabinet or flip DIP switch 1 to the OFF position on the Main PCB. From the **OPERATOR MODE MENU**, press FACE RIGHT or FACE LEFT until the **GAME AUDITS MENU** appears in white letters. Now press the START button, and the **GAME AUDITS MENU** will appear on the screen.

**DISPLAY GAME SELECTION AUDITS:**

This menu will show the audits for each game selection.

**NUMBER OF GOLFERS AND HOLES PLAYED:**

This menu displays how many games were played by 1, 2, 3, or 4 players and how many holes were played during a game.
**OAK VALLEY AUDITS:**

This menu displays the audits for the Oak Valley course.

```
GOLDEN TEE 3-D GOLF V1.00
PRESS START TO EXIT
OAK VALLEY AUDITS
TOTAL GAMES XXX
TOTAL HOLES PLAYED XXX
AVERAGE HOLES PER GAME XXX
TOTAL STROKES XXX
TOTAL PUTTS XXX
TOTAL WATER OR UNPLAYABLE BALLS XXX
TOTAL OUT OF BOUNDS SHOTS XXX
TOTAL DELAY OF GAMES XXX
```

**OCEAN POINTE AUDITS:**

This menu displays the audits for the Ocean Pointe course.

```
GOLDEN TEE 3-D GOLF V1.00
PRESS START TO EXIT
OCEAN POINTE AUDITS
TOTAL GAMES XXX
TOTAL HOLES PLAYED XXX
AVERAGE HOLES PER GAME XXX
TOTAL STROKES XXX
TOTAL PUTTS XXX
TOTAL WATER OR UNPLAYABLE BALLS XXX
TOTAL OUT OF BOUNDS SHOTS XXX
TOTAL DELAY OF GAMES XXX
```

**CACTUS CANYON AUDITS:**

This menu will display the audits for the Cactus Canyon course.

```
GOLDEN TEE 3-D GOLF V1.00
PRESS START TO EXIT
CACTUS CANYON AUDITS
TOTAL GAMES XXX
TOTAL HOLES PLAYED XXX
AVERAGE HOLES PER GAME XXX
TOTAL STROKES XXX
TOTAL PUTTS XXX
TOTAL WATER OR UNPLAYABLE BALLS XXX
TOTAL OUT OF BOUNDS SHOTS XXX
TOTAL DELAY OF GAMES XXX
```

**RESET AUDITS:**

This menu will reset your audits.

```
GOLDEN TEE 3-D GOLF V1.00
TRACKBALL UP TO MOVE UP
TRACKBALL DOWN TO MOVE DOWN
PRESS START TO CHOOSE
RESET AUDITS
NO RESET AUDITS
RESET AUDITS
```

If you wish to set all of the game audits (described above) back to zero, highlight `RESET AUDITS` from this menu and press the START button. The screen will briefly display `AUDIT RESET`.

If you change your mind and decide not to reset the audits to zero, highlight `NO RESET AUDITS` and you will exit this screen without making any changes.
**SYSTEM TESTS**

GOLDEN TEE 3-D GOLF has been inspected and tested at the factory, and most likely the game will be in perfect working order when you plug it in. If you are experiencing any problems with the game, the SYSTEM TESTS MENU is a good place to start when tracking down the problem. To enter the SYSTEM TESTS MENU, first go to the OPERATOR MODE MENU by pressing the test switch located just inside the coin door of the cabinet, or set DIP Switch 1 on the Main PCB to the OFF position. From the OPERATOR MODE MENU, roll the trackball up or down until the word SYSTEM TESTS MENU appears in purple letters. Now press the START button, and the SYSTEM TESTS MENU will appear on the screen.

**FULL GROM CHECKSUM TEST:**

Choose FULL GROM CHECKSUM TEST from the SYSTEM TEST MENU to test the Graphics chips on the PCB. This test performs a complete test of the Graphics ROM's. While the test is in progress the following message is displayed:

When the test is completed the GROM Test Screen is displayed.

1. If all checksums are shown in blue, the test passed and your game is in good working order.

2. If any checksums are bad, they will be displayed in red text on this screen. This means that the GROM is defective and needs to be replaced. Call your distributor or the Incredible Technologies, Inc. Service Department for further help.

3. To exit this test, press the START button.

**VIDEO SCREEN TESTS:**

You can test your monitor and adjust colors by choosing VIDEO SCREEN TESTS and pressing the START button.
FAST GROM CHECKSUM TEST:

Choose FAST GROM CHECKSUM TEST from the SYSTEM TEST MENU to test the Graphics chips on the PCB. This test performs a complete test of the Graphics ROM's. While the test is in progress the following message is displayed:

```
FAST GROM CHECKSUM SCREEN
(TE2 IN PROGRESS)
```

When the test is completed the GROM Test Screen is displayed.

```
GOLDEN TEE 3-D GOLF V1.00

FAST GROM CHECKSUM TEST

ROM1: 00000 GOOD
ROM2: 00000 GOOD
ROM3: 00000 GOOD
ROM4: 00000 GOOD

FAST GROM CHECKSUM TEST SCREEN
(TE2 COMPLETED)
```

1. If all checksums are shown in white, the test passed and your game is in good working order.

2. If any checksums are bad, they will be displayed in red text on this screen. This means that the GROM is defective and needs to be replaced. Call your distributor or the Incredible Technologies, Inc. Service Department for further help.

