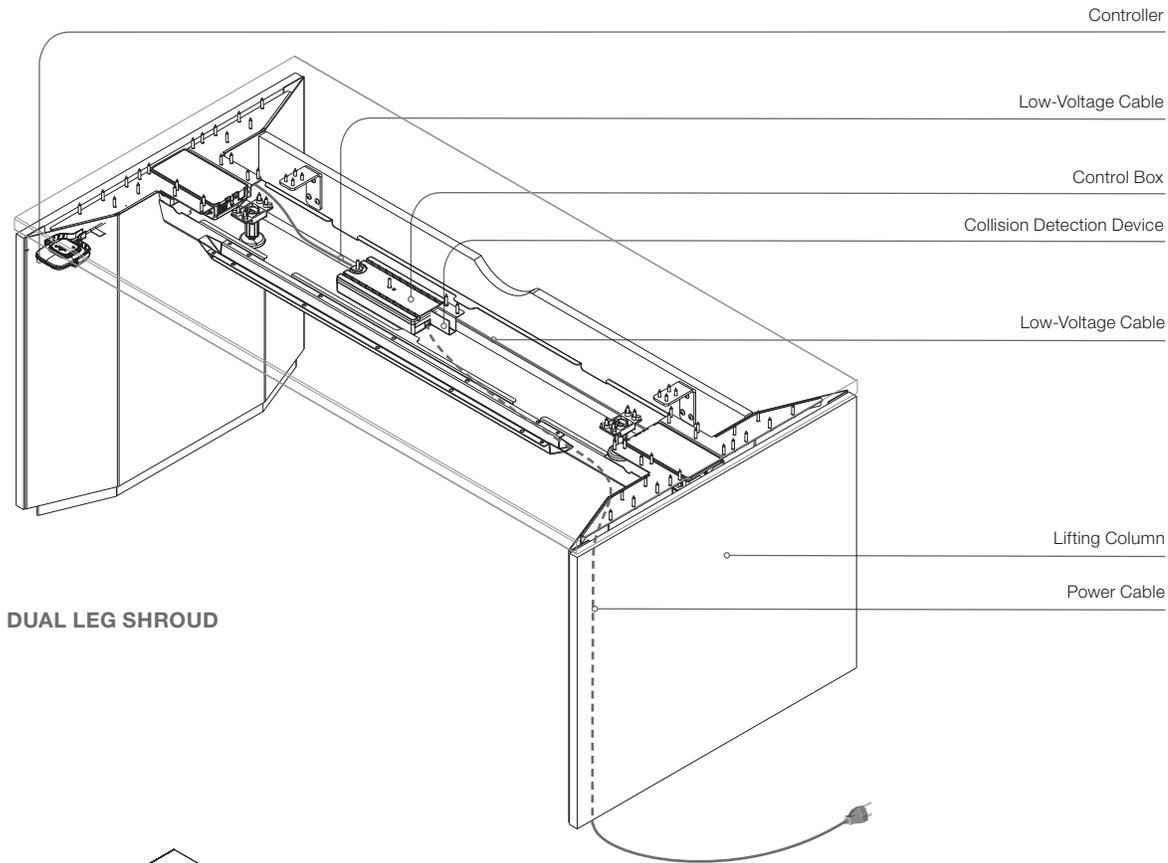
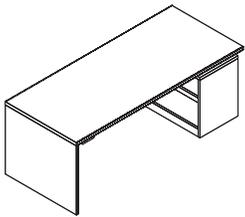


Troubleshooting Guide



DUAL LEG SHROUD



SINGLE LEG SHROUD integrated leg

SLIM LEG HEIGHT-ADJUSTABLE DESKS

HOW THEY WORK

- Each Lifting Column contains an individual motorized lift mechanism.
- The Control Box contains a power transformer. This converts high-voltage AC current from the wall outlet (120v) to low-voltage 18v DC current, which powers the Lifting Column.
- Only the main power cable carries high voltage. All other cables are low voltage.
- The Control Box contains a computer processor with embedded software controllers.
- The Control Box controls all aspects of Desk motion.
- The Control Box will shut down the entire Desk if a collision is detected.
- The Controller is the user interface to the Desk, and directs all Desk movements by lifting or pressing down until the desired height is reached.
- Preset data is stored in the Controller itself, not the Control Box.

READ THE ASSEMBLY DIRECTIONS AND USER GUIDE

Many times, problems can be the result of improper assembly. Reference the Assembly Directions document to ensure the Desk is assembled correctly. If so, reference the troubleshooting steps throughout this document.

