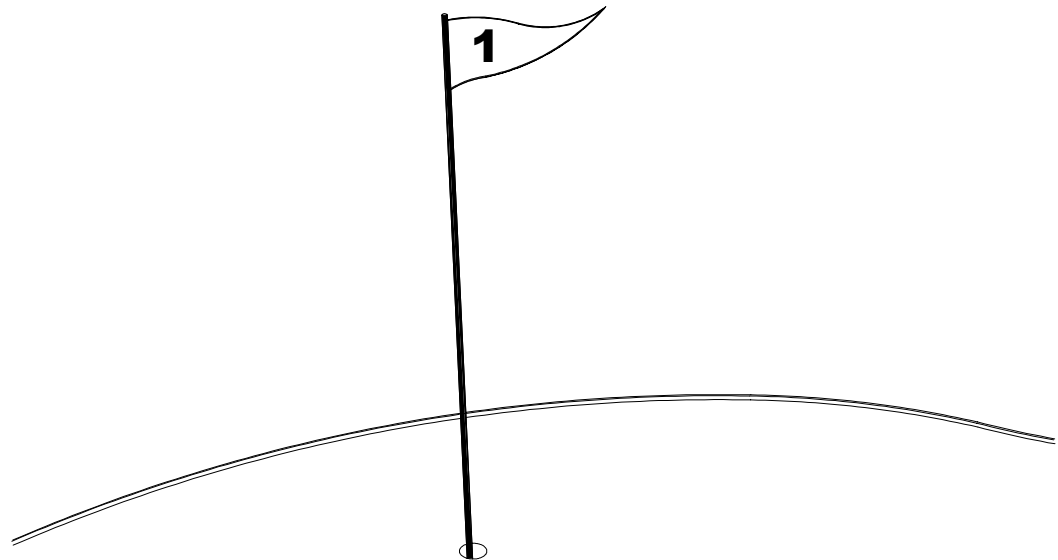# SKINS GAME

CONVERSION KIT

CHAPTER

1

SAFETY & SETUP

👉	**NOTICE:** This manual is subject to change without notice. Midway Games West Inc. reserves the right to make improvements in equipment function, design, or components as progress in engineering or manufacturing methods may warrant.
	Fill out and mail in the Game Information Card. Include the game serial number from the label on the rear of the cabinet. For your records, write the game serial number in the manual. SERIAL NUMBER _____

SAFETY INSTRUCTIONS

The following safety instructions apply to operators and service personnel. Read these instructions before preparing the game for play. Other safety instructions appear throughout this manual.

DEFINITIONS OF SAFETY TERMS

DANGER indicates an imminent hazard. If you fail to avoid this hazard, it WILL cause death or serious injury.

WARNING indicates a potential hazard. If you fail to avoid this hazard, it COULD cause death or serious injury.

CAUTION indicates a potential hazard. If you fail to avoid this hazard, it MAY cause minor or moderate injury. CAUTION also alerts you about unsafe practices.

NOTICE indicates information of special importance.

	CAUTION: HANDLE DRIVES CAREFULLY The hard disk drive must be packed in an anti-static bag. When shipping the drive for repair or replacement, pack it in an approved container (P/N 08-8068). Do not stack or drop hard disk drives.
	WARNING: DISCONNECT POWER Always turn AC power off and unplug the game before attempting service or adjustments unless otherwise instructed. Installing or repairing PC boards with power ON can damage components and void the warranty.
	WARNING: GROUND GAMES. Avoid electrical shocks! Do not plug in a game until you have inspected and properly grounded it. Only plug this game into a grounded, three-wire outlet. Do not use a "cheater" plug, or cut off the ground pin on the line cord.
	CAUTION: ATTACH CONNECTORS PROPERLY. Ensure proper mating. Do not force connectors that do not slip on easily. Reversed connectors may damage game and void warranty. Connector keys allow a connector to fit only one set of pins on a board.
	WARNING: HAZARD TO EPILEPTICS. A very small portion of the population has a condition that may cause them to experience epileptic seizures or have momentary loss of consciousness when viewing certain kinds of flashing lights or patterns present in our daily environment. These persons may experience seizures while watching some kinds of television pictures or playing certain video games. People who have not had any previous seizures may nonetheless have an undetected epileptic condition. If you or a family member experiences symptoms linked to an epileptic condition (e.g., seizures or loss of awareness), consult a physician at once before playing video games. We recommend that parents observe their children while they play video games. If you or your child experience the following symptoms: dizziness, altered vision, eye or muscle twitching, involuntary movements, loss of awareness, disorientation, or convulsions, DISCONTINUE USE IMMEDIATELY and consult a physician.