3. To exit this test, press the START button.

VIDEO RAM TEST:

This test performs a complete test of the Graphics video RAM. The video RAM is tested in two pages. The following message will be displayed as each page is tested.

```
RUNNING VIDEO PLANE A/B. FIRST PAGE
```

When the test is completed the results will be displayed as follows.

```
GOLDEN TEE 3-D GOLF V1.00

VIDEO RAM TEST

VIDEO PLANE A PAGE 0 STATUS = 0000
VIDEO PLANE A PAGE 1 STATUS = 0000
VIDEO PLANE B PAGE 0 STATUS = 0000
VIDEO PLANE B PAGE 1 STATUS = 0000
U32 GOOD U35 GOOD U36 GOOD U31 GOOD
VIDEO RAM TEST (PASSED or FAILED)
PRESS START BUTTON TO EXIT
PRESS LEFT BUTTON TO LOOP TEST
```

```
VIDEO RAM TEST SCREEN
```

1. If the game passes this test, zeros will be displayed in white along with a VIDEO RAM TEST PASSED message.

2. If the test fails, a non-zero status and VIDEO RAM TEST FAILED message will be displayed in red. Call your distributor or the Incredible Technologies, Inc. Service Department for further help.

3. To exit this test, press the START button.

PALETTE RAM TEST:

```
GOLDEN TEE 3-D GOLF V1.00

PALETTE RAM TEST
PALETTE RAM STATUS = 0000
RED GOOD GREEN GOOD BLUE GOOD
PALETTE RAM TEST (PASSED or FAILED)
PRESS START BUTTON TO EXIT
PRESS LEFT BUTTON TO LOOP TEST
```

```
PALETTE RAM TEST SCREEN
```
BOARD TESTS:

This test will perform all of the system's tests at one time.

<table>
<thead>
<tr>
<th>PROGRAM MEMORY U45-U48 (GOOD or BAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PALETTE RAM TEST</td>
</tr>
<tr>
<td>RED GOOD  GREEN  GOOD  BLUE  GOOD</td>
</tr>
<tr>
<td>PALETTE RAM TEST (PASSED or FAILED)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIDEO RAM TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>U32 GOOD  U36 GOOD  U38 GOOD  U31 GOOD</td>
</tr>
<tr>
<td>VIDEO RAM TEST (PASSED or FAILED)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROM TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROM  CHECKSUM  STAT</td>
</tr>
<tr>
<td>GROM  GROM  CHECKSUM  STAT</td>
</tr>
<tr>
<td>GROM  GROM  GROM  GROM  CHECKSUM  STAT</td>
</tr>
</tbody>
</table>

| FAST GROM CHECKSUM TEST (PASSED or FAILED) | 111 BOARD TEST (PASSED or FAILED) 111 |

**SOUND TESTS:**

Choose SOUND TEST from the SYSTEM TEST MENU to test the sounds and speakers in the game. The sound section also controls the coin meter, and you can test it from this section as well.

<table>
<thead>
<tr>
<th>GOLDEN TEE 3-D GOLF V1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRACKBALL UP TO MOVE UP</td>
</tr>
<tr>
<td>TRACKBALL DOWN TO MOVE DOWN</td>
</tr>
<tr>
<td>PRESS START TO CHOOSE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUND TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COIN METER TEST</td>
</tr>
<tr>
<td>TEST ALL SOUND ROMS</td>
</tr>
<tr>
<td>ROM0 - DRUMS AND PERCUSSION</td>
</tr>
<tr>
<td>SROM1 - BROKEN GLASS</td>
</tr>
<tr>
<td>SROM2 - FABULOUS SHOT !</td>
</tr>
<tr>
<td>SROM3 - GOLF SWING</td>
</tr>
<tr>
<td>HOLE IN ONE EVENT</td>
</tr>
<tr>
<td>MUSIC</td>
</tr>
</tbody>
</table>

To test the coin meter, choose COIN METER TEST from this menu. If everything is working properly, the meter should increment each time the START button is pressed while this line is highlighted.

CONTROL PANEL TEST:

When CONTROL PANEL TEST is selected, the screen will display a diagram of a typical GOLDEN TEE 3D GOLF control panel. The controls are highlighted on the diagram when the controls are active. Test all of the controls, including coin test and service switches. Press FACE LEFT and FACE RIGHT together to exit this test.

