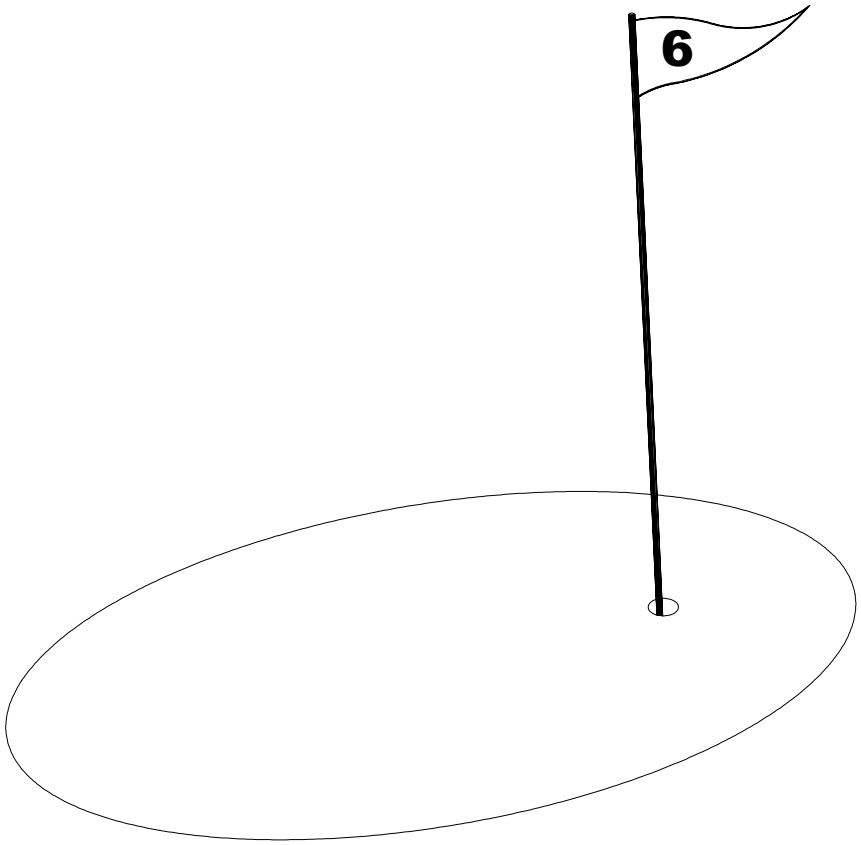
SKINS GAME

CHAPTER



TROUBLESHOOTING

⚠	**CAUTION:** Turn AC power off before attempting any of the following procedures, unless otherwise specified. Failure to do so may damage equipment, cause personal injury, or void warranty.

Machine Does Not Start

Symptom	Problem	Suggested Solution
• Machine appears non-functional.	Lack of electricity	Check that power switch is on and line cord is plugged into grounded AC outlet.
• Audio non-functional • Fan non-functional • No video display	Poor AC connection	1. Test line cord, power plug and IEC receptacle for breaks or damage. Verify continuity of each wire. 2. Fully seat IEC connector into cabinet receptacle. 3. Verify wiring harness connectors are fully seated in the corresponding power supply receptacles. 4. Verify AC wire connections at power supply terminals.
	Broken fuse	Replace broken fuse on AC assembly with identical type.
	Faulty AC line filter	1. Check line filter with ohmmeter to verify operation. 2. Replace line filter if bad.
• Machine appears non-functional. • Fan functional	Power supply misadjusted	Using voltage meter, correctly adjust +5V output on power supply using adjustment knob.
• Machine appears non-functional. • Fluorescent light functional • Currency acceptor price indicator is illuminated. • Power supply fan functional	Poor DC connection	1. Fully seat DC cable connectors in power supply. 2. Check power supply DC fuse. Replace broken fuse with one with identical current and voltage rating.
	Faulty CPU board assembly	1. Inspect CPU Board Assembly under low light levels. When board gets DC power, its LEDs glow, although voltages or signals may be incorrect. 2. Turn AC power off. Ensure JAMMA connectors are fully seated onto mating CPU Board connector. 3. Turn AC power on. Using 20-volt DC setting on a digital voltmeter, measure DC voltages at the hard drive power connector pins. Adjust +5V source if necessary. Refer to Cabinet Wiring Diagram for wiring information and voltage limits 3. Using 2-volt AC setting on a digital voltmeter, measure same DC voltages as above. Any reading here indicates that supply voltages are unstable and may contain ripple or noise. 4. Place CPU Board Assembly in known working machine to verify operation. Replace if faulty.
• Power-Up Self-Test runs. • Attract Mode does not begin. • Audio non-functional	Faulty hard disk drive	1. Turn AC power on. Press TEST MODE button to access Menu System. From DISK TESTS Menu, choose DRIVE READ TEST. This indicates whether hard disk drive mechanism is functional. 2. Turn AC power off. Unlock and open rear door. Inspect board assemblies. Ensure hard disk drive ribbon cable connector is fully seated in mating connector on CPU Board Assembly. Ensure all drive mounting screws are installed. 3. Ensure hard drive is correct part. Drives have a label with assembly number and software version.
	Wrong component	Verify that ROM instruction set and CPU Board set are