Welcome to Skins Game!

It's a beautiful day on the digital fairway. Midway Games West Inc. keeps the greens perpetually immaculate. In Skins Game, you and up to three other players are invited to practice your putting, perfect your drive, or simply haul off and lob a bucket of balls into the water hazards. Don't worry. We'll refill the bucket.

Ultra-realistic Skins Game is just like a round of golf, minus the strenuous exercise. Your Midway caddy warns you about sand traps and water hazards and offers the best route for your shots. She selects what she thinks is the best club, but you may choose yourself from a full bag of putters, drivers, wedges, and irons—all custom crafted for optimal performance. As you enjoy your game, birds chirp peacefully in the distance and the sun shines with nary a cloud to speak of. Heatstroke is never a problem.

Adjust your stance and shot direction all you like, but your virtual player begins each stroke oriented in the best stance and direction to hit the pin. While the three-dimensional terrain forces your ball to follow Newtonian physics, your shot "snaps" to the pin unless you choose to aim elsewhere. And a peek at the wind gauge may convince you to do so! The wind *will* send your ball off course if you're not careful.

Of course in Extreme Mode, say bye-bye to Mr. Newton as you change the ball's path or spin in mid-flight.

Players who don't dawdle at the tee earn QuickShot bonuses, rewards for hitting the ball within 15 seconds. Collecting 10 QuickShot bonuses gives you an extra Power Shot. And Power Shots mean added distance with your clubs. However, you must carefully time the joystick release, or your Power Shot becomes a nasty hook or slice. Normally, players earn one Power Shot for each three holes.

As your game improves (or not), a hard drive records your scores. With the keypad, you can enter a PIN that identifies you and calls up your statistics–in case there was any doubt about your birdie on the fourth hole at Eagle Ridge.

PRODUCT SPECIFICATIONS

Equipment Requirements

Video Display Monitor	*Audio System*	*Wiring*
Standard Resolution RGB	2 Channel Audio	JAMMA harness

Game Characteristics

Player Variables	*Operator Variables*	*Diagnostics*
1 to 4 players per game	Coinage, Play Mode,	Automatic Power-Up Test
Choice of Character	Difficulty, Volume,	Manual Multi-Level Menu System
Character Profile Memory	Audits, Statistics	

> **NOTICE**   Skins Game conversion requires use of a low resolution monitor. You must also have a standard JAMMA wiring harness.

KIT COMPONENTS

  Unpack materials from carton and inspect for obvious signs of damage. Use this checklist to ensure the kit is complete. Some of these parts may already be installed. You must supply the remainder of the materials required for this conversion.

Item	Part No.	Qty	Item	Part No.	Qty
Artwork			**Controls**		
Side panel decal	31-3487	2	Joystick assembly	A-23389	1
Marquee Artwork	31-3456.3-2	1	Joystick mounting plate	04-12875	1
Joystick decal	31-3490	1	Joystick adapter harness	H-23480	1
Button decals	31-3489	1	Keypad pod assembly	A-23458	1
Wallpaper decal	31-3488	1	Keypad harness	H-23445.2	1
Bezel instructions bottom decal	31-3457	1	Blue pushbutton	20-10209-3	2
Bezel instructions top decal	31-3486	1	White pushbutton	20-10209-2	2
Extreme Mode Decal	31-3602	1	Yellow pushbutton	20-10209-5	1
Hardware and Tools			Illuminated red start pushbutton	31-3475	1
Screw 6-32 x 1/4 p-ph w/ spring	4006-01209-04	4	**Printed materials**		
Screw 6-32 x 1/2 p-ph	4006-01005-08	2	Epilepsy warning	16-9922.1	1
nut 8-32 keps	4408-01128-00	14	Control panel template	16-10996	1
Washers	4700-00012-00	8	Registration card	16-10650	1
Screw #8 x 16 pin yellow	4108-01219-10Y	10	Cardboard bezel	08-8067	1
Screw #8 x 5/8 torx	4108-01193-10B	10	**Electronics**		
Torx wrench	20-9620	1	Electronics assembly	A-23502	1
Screw 8-32 x 1 ¼	4308-01123-20B	4	Ferrite bead	5556-13956-00	2
Overlays			Hard drive assembly	A-23453	1
Control panel cover	03-9664	1	Hard drive bracket	01-15029	1
Marquee clear shield	03-9663	1	Ground wire	H-21672	2