NOTE:

For cabinets with 2 sets of player controls, two separate player control tests will appear in the SYSTEM TESTS MENU.
# 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 on the memory board improperly set.</td>
<td>Dip switches 1 and 2 must be 'ON', and 3 and 4 must be 'OFF'</td>
</tr>
<tr>
<td></td>
<td>Bad connections or video inputs are not hooked up</td>
<td>Make sure there are good connections from the board’s video outputs to</td>
</tr>
<tr>
<td></td>
<td>properly.</td>
<td>the monitor’s video inputs.</td>
</tr>
<tr>
<td></td>
<td>Monitor</td>
<td>Make sure the monitor is operating correctly. (Check it with another</td>
</tr>
<tr>
<td></td>
<td>JAMMA harness connected improperly</td>
<td>compatible logic board.)</td>
</tr>
<tr>
<td>Scrambled Picture</td>
<td>Missing sync connection or misadjusted monitor</td>
<td>Identify Pin 1 on the JAMMA connector and on the PCB. If installed</td>
</tr>
<tr>
<td></td>
<td>Need a 75 ohm pull-up resistor on the sync line.</td>
<td>incorrectly, damage to the PCB may have occurred.</td>
</tr>
<tr>
<td>Monitor out of sync and can be adjusted.</td>
<td>Bad video connections</td>
<td>Check the sync connection - Adjust monitor.</td>
</tr>
<tr>
<td>Missing colors or a washed out color</td>
<td>Misadjusted monitor</td>
<td>Solder a 75 ohm resistor across D9 located on the main board.</td>
</tr>
<tr>
<td>Bright, blurry, or rolling picture</td>
<td>Misadjusted monitor</td>
<td>Check the video red, green, and blue connections.</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>Bad GROM</td>
<td>Adjust the monitor, not the board. (Refer to your monitor manual.)</td>
</tr>
<tr>
<td>Bad images in picture</td>
<td>GND problem</td>
<td>Change Dip Switch 3 on the Main PC board or reverse the monitor's</td>
</tr>
<tr>
<td>Diagonal white lines</td>
<td></td>
<td>convergence wires. (Refer to your monitor manual.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do GROM test. Check IC pins to make sure none are bent over.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Earth and Logic GND’s should be connected at the power supply.</td>
</tr>
</tbody>
</table>
## SOUND PROBLEMS

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sound</td>
<td>+12v power supply is bad</td>
<td>Try another +12v power supply.</td>
</tr>
<tr>
<td></td>
<td>Bad connection to the board</td>
<td>Check for +12v power on the board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check for +5v power on the board.</td>
</tr>
<tr>
<td></td>
<td>JAMMA harness connected improperly</td>
<td>Check the volume setting in the OPERATORS ADJUSTABLE section of the Operators Mode.</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous</td>
<td>Check the speaker connections.</td>
</tr>
<tr>
<td></td>
<td></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></td>
<td></td>
<td>Make sure the sound status light is flashing on the board.</td>
</tr>
</tbody>
</table>
## CONTROL PROBLEMS

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buttons do not work or are partly inoperable</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>JAMMA harness connected improperly</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>Coin counter not working</td>
<td>Miscellaneous</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>Trackball mounted correctly but is swinging 45° out of line</td>
<td>DIP switch 3 found on the Main Board is not “ON”.</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>In a two or more player game, controls only work for players 1 and 3.</td>
<td>On the Main Board DIP switch 2 is in the “OFF” position.</td>
<td>Make sure that the signal wire has a connection from the switch to the board.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure +12v is hooked up to the counter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The signal wire is not connected to coin counter. (Check continuity.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify that the counter is good.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure the DIP switch 3 is “ON”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DIP switch 2 must be in the “ON” position for cabinets with one set of player controls.</td>
</tr>
<tr>
<td>Symptom</td>
<td>Probable Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>No reaction when game is turned on</td>
<td>Blown fuse</td>
<td>Power supply is too high. Power should be between +5v &amp; 5.2v. (Measured on the circuit board.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cabinet is not connected to earth ground. (All metal should be connected to the earth ground.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short between power and ground. Check for foreign material.</td>
</tr>
<tr>
<td></td>
<td></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>
</tr>
<tr>
<td></td>
<td></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>
</tr>
<tr>
<td>No power from the power supply</td>
<td></td>
<td>Replace power supply.</td>
</tr>
<tr>
<td>Power supply</td>
<td></td>
<td>Power supply too low. (should ideally be between +5v &amp; +5.2v.) (Measured on the circuit board.)</td>
</tr>
<tr>
<td>Short on the board</td>
<td></td>
<td>Check for loose or foreign material on the board.</td>
</tr>
<tr>
<td>JAMMA harness connected improperly</td>
<td></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>Screen flashes repeatedly</td>
<td>Open on socketed IC's</td>
<td>Check for bent pins on socketed parts.</td>
</tr>
<tr>
<td></td>
<td>+5v setting too low</td>
<td>Make sure that all IC's are seated in their sockets properly.</td>
</tr>
<tr>
<td></td>
<td>DIP switch on the memory board may not be set correctly.</td>
<td>Check voltage. (Measured on the circuit board.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make sure dip switch #1 and # 2 are “ON”, and #3 and #4 are “OFF” on the memory board.</td>
</tr>
</tbody>
</table>
## MISCELLANEOUS PROBLEMS

