

IGT S-Slot; S-Plus - Additional Component Information - Model:

Item:	Problem:	Remedy:	Reason:
Coin Comparitor			
Coin Accepted Light			
Coins Played LED			
Win Condition (Hopper)			
Win Condition (Hand Pay)			
Lose Condition			
Bet One Credit			
Play (X) Credits			
Spin Reels			
Collect Winnings			
Credits Display			
Reel Mechanism			
Optic Sensor			
Hopper			
Hopper Optics			
Hopper Diverter			
Hopper Bowl Coin Level Probe			
Processor Board			
Hopper Base			
Hopper Rails			
Hopper Beau Plugs			
Hopper Knife			
Knife Retaining Screws			
Hopper Housing			
Hopper Wiper			
Hopper Shelf Wheel			
Hopper Pinwheel			
Other:			
Other:			

IGT S-Slot; S-Plus - Additional Component Information - Model:			
Item:	Problem:	Remedy:	Reason:
Handle Mechanism			
Ratchet			
Lockout Solenoid			
Handle Mechanism Bumpers			
Upper Microswitch			
Switch Wiring			
Cabinet Exterior			
Lubricate Moving Parts			
Coin Acceptor			
Coin Comparitor			
Coin-in Switch			
Diverter Solenoid			
Lockout Solenoid			
Coin Head			
Encoder Insert			
Acceptor Clips			
Reject Chute			
Diverter Spring			
Diverter			
Jackpot Reset/Statistical Display Switch			
Handle Spin Switch			
Power On Switch			
Change Light Switch			
Self Test Switch			
Door Switch			
Other:			

IGT S-Slot; S-Plus - Additional Component Information - Model:			
Item:	Problem:	Remedy:	Reason:
Reel Light Assembly (fluorescent)			
Fluorescent Starters			
Reel Glass Lights (GE 47 bulbs)			
Belly Light Assembly (fluorescent)			
Service Light Assembly (15-watt bulb)			
LED Display Assembly			
Processor Board			
LED Display Board			
Progressive Driver Board			
Coin Tray			
Coin Release			
Wood Base			
Slot Casing			
Other:			

IGT S-Slot; S-Plus - Additional Component Information - Model:						
Item:	Problem:	Remedy:	Reason:			
Input Test (1)						
Output Test (2)						
Sound Test (50)						
Display Test #1 (-)						
Display Test #2 (-)						
Hopper Test (3)						
Paytable/Reel Strip (4, 5)						
Option Selections (6)						
Option Selections (7)						
Option Selections (8)						
Option Selections (9)						
Tilt Condition Codes code - meaning, solution (✓)	12 - low battery voltage, replace 3.6 volt battery on board ()	21 - coin-in tilt, clear jam, check coin-in optics ()	3100 - extra coin paid out, check brake, check hopper ()	3200 - coin out tilt, clear jam, check hopper ()	3300 - empty hopper, refill hopper, check hopper ()	41 - reel # 1 tilt, check reel 1 ()
Tilt Condition Codes code - meaning, solution (✓)	42 - reel # 2 tilt, check reel 2 ()	43 - reel # 3 tilt, check reel 3 ()	44 - reel # 4 tilt, check reel 4 ()	45 - reel # 5 tilt, check reel 5 ()	49 - reel mechanism disconnected, check wire harness process. board; reel plug ()	61 - bad CMOS RAM, press and hold Self Test switch for 3 seconds ()
Tilt Condition Codes code - meaning, solution (✓)	61-1 - game date reset, open/close door, reset switch 1/4 CW ()	61-2 - recoverable CMOS error, press and hold Self Test switch for 3 seconds ()	62-0 - bad game EPROM, verify insertion, replace EPROM ()	62-1 - bad data EPROM, verify insertion, replace EPROM ()	63 - processor tray open, check processor tray lock optics/switch ()	64 - link down, check communicator ()
Tilt Condition Codes code - meaning, solution (✓)	65-0 - bad EEPROM device, press Self Test switch for 1 second, if not clearing replace EEPROM ()	65-1 - bad EEPROM data, press Self Test switch for 1 second, 65-1 clears ()	65-2 - game type mismatch, press Self Test switch for 1 second, 65-2 clears ()	66 - game EPROM change, power down, then power up ()	67 - data EPROM change, power down, then power up ()	68 - not compatible data EPROM, change to compatible data EPROM ()

IGT S-Slot; S-Plus - Additional Component Information - Model:			
Item:	Problem:	Remedy:	Reason:
Transformers			
Line Filter Assembly			
Capacitors			
Resistors			
ICs			
Diodes			
Molex Plugs			
Beau Plugs			
Wiring			
AC Line Cord			
Casing Ground			
Motors			
Lamps			
Solenoids			
Stepper Motors			
Solder Joints and Connections			
Microswitches			
Toggle Switches			
Graphics			
Top Glass			
Middle Glass			
Belly (Bottom) Glass			
Model and Serial Number Plate			
Fuse Block			
3 Fuses			
Reel Strips			
Silicone Tape Wrap			
Cable Ties			
Screws			
Nuts			
Bolts			
Washers			