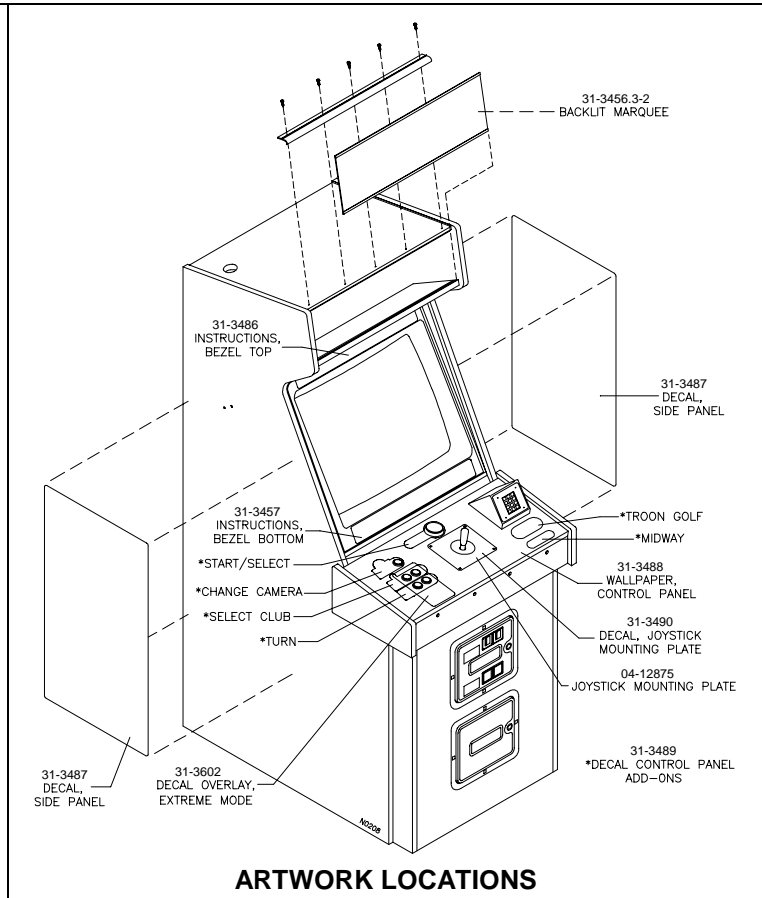## Recommended tools and supplies

 Utility knife, screwdrivers, liquid soap, nut drivers or socket wrench, wood filler material, black electrical tape, hole saw or equivalent, squeegee, soldering iron and solder, pliers or wire cutters, 180 grit sandpaper or electric sander, black semi-gloss paint, electric drill and wood drill bit set.

CONVERTING A TYPICAL VIDEO GAME CABINET

PREPARE EXISTING CABINET

1. Verify operation of existing game before changing cabinet. Pay special attention to parts you will reuse during conversion (e.g., power supply, monitor, coin mechs). Repair or replace damaged parts before installing kit.

2. Switch off AC power. Disconnect AC line cord. Clear work area and cover or protect non-wood items (marquee, monitor, coin door, brackets, line cord, etc.).

3. **ARTWORK** Note location of decals or artwork and remove. Clean off glue residue. Fill gouges or unused holes with suitable filler material like quick-hardening wood putty. Sand wood smooth and remove dust.