<table>
<thead>
<tr>
<th><strong>Symptom</strong></th>
<th><strong>Probable Cause</strong></th>
<th><strong>Solution</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Green L.E.D. not blinking</td>
<td>Program not running</td>
<td>Make sure all socketed I.C.'s are seated correctly. Look for bent pins.</td>
</tr>
<tr>
<td></td>
<td>No power</td>
<td>Blown fuse. Check for +5v before and after the fuse. Adjust power supply for +5v after the fuse. Use fast blow fuses only.</td>
</tr>
<tr>
<td></td>
<td>Bad connections</td>
<td>Make sure you have continuity from PCB to power supply.</td>
</tr>
<tr>
<td>Operator adjustables keep changing</td>
<td>Loose pin on ASIC (U1)</td>
<td>Call Incredible Technologies, Inc.</td>
</tr>
<tr>
<td>Sounds bad</td>
<td>Low battery voltage</td>
<td>Battery should be 2 to 3 volts.</td>
</tr>
<tr>
<td>Game comes up in Test Mode</td>
<td>Bad static RAM</td>
<td>Replace.</td>
</tr>
<tr>
<td>Trackball mounted correctly but is swinging 45° out of line.</td>
<td>Miscellaneous</td>
<td>Check the speaker connections.</td>
</tr>
<tr>
<td></td>
<td>Dip Switch 1 is “OFF”</td>
<td>Make sure Dip Switch 1, on the Main PC board, is in the “ON” position.</td>
</tr>
<tr>
<td></td>
<td>Dip switch 3 found on the Main board is not “ON”.</td>
<td>Make sure the Dip switch 3 is “ON”.</td>
</tr>
</tbody>
</table>
# JAMMA Harness Connection for Golden Tee 3D Golf

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>PARTS SIDE</th>
<th>SOLDER SIDE</th>
<th>WIRE COLOR</th>
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<tbody>
<tr>
<td>Black</td>
<td>GND</td>
<td>1</td>
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</tr>
<tr>
<td>Black</td>
<td>GND</td>
<td>2</td>
<td>GND</td>
</tr>
<tr>
<td>Red</td>
<td>+5 vdc</td>
<td>3</td>
<td>+5 vdc</td>
</tr>
<tr>
<td>Red</td>
<td>+5 vdc</td>
<td>4</td>
<td>+5 vdc</td>
</tr>
<tr>
<td>Orange</td>
<td>+12 vdc</td>
<td>5</td>
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<tr>
<td></td>
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<td>6</td>
<td>+12 vdc</td>
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<td>7</td>
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<tr>
<td></td>
<td></td>
<td>8</td>
<td>Coin Counter</td>
</tr>
<tr>
<td>Yellow-Green</td>
<td>Left Speaker (-)</td>
<td>9</td>
<td>Left Speaker (+)</td>
</tr>
<tr>
<td>Green-Black</td>
<td>Video Green</td>
<td>10</td>
<td>Video Red</td>
</tr>
<tr>
<td>White</td>
<td>Video Sync</td>
<td>11</td>
<td>Video Blue</td>
</tr>
<tr>
<td>Orange-Black</td>
<td>Service</td>
<td>12</td>
<td>Video GND</td>
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<tr>
<td>Green-Blue</td>
<td>Coin2</td>
<td>13</td>
<td>Test</td>
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<td>Coin 1</td>
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<tr>
<td>Orange-Yellow</td>
<td>Volume Down</td>
<td>22</td>
<td>Player - Face Left</td>
</tr>
<tr>
<td>Gray-Yellow</td>
<td>Call in button</td>
<td>23</td>
<td>Player - Face Right</td>
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<tr>
<td>Black</td>
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<td>24</td>
<td>Volume Up</td>
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<tr>
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<td>GND</td>
<td>25</td>
<td>Coin 3</td>
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### Trackball Cable Connection

<table>
<thead>
<tr>
<th>Memory Board Connector</th>
<th>Trackball Connector</th>
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</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>
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<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 trackball cable to JP9 of the Memory Board. (Labeled as Player 1)
INcredible Technologies, Inc.

Service / Sales  (800) 262-0323
Fax  (708) 870-0120

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