		correct. Components are marked with manufacturer name, assembly number and hardware version.
	Wrong voltage	1. Turn AC power on. Using 20-volt DC setting on a digital voltmeter, measure DC voltages present at power connector pins. Verify +5V source if it is adjustable. Refer to cabinet Wiring Diagram. 2. Using the 2-volt AC setting on a digital voltmeter, measure the same DC voltages as above. Any reading indicates that the supply voltages are unstable and may contain ripple or noise.
	DIP switches set wrong	Check DIP switch setting.

CAUTION: Do not operate monitor without Remote Adjustment Board.

Video Problems

Symptom	Problem	Suggested Solution
• Monitor appears non-functional. • Audio functional • Controls functional	Lack of electricity to monitor	1. Unlock and remove rear door. Verify AC power is connected to video monitor. Inspect neck of CRT under low light level conditions. A glow near the CRT base indicates voltage in the filament circuits, not that other voltages or signals are proper. 2. Turn AC power off. Verify that video signal and Remote Adjustment Board connectors fully seat on the Video Monitor Board. Check other monitor connectors in the same way. 3. Examine AC line fuse on Video Monitor Board. Replace faulty fuse with one of identical voltage and current rating. 4. Ensure no loose parts or wires are caught on chassis or mounting brackets. 5. Verify monitor works by placing in known working game. Replace faulty monitor with identical type.
• Monitor does not lock onto signal or provide stable picture. • Picture wavers or rolls, has dark bars, uneven or missing colors, etc	Poor connection	1. Check connectors and cables for wiring continuity from CPU Board Assembly to the Video Monitor. 2. Ensure all cabinet ground wires are connected, especially at the Video Monitor Chassis.
	Wrong monitor	Verify this is the correct monitor. Using monitors with different resolution results in what appears to be horizontal tearing or complete loss of sync.
	Magnetic interference	Move cabinet away from equipment, appliances, other Video Game Machines, etc. Some normally operating devices emit very strong electrical or magnetic fields.
	Faulty monitor	Verify monitor works by placing in known working game. Replace faulty monitor with identical type.

Audio Problems

Symptom	Problem	Suggested Solution
• Video functional • Game functional • Audio non-functional	Poor connection	1. Press TEST MODE pushbutton to enter Menu System. Choose ADJUST VOLUME. Ensure Attract Mode and game volume levels are not at zero. Adjust levels if necessary to produce sound. 2. Inspect wiring harnesses and verify connections as indicated by the Cabinet Wiring Diagram. 3. Using 20-volt DC setting on a digital voltmeter, measure DC voltages present at power connector pins. Verify +5V, -5V and +12V sources. Refer to Cabinet Wiring Diagram. 4. Using 2-volt AC setting on a digital voltmeter, measure same DC voltages as above. Any reading here indicates that the supply voltages are unstable and may contain ripple or noise.
	Bad IC	Place CPU Board in known good machine. Repair or replace if audio is non-functional.
• Audio distorted, muffled, missing frequencies • Low hum present	Faulty speakers	1. Press TEST MODE to enter Menu System. 2. From the Self-Test Menu, choose SOUND TESTS to verify some audio circuit functions. 3. Turn AC power OFF. Remove grill and that each speaker is full range (100 Hz to 10 KHz response) and rated for at least 10 watts.
	Bad wiring	1. Turn AC power off. Remove grille. Ensure no loose parts are caught in speaker cones, terminals, mounting screws, or stuck to magnets. 2. Ensure wiring is not reversed on a speaker. Weak, low frequencies and thin or hollow sound quality suggests incorrectly phased speakers. 3. Verify wiring against Cabinet Wiring Diagram. Ensure there is a separate wire (not a common return) for each speaker. Ensure cabinet ground wires are connected. 4. Using 2-volt AC setting on a digital voltmeter, measure voltages at the speaker terminals. Any reading here indicates that supply voltages are unstable and may contain ripple or noise. 5. Place speaker in working game to verify operation.
• Audio monaural	Poor connection	Verify wiring against Cabinet Wiring Diagram. Check for shorted wires.