4. Evenly cover entire cabinet with black paint and allow to dry before continuing.

5. Lightly moisten cabinet with soapy water. Remove decal backing and apply from top to bottom. When in place, smooth decal outwards, squeezing out air bubbles. Pop persistent air bubbles with a knife and smooth down. Allow 12 hours for adhesive to set.

6. **MARQUEE** Remove existing marquee from cabinet. Check lamp and replace if cracked or if ends are darkened, even if it still works. Install kit marquee. Using previous shield as a guide, trim new attraction shield to size and deburr edges. Install new marquee attraction shield.

ARTWORK LOCATIONS

31-3456.3-2 BACKLIT MARQUEE
31-3486, INSTRUCTIONS, BEZEL TOP
31-3487 DECAL, SIDE PANEL
31-3457 INSTRUCTIONS, BEZEL BOTTOM
*START/SELECT
*CHANGE CAMERA
*SELECT CLUB
*TURN
*TROON GOLF
*MIDWAY
31-3488 WALLPAPER, CONTROL PANEL
31-3490 DECAL, JOYSTICK MOUNTING PLATE
04-12875 JOYSTICK MOUNTING PLATE
31-3489 *DECAL CONTROL PANEL ADD-ONS
31-3487 DECAL, SIDE PANEL
31-3602 DECAL OVERLAY, EXTREME MODE
N0208

7. Remove viewing glass and set in safe place. Clean CRT glass. Apply instructions decals to top and bottom of bezel. Place Epilepsy Warning label on front of monitor bezel. Ensure decals and labels do not obstruct viewing area. Clean bezel and viewing glass before installing in cabinet.

8. **CABINET** Remove and save screws at top and sides of rear door. Unlock rear door. Lift door off cabinet and set aside. Use a vacuum cleaner to remove dirt or debris inside cabinet.

9. **CONTROL PANEL** Locate and unlock control panel latches or fasteners. Free panel from operating position. Label each harness wire before disconnecting from controls. Once wires are disconnected, remove control panel from cabinet and set aside. Save mounting brackets and hardware for later reinstallation.

10. Some cabinets have speakers or other components on the control panel. Note polarity and function of wires before disconnecting. Incorrectly phased speakers cause weak low frequencies or a thin, hollow sound quality.

INSTALL PLAYER CONTROLS

1. **TEMPLATE** If control panel template is creased, flatten with a stack of books, newspapers, magazines, etc.

2. Remove buttons, joysticks, or other controls from control panel. Remove covering and artwork, hinges or mounting brackets.

3. Fill holes with suitable material (i.e., wood putty, glue, etc.). Let dry. Sand or file flat both sides of surface. Should you choose to replace the control panel board, it must match the original panel in size and thickness, and include all fastening and grounding hardware.

4. Tape template on top of panel. Orient template to center controls. Cut and deburr holes. Remove template.

> **NOTICE:** If existing game already has a recessed area where the joystick will go, you may not need to cut a new hole.

5. **DECAL** Remove backing and apply control panel decal to panel. Work down from top. After decal is in place, smooth it outwards, squeezing out air bubbles. Pop persistent air bubbles and smooth decal.

6. Let adhesive set. Trim decal edges and cut joystick, button, and keypad holes to fit control panel.

7. **BUTTON DECALS** Position control decals next to appropriate holes in the following order:

   a. Camera   b. Select Club   c. Turn   d. Extreme Mode rectangular overlay
   e. Start/Select   f. Troon logo   g. Midway logo

8. **OVERLAY** Place plastic overlay on top of panel decals. Deburr overlay edges. Tape control panel template on top of overlay in same position as holes beneath overlay. Cut and deburr holes. Remove template. Fasten overlay with included hardware.

> **NOTICE:** Some games require you to cut out a circle rather than a rectangle for the joystick. Observe notice on template for further instructions.

9. **BUTTONS** Disassemble each switch from its pushbutton. Bend large prong away from switch enough to slide switch off housing. Unscrew nut from housing.