IGT S-Slot; S-Plus - Additional Component Information - Model:

Recommendations and other Information

Modes of Operation

1. Ready 2. Insert Coin 3. Coin Accepted 4. Coins Played 5. Reels Spin 6. Win Condition (Hopper Pay) 7. Win Condition (Hand Pay) 8. Replay 9. Collect Winnings

a. Keep this slot machine **UN**plugged when not in use.

b. When ready to use, plug this machine into a 3-prong outlet.

c. Verify that all lights, fluorescent and LEDs bulbs, illuminate.

d. Drop coins into the coin chute, slowly, one at a time.

e. Be sure coin comparitor LED is on (red lamp is illuminated).

f. Be sure there is a coin in the coin comparitor.

g. If a coin jams, press the coin return (on the front of the machine). It should fall back into the tray.

h. Be sure the coins are accepted. Watch the lights.

i. Pull the handle down completely. Let it return on its own.

j. The reels should spin quickly together. They will slow down and prepare to stop beginning from left to right. **(Four and five reel machines are similar.)**

k. A payout will occur if the correct symbols line up as per the pay table.

l. Be sure there are sufficient coins in the hopper.

m. If a hopper-timeout occurs, it will show on the display. Add coins.

n. **DO NOT USE** any "water displacement" lubricants anywhere inside or on the outside of this machine.

o. Keep the machine cabinet locked at all times. Safeguard the keys (2).

p. **DO NOT** "tinker" or tamper with the circuitry inside this machine. There are no user-serviceable parts to adjust. There is **lethal voltage** present!

q. Be gentle with this machine. It is many decades old.

r. Additional:

s. Additional:

t. Additional:

u. Additional:

Error Code	Error Description	Most Common Repair (if these do not work, contact us)
12	Battery Voltage has dropped below 2.9 volts	Turn power off - Turn power on Open / close door to clear Replace 3.6 volt Lithium battery on CPU board
21	Coin In Error	Verify that comparitor is seated in all four acceptor clips Verify that acceptor does not have coin(s) jammed Verify that the coin optics are not blocked Ensure toggle power switch is activated (if installed) Clean comparitor, verify coin is correctly placed Replace coin comparitor
3100	Coin Out Tilt (Hopper)	Check for and clear any jammed coins in the coin out channel Check the coin out optic sensor for blockage or dirty surface Replace hopper coin out optic
3200	Extra Coin Out (Hopper)	Verify that the hopper motor brake functions Check the coin wiper/ knife for jams - Adjust if necessary
3300	Hopper Empty	Check hopper for coin level and refill
41	Reel #1 Tilt	Designated reel is misaligned or malfunctioning. Verify reel is not unplugged. Switch connectors from one reel to another, determine if error follows change of connectors. Try replacing reel assembly or optics if error stays with bad reel. Clear Ram
42	Reel #2 Tilt	
43	Reel #3 Tilt	
44	Reel #4 Tilt	
45	Reel #5 Tilt	
49	Reel Mechanism Disconnected	Verify reels are not unplugged
During the process of clearing error codes, you may encounter multiple 6x series errors. Just follow the information below in the "Most Common Repair" column which matches the error code on the door display.		
61	CMOS RAM Error	Bad (or cleared) CMOS RAM data Press test button 3 seconds Error code 61-1 should now be displayed Follow 61-1 repair instructions
61-1	Game Data Reset	Close door - turn and release reset key once
62	Bad Game EPROM	Check circuit board - replace Game EPROM
62-1	Data EPROM Error	Check circuit board - replace Reel EPROM
65-0	Bad EEPROM Device	Press self test switch for 3 seconds If error will not clear replace EEPROM
65-1	Bad EEPROM Data	Processor could not read or write to the named chip Press test button for 3 seconds
65-2	Game Type Mismatch	Error code clears from display - Close door
65-3	EEPROM / Game Data Changed	Close door - turn reset key Error Code 65-1 or 65-2 appears in display Follow 65-1 or 65-2
66	Game EEPROM Changed	Turn power off - Turn power on
67	Data EPROM Changed	
68	Invalid Data EPROM	Change to valid Data EPROM