Controls Problems

Symptom	Problem	Suggested Solution
• Joystick non-functional or functions erratically	Joystick is out of calibration	From Self-Test Menu, choose CONTROLS TEST. Follow screen instructions to recalibrate joystick.
	Faulty wiring	1. Ensure wiring connectors are firmly seated in control panel and no wires are broken or pinched. 2. Repair or replace damaged cables. Reposition wires as necessary to avoid cinching.
	Poorly seated potentiometer	1. Inspect joystick assembly. A potentiometer may not be seated snugly. 2. Remove a spring clip to reveal potentiometer. 3. Try rotating potentiometer. If snug, it will not turn. If it turns, push it inward while turning until you correctly realign it and it seats tightly. 4. Replace clip and inspect other potentiometer.
	Bad potentiometer	5. Turn AC power on. Check voltage at each potentiometer. Put voltmeter leads on center tap and ground. Leave joystick in default position. Meter should read about +1.5V. 6. Use analog or bar graph digital voltmeter for this test: Put voltmeter leads on wiper and ground. Move joystick through its range. Check for smooth, linear transition between .5V and 1.5V. If meter jumps at any point, potentiometer is bad. 7. Replace a potentiometer that fails either test.
	Bad inline power fuse	1. Check voltages to CPU Board Assembly. 2. If +5VDC is absent, replace inline fuse on power cable. Use identical type fuse and retest voltages.
	Faulty Pot Amp chip	1. Test CPU Board Assembly in working machine. 2. If joystick is still bad, repair or replace.
• Joystick slips, seems loose. Poor response.	Nylon spacer worn by rotating bracket	1. Remove joystick assembly, turn upside down, and check whether there is too much play in brackets when stick moves. 2. Invert nylon spacer 180 degrees and replace. 3. If already inverted, replace with new spacer.
	Loose potentiometer captivating bracket	Ensure pot captivating bracket is flush to flat of pot shaft and retaining screw is secure.
• Joystick non-functional	Faulty fuse	Replace broken fuse with identical type.
• Button non-functional or functions erratically	Poor connection	Check connection and tighten.
	Faulty button	1. Place button in known working machine. 2. Replace faulty button with identical type.

• Startup button bulb non-functional	Faulty bulb	1. Remove bulb and inspect filament. 2. Replace faulty bulb with identical type. 3. Check +12 fuse to lamp.
• Keypad non-functional or functions erratically	Poor connection	1. Check that connections are tight. 2. Compare to Wiring Diagram to ensure accurate connections.
	Faulty keypad	1. Place keypad in known good machine. 2. Replace faulty keypad with identical type.

Coin Mechanism Problems

Symptom	Problem	Suggested Solution
• Currency or tokens are accepted • Number of credits per coin or bill is incorrect.	Improper software settings	1. Press TEST MODE pushbutton. 2. Access CONTROLS TEST. Confirm operation of each coin or bill mechanism. 3. Access COIN OPTIONS. Verify each mechanism's pricing and setup options are set correctly.
	Faulty wiring	1. Check that cabinet wiring is correct. 2. Check that coin meter and coin switches connect properly to control input wires from JAMMA connector and CPU Board wiring. 3. Ensure coin meter and coin switches connect properly to control input wires.
• Currency or tokens are accepted. • Startup fails. • Audio and video functional	Improper settings at Menu System	1. Press TEST MODE pushbutton. 2. Access COIN OPTIONS. Confirm pricing and setup of each mechanism.
	Faulty wiring	1. Ensure no loose parts or wires are caught in hinges, latches, or switch contacts. 2. Check that external coin door indicators (pricing, flashing arrows, etc.) are illuminated. 3. Check connectors and cables for wiring continuity from CPU Board Assembly to coin mechanisms. 4. Replace faulty wiring with identical type.
	Faulty coin mechanism	1. Check mounting of each mechanism. 2. Close and lock release latches. 3. Test good and bad coins to see if mechanism accepts and rejects correctly. 4. Check continuity in switch connections (common to normally open or common to normally closed). Replace switches with bent levers, broken actuators, etc. 5. Place each coin mechanism in working game to verify operation. 6. Replace faulty coin mechanisms with identical type.