10. Insert pushbutton housing through a button hole from top of control panel. Screw nut finger tight on switch housing from underside of panel. Snap switch back on housing. Repeat for each button.
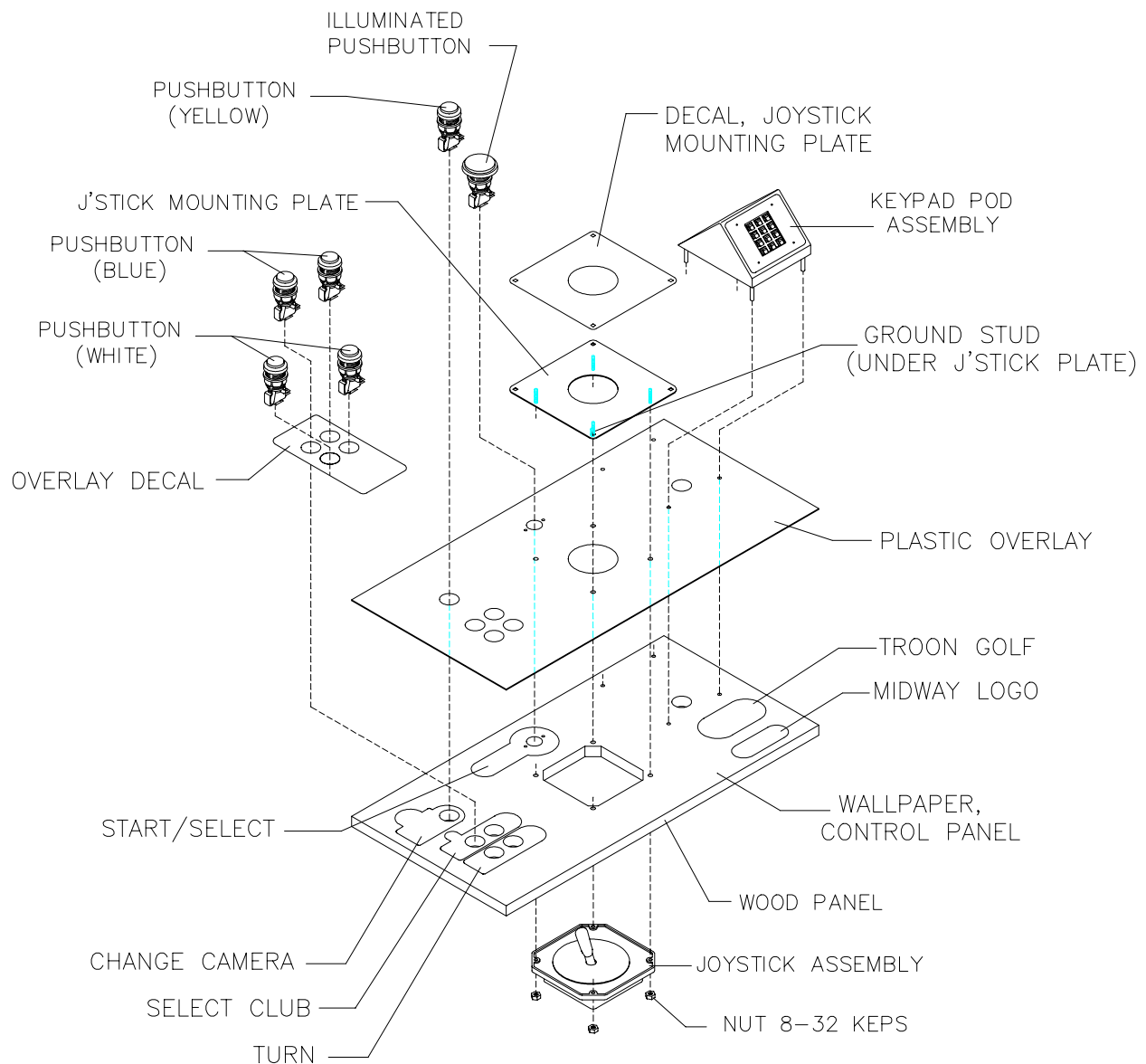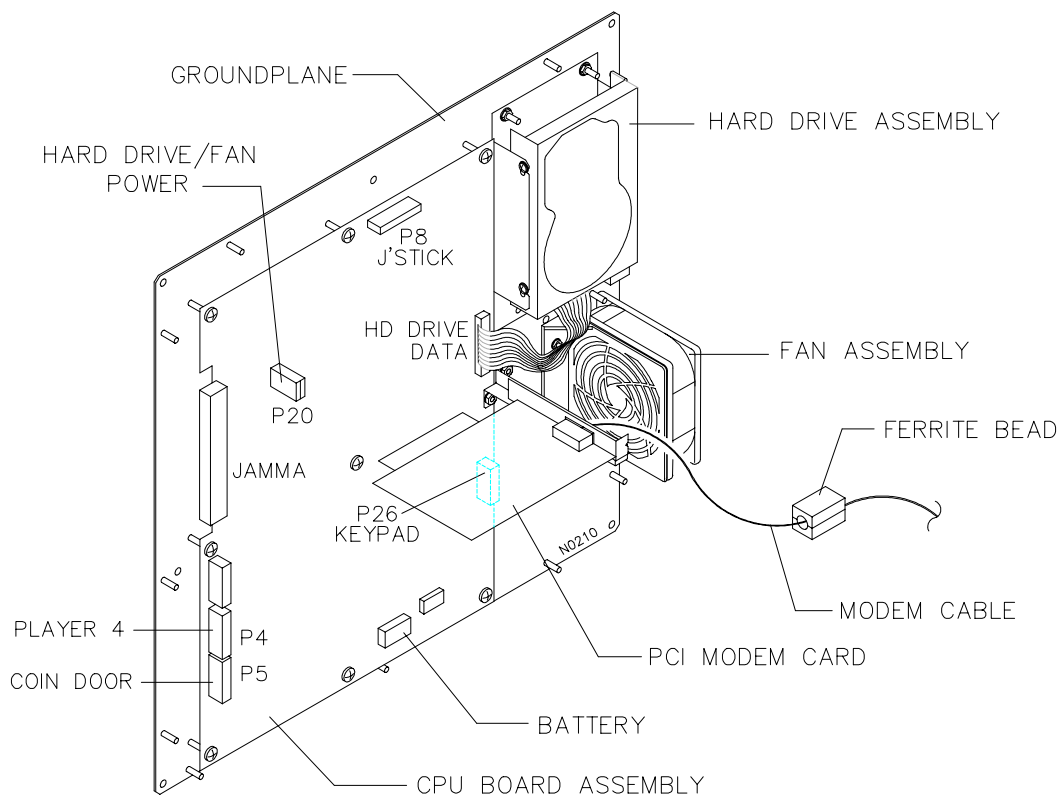
PUSHBUTTON, JOYSTICK, AND KEYPAD LOCATIONS