Phase 1

Inputs Troubleshooting Chart

Symptom	Possible Cause	Solutions
Will not accept coins	<ol style="list-style-type: none"> 1. Coin jam or tilt has occurred 2. INSERT COIN is not displayed; game is not over 3. 24 VAC fuse is blown 4. Broken wire or bad connection 5. Wrong sample coin in comparator (coin mech only) 6. Faulty coin acceptor 7. Faulty processor board 8. Faulty mother board 9. Door-open sensor inoperative 	<ol style="list-style-type: none"> 1. Remove jam; check coin comparator 2. Complete the game 3. Replace the fuse AFTER checking why it is blown 4. Check related wiring and connectors 5. Install a sample coin of the correct denomination 6. Replace the coin acceptor 7. Replace the processor board 8. Replace the mother board 9. Align or replace the sensor
Will not register coins deposited	<ol style="list-style-type: none"> 1. Optics are obstructed 2. Coin-in channel is misaligned 3. Broken wire or bad connector 4. Faulty coin acceptor 5. Faulty coin-in optics 6. Faulty mother board 7. Faulty processor board 	<ol style="list-style-type: none"> 1. Check for objects obstructing optics 2. Align coin-in components correctly 3. Check related wiring and connections 4. Replace the coin acceptor 5. Replace the coin-in optics 6. Replace the mother board 7. Replace the processor board

Phase 1

Inputs Troubleshooting Chart (continued)

Symptom	Possible Cause	Solutions
Bill acceptor will not accept bills	<ol style="list-style-type: none"> 1. Bill is returned or not accepted 2. Bill is stuck in acceptor before reaching lower transport 3. Object is detected in bill path 4. Rejected bills are folded, torn or are facing wrong 5. Bill jammed in lower transport, or the bill stacker is full 	<ol style="list-style-type: none"> 1. Drop box misaligned or full 2. Remove upper assembly and down on bill to release it 3. Remove any jammed material 4. Flatten bill and insert again 5. Remove lower assembly and dislodge any jammed bills in the stacker or transport
Player switches not functioning	<ol style="list-style-type: none"> 1. Faulty microswitch 2. Switch plunger stuck down 3. Broken wire/bad connection 4. Switch wires in wrong position 5. Faulty processor board 6. Faulty mother board 	<ol style="list-style-type: none"> 1. Replace the microswitch 2. Clean switch, verify retaining nut is FINGER TIGHT only 3. Check related wiring and connectors 4. Verify wire positions using wiring diagram 5. Replace the processor board 6. Replace the mother board

Phase 2

Outputs Troubleshooting Chart

Symptom	Possible Cause	Solutions
No machine functions	<ol style="list-style-type: none"> 1. Power cord is disconnected 2. 120 VAC fuse is blown 3. Faulty power switch 	<ol style="list-style-type: none"> 1. Attach power cord to appropriate outlet (verify correct voltage) and to the lower module 2. Replace the fuse AFTER checking why it is blown 3. Troubleshoot/replace the switch
No sound	<ol style="list-style-type: none"> 1. Broken wire or bad connection 2. Speaker is defective 3. Faulty processor board 4. Faulty mother board 	<ol style="list-style-type: none"> 1. Check related wiring and connectors 2. Replace the speaker 3. Replace the processor board 4. Replace the mother board
Optional change light (candle) does not illuminate	<ol style="list-style-type: none"> 1. Lamp is burned out 2. Change switch is faulty 3. 7 VAC fuse is blown (all lamps are out) 4. Broken wire or bad connection 5. Faulty processor board 6. Faulty mother board 	<ol style="list-style-type: none"> 1. Replace lamp, verify operation in self test 2. Replace switch, verify operation in self test 3. Replace the fuse AFTER checking why it is blown (check for shorts!) 4. Check related wiring and connectors 5. Replace the processor board 6. Replace the mother board
Fluorescent lights do not illuminate	<ol style="list-style-type: none"> 1. Starter is burned out 2. Lamp is burned out 3. Ballast is defective 4. Broken wire or bad connection 5. 120 VAC fuse is blown 	<ol style="list-style-type: none"> 1. Replace the starter 2. Replace the lamp 3. Replace the ballast 4. Check wires, connectors, 110 volt junction block 5. Replace the fuse
Mechanical meter(s) not functioning	<ol style="list-style-type: none"> 1. Faulty meter 2. 24 VAC fuse is blown 3. Broken wire or bad connection 4. Faulty processor board 5. Faulty mother board 	<ol style="list-style-type: none"> 1. Replace the meter 2. Replace the fuse AFTER checking why it is blown 3. Check related wiring and connectors 4. Replace the processor board 5. Replace the mother board