• Currency or tokens are not accepted • Game does not start. • Audio and video functional	Bad currency	1. Inspect cash box for counterfeit currency. 2. Remove any items that block path from mechanism to cash vault.
	Faulty coin mechanism	1. Unlock and open coin door. Check each mechanism for proper mounting. 2. Remove mechanism. 3. Clear currency path. 4. Reinstall mechanism and latch it.
	Tilted coin mechanism or game	1. Verify that mechanism is level after doors close. 2. Repair or replace coin door if bent or damaged. 3. If necessary, adjust cabinet leg levelers to keep mechanisms vertical.
• Coin indicators do not light	Burned-out bulb	1. Burned-out bulbs may appear white or darkened. Check continuity with DVM. 2. Replace burned-out bulb with same type.
	Faulty fuse	1. Check fuse continuity with DVM. 2. Replace blown fuse with identical type 3. If fuse is not blown, check wiring.

Bill Validator Problems

Symptom	Problem	Suggested Solution
• Bill validator does not function after field installation. • Coin mechanisms functional	Improper software settings	1. Press TEST MODE to enter Menu System. Choose COIN OPTIONS. Confirm pricing and setup. 2. If necessary, adjust pricing and setup. 3. Check validator switch settings against manufacturer's instruction sheet.
	Faulty wiring	1. Check if external coin door indicators (pricing, flashing arrows, etc.) are illuminated. 2. Ensure no loose parts or wires are caught in hinges, latches, or switch contacts. 3. Verify that harness connectors are attached and fully seated. 4. Check for validator cable continuity. 5. Replace faulty wiring with identical type.
	Faulty bill validator	1. Verify that bill validator operates properly by placing it in working game. 2. Replace faulty validator.

Marquee Lamp Problems

• Marquee lamp is non-functional or functions intermittently • Startup is normal. • Game play is normal.	Bulb seated poorly	Verify fluorescent bulb pins make good connection with socket contacts.
	Faulty bulb	1. Remove fluorescent bulb from sockets. 2. If you find cracks or darkened ends, replace. 3. Check continuity of both bulb filaments. 4. Verify bulb operates by placing in known working game. Clean bulb. 5. Replace faulty bulb with identical type.
	Faulty wiring	1. Measure fluorescent bulb AC voltages. Check wiring and connector continuity from AC power chassis to lamp assembly. 2. Replace faulty wiring with identical type
	Other faulty lamp parts	1. Ensure ballast is rated for local AC line voltage and frequency. 2. Check continuity of starter and ballast. 3. Place starter and/or ballast in working game to verify operation. 4. Examine DC fuse on electronics shelf. 5. Replace faulty parts with identical ones.

Miscellaneous Problems

• Game functional • Cabinet becomes warm after several hours of use.	Poor air flow.	1. Check air flow at bottom and rear of cabinet. 2. Clear obstructions. 3. Move cabinet away from sources of heat. 4. Turn AC power off. Remove dust from vent holes with high-power vacuum cleaner. 5. Check operation of all fans. Replace if faulty.
• Error messages appear on screen.	Faulty hardware	Check assembly cited in message. Call authorized distributor for help with unresolved screen messages.
• Modem non-functional	Bad connection	Check that modem is well seated in PCI slot.
	Cable disconnected	Ensure cable is well seated in jack and modem.
	Bad phone line	1. Plug cable into another wall jack. 2. Test jack with fax machine or telephone.
	Server down	Reattempt connection tomorrow.
	Bad modem card	Replace faulty card with identical type
• Clock is wrong	Software set wrong	Use Set Date/Time in Menu System to reset clock.
	Drained battery	Replace lithium battery with identical type.