11. Rotate pushbuttons so switch terminals are oriented toward JAMMA harness. Tighten nuts firmly.

12. **JOYSTICK** Align joystick mounting holes with control panel holes and insert carriage bolts. Install a flat washer and a nut on each carriage bolt and tighten securely.

13. Lay joystick mounting plate on top of joystick. Fasten with included hardware.

14. **KEYPAD** Insert keypad studs through holes in control panel. Install and tighten flat washers and nuts.

15. Remove backing from joystick mounting plate decal and place on plate. Smooth decal.

16. Close and lock control panel using existing fasteners.

INSTALL GAME ELECTRONICS

⚠	**WARNING: DISCONNECT POWER.** To avoid electrical shock, turn off power switch and disconnect AC line cord before removing or replacing any component. After servicing components, be sure all ground wires are secure before restoring power.

1. **REMOVE OLD ELECTRONICS** Label, then carefully disconnect cables on each printed electronics board assembly in cabinet. Note orientation of JAMMA edge connector on CPU Board Assembly. Remove boards and store in anti-static bags. Leave JAMMA harness in cabinet so you can reuse it.

2. **PREPARE ELECTRONICS** Place Skins Game kit electronics assembly on flat, static-free work surface. Remove electronics cover and set aside. Inspect electronics for any damage and ensure all connectors are properly seated.

3. **LOCATE ELECTRONICS** Place new groundplane (with electronics assembly, but without hard drive or groundplane cover) in cabinet in location of previous assembly. JAMMA edge connector header should face same direction as previous connector header. Mark mounting holes and set electronics aside.

4. **MOUNT ELECTRONICS** Drill pilot holes where necessary and use hex-head screws to attach electronics to cabinet wall.