Phase 3

Software Troubleshooting Chart

Symptom	Possible Cause	Solutions
Code/message appears on the digital or dot matrix display	Game or system software sensed a tilt, error, service or security condition	Refer to page 7 of this document; refer to Field Service Manual (Section 3, pages 8, 9), June 18, 1993, 821-027-01
Options (game sounds, hopper pay amounts, progressives) not functioning properly	Game program not compatible with processor board DIP switch settings	Verify DIP switch settings using Field Service Manual (Section 5, page 115), June 18, 1993, 821-027-01
Statistical data mode will not display	<ol style="list-style-type: none"> 1. Faulty reset key switch 2. Game is not over/completed 3. Broken wire/bad connection 4. Faulty processor board 5. Faulty mother board 	<ol style="list-style-type: none"> 1. Replace reset switch 2. Complete the current game 3. Check related wiring and connectors 4. Replace the processor board 5. Replace the mother board
Self test mode will not display	<ol style="list-style-type: none"> 1. Faulty self test switch 2. Game is not over/completed 3. Machine is in tilt mode 4. Faulty processor board 5. Faulty mother board 	<ol style="list-style-type: none"> 1. Replace the self test switch 2. Complete the current game 3. Clear the tilt 4. Replace the processor board 5. Replace the mother board

Clearing your IGT S-PLUS Stepper (Complete Reset)

- In the rare event the slot machine game needs changing; needs a battery replacement or a RAM error is encountered, your S-Plus machine will need to be reset to factory settings.
- To do this, a clear chip is needed. Keep the following devices connected to the slot machine during the clearing process: coin comparator, bill validator, hopper, and/or progressive meter. The Main Processing Unit programming will recognize these peripheral devices during the clear chip procedure.
- Make sure the lithium battery has a voltage of 3.6 volts. If there is an **ERROR 12** on the display, the battery must be replaced first, before the clear chip procedure. (Purchase a 3.6-volt lithium battery with solder tabs spot welded to the positive and negative ends.) If the battery has the correct voltage, skip the next step and proceed to the **CLEAR CHIP PROCEDURE**.
- Turn the machine power to **OFF**. Unplug the power cord from the wall outlet. Remove the coin tray and hopper. Remove the (Main Processing Unit) MPU board from the machine. Carefully unsolder the old battery. Solder the new battery in the board. Watch the polarity (+) for the correct battery placement as shown on the board. Proceed with the steps below to continue with the clear chip process.

CLEAR CHIP PROCEDURE

- With the power **OFF** to the slot machine, open the door, lift out the coin tray and slide the hopper out carefully from its rails. Place the hopper on an old towel. (If the battery has been replaced, this step is not necessary.)
- Pull up carefully on the large knob to remove the MPU from its chassis and out of its sockets. (If the battery has been replaced, this step is not necessary.)
- On the circuit board (component side view), locate the game chip (the EEPROM will show two letters; usually SS) and a four-digit number. (The circuit board will have the words **GAME PROM** stamped above the chip holder.)
- Observe/use all Electrostatic Discharge safety procedures to handle all ICs correctly.
- Using a chip removal tool, carefully remove the EEPROM from the board. Take note of the direction the notch on the chip is facing.
- Carefully install the clear (CLR) chip in place of the previously-removed game chip.
- Make sure the notch on the clear chip is facing the direction indicated on the MPU.

- Replace the MPU in the machine and make sure it is firmly seated.
- Replace the hopper, sliding the edges carefully into the rails in the casing. Be sure it is firmly seated in its plug.
- Plug the machine's line cord into an electrical socket.
- Power **ON** the machine.
- Wait about 15 seconds, then press the reset button (the small white button near, or next to, the power switch inside the machine.)
- The machine will start counting up on the front display. Once the counting has stopped, the RAM has cleared. (A "1", and then a "2" will display, after a number of digits are shown being counted up from the value of "0".)
- Turn **OFF** the power for the machine. Unplug the machine's line cord from the electrical wall socket.
- Remove the hopper carefully, sliding the edges out of the rails in the casing. Place it on an old towel.
- Remove the MPU.
- Remove the clear (CLR) chip carefully with the chip removal tool.
- Replace it with the original game chip (with the letters SS and a four-digit number.)
- Make sure the notch is facing the correct direction and that all the pins are properly in place.
- Gently push the program chip back into the socket. The circuit board has the words *GAME PROM* stamped above the chip holder.
- Seat the MPU firmly back in place in its sockets.
- Replace the hopper, sliding the edges carefully into the rails in the casing. Be sure it is firmly seated in its plug.
- Replace the coin tray.
- Turn **ON** the machine and wait several seconds.

- Look at the front display. It should read **61**.
- Push and hold the reset button (the white button near, or next to, the power switch) for about 3 seconds. A tone will sound; the display will show a code of **61-1**.
- Close the door and turn the jackpot reset key once, one quarter turn CW (clockwise) with the brass key on the right side of the machine in the cabinet keyhole lock.
- Wait approximately 15 seconds. All three reels should spin, and then stop from left to right. The machine should be ready to play.
- Try coining the machine. If it works, the clear chip procedure was successful.
- If it does not and the display reads **65**, open the door and push the reset button once.
- Close the door and turn the jackpot reset key once again one quarter turn CW. Wait for the reels to spin, then drop in a coin.

If the above steps do not reset the machine, contact us for assistance.