ELECTRONICS ASSEMBLY

WIRE CABINET

⚠️	**CAUTION: ATTACH CONNECTORS PROPERLY.** Be sure that printed circuit board (PCB) connectors mate properly. If connectors do not slip on easily, do not force them. A reversed connector may damage video game machine and void warranty. Connector keys only allow a connector to fit one set of pins on a board.
⚠️	**CAUTION: OBSERVE GROUNDING.** Be aware of ground wires in game. Ground wires are usually green or green with a yellow stripe. Reuse any existing ground wires, and use ground wires included in this kit.

1. **JAMMA HARNESS** When wiring JAMMA harness to the controls and the CPU Board Assembly, refer to Cabinet Wiring Diagram in Wiring Chapter.

2. Attach component end of JAMMA harness to mate on CPU Board Assembly.

3. Attach free end of joystick adapter harness to its mate connector (P8) on the CPU Board Assembly.

4. Attach keypad harness to its mate connector (P26) on the CPU Board Assembly. Attach the other end of the harness to the pigtail on the keypad assembly Do not force connectors. They are keyed to fit only one way.

5. Attach Player 4 (P4) and coin door connectors to CPU Board Assembly.

6. Double check your connections to ensure they are all firm and secure. Do not force connectors.

7. **JOYSTICK HARNESS** Attach free connector of joystick harness to its mate connector on the joystick adapter harness H-23480. Connect one end of green/yellow wire to joystick mounting plate and other end to safety ground.

8. **BUTTONS** Mate each of the five small buttons and start button to corresponding JAMMA wires.

9. Connect one end of an H-21672 ground braid to control panel and other end to safety ground on power supply.

10. Ensure each button is connected to ground through JAMMA harness black ground.

👉	**NOTICE:** Hard disk drives are sensitive to static. When not in use, store drives in anti-static bags. Do not drop or stack drives.

11. **HARD DISK DRIVE** Mount hard drive onto hard disk drive bracket. Note that end of bracket where holes are spaced closer together is where ribbon cable connects.

12. Mount bracket onto studs on electronics assembly with included KEPS nuts.

13. Connect data ribbon cable and power cable to Hard Disk Drive.

14. Replace groundplane cover. Secure to groundplane using all but one of the enclosed nuts.

15. Attach one end of second ground braid H-21672 to remaining groundplane post and fasten nut. Secure other end of braid to safety ground on power supply.

16. Replace and lock rear door.

POWER UP AND TEST GAME

1. Plug line cord into AC power source and turn on power switch. LEDs in electronics cage should illuminate. Using the 20-volt DC setting on a digital voltmeter, measure DC voltages at the power connector pins. Adjust the +5V source if it is necessary. Voltage tolerances are ±.4 on +5V, ±½ V on +12Vhe game begins self diagnostics. If no errors are found, Attract Mode begins. If problems occur, check wiring and refer to Troubleshooting Chapter.

2. Unlock and open coin door. Press and hold TEST button to access Menu System. Use tests to verify operation of monitor, hard drive, speakers, and all pushbuttons and joystick and keypad.

3. Exit the Select Test Menu to begin normal game operation. Open the coin door and press the SERVICE CREDITS button to allow game play. Choose a player position and press the START button to begin. Listen to the audio while playing the game. Note unexpected irregularities in sound (out of phase, no low frequencies, etc.). Check the wiring harness for internal shorts. Refer to Wiring for jumper locations and recommended settings, or Troubleshooting.

4. Close and lock coin door. Allow the system to operate for several hours before attempting any game changes.

5. Play several games to test operation of player panel buttons. Do they function? Do they operate consistently? Does each control perform its designated operation? Game play and earnings depend on proper performance of the VIEW, START and movement buttons. If any button does not operate properly, check connections against the wiring diagram. Replace intermittent or otherwise faulty controls.

⚠	**CAUTION: SEEK FCC APPROVAL.** Installation of this kit does not guarantee compliance with FCC requirements. You are solely responsible, and Midway has no responsibility for FCC compliance of installed kits. Don't install an FCC compliance label on the product until the FCC acknowledges compliance.