TROUBLESHOOTING PARTS KIT

Having a spare part that is known to work will quickly lead to accurate identification of faulty components. Without this, it can be little more than guesswork.

Steelcase strongly recommends that every Dealer maintain a small kit of parts for troubleshooting purposes.

This kit of parts should include:

- | | | |
|----------------------------|-------|---|
| 1. Lifting Column Pkg | qty=1 | Service Part No. 1450969001SR Freestanding 1451152001SR Integrated |
| 2. Control Box | qty=1 | Service Part No. 841364900SR |
| 3. Simple Touch Controller | qty=1 | Service Part No. 1093294001SR |
| 4. Active Touch Controller | qty=1 | Service Part No. 1093247001SR |
| 5. Low-Voltage Cable (2m) | qty=1 | Service Part No. 23084302SR |
| 6. Power Cable | qty=1 | Service Part No. 22047301SR (North America) |

Always maintain a complete kit of troubleshooting spare parts that are known to work properly, to quickly identify the root cause of problems and resolve customer issues on the first try.

TROUBLESHOOTING STEPS

- Step 1:** Check for power at the wall outlet; ensure the Desk is properly assembled, and all cables are securely connected.
- Step 2:** Check all low-voltage cable connections. Are any of the pins in the connectors damaged or not making contact? (see Fig. 2 on page 4)
- Step 3:** Obtain a Control Box, Controller and Power Cable that are known to work.
- Step 4:** Using the known-good components, test the Lifting Column one by one (see Common Procedures). Replace any faulty Lifting Column.

Between each of the following steps, be sure to initialize the Control Box (see Common Procedures).

- Step 5:** If Lifting Column operates properly, progressively swap out parts in the test setup as follows:
- Swap the known-good Power Cable with the original from the non-functioning Desk. If it stops working, the Power Cable is faulty.
 - Using the original Power Cable, swap the known-good, Low-Voltage Cable with the original from the non-functioning Desk. If it stops working, the Low-Voltage Cable is faulty. Some Desk disassembly may be required.
 - Using the original Power and Low-Voltage Cables, swap the known-good Controller with the original from the non-functioning Desk. If it stops working, the Controller is faulty.
 - Using the original Power and Low-Voltage Cables and Controller, swap the known-good Control Box with the original from the non-functioning Desk. If it stops working, the Control Box is faulty.

Be sure to go through all of the steps above to fully identify all faulty components.

There could be more than one!

COMMON PROCEDURES

POWER-SAVING CONTROL BOX:

- The Control Box automatically powers down into 'Standby' mode after approximately 10 seconds of inactivity.
- During Standby mode, the Control Box only consumes 0.1 watt of power.

SETTING THE ACTIVE TOUCH DISPLAY HEIGHT:

- Upon first time install of the Active Touch controller or after a Power Cycle, the text will blink "SELECT", "HEIGHT".
- Lift up or press down on the controller to scroll through the starting height options.
- Once the correct height has been chosen, pause for 2 seconds.
- The light guide will fill. When all three bars are full, the starting height is saved.

POWER CYCLE THE CONTROL BOX:

- In the unlikely event that an error occurs, and the desk is unresponsive, disconnect power to the Desk for at least 10 seconds to reset the Control Box.
- Reconnect power to the desk.

RESETTING THE ACTIVE TOUCH DISPLAY HEIGHT:

- Press 1, 2, 1, 2. The text will begin blinking "SELECT", "HEIGHT".
- Lift up or press down on the controller to scroll through the starting height options.
- Once the correct height has been chosen, pause for 2 seconds.
- The light guide will fill. When all three bars are full, the starting height is saved.

TEST LIFTING COLUMN:

- Lifting Column can be operated independently.
- Obtain a Control Box that is known to work. Be sure the Control Box is unplugged, or plugged in but in Standby mode.
- Connect the Low-Voltage Cable of the Lifting Column to the known-good Control Box. Connect only to Port/Channel 1 (farthest from the Power Cable).
- Obtain a Controller that is known to work, and connect it to the Control Box. **TIP:** Verify that the Control Box software is current when using the Active Touch controller. (See Fig 4 on page 4.)
- If the Control Box is unplugged from the wall outlet, plug the Power Cable back in.
- With the system hot, operate the Lifting Column.
 - A. Can the Lifting Column be operated through its full range of motion?
 - B. Does the Lifting Column appear to function normally?

Any faulty Lifting Column must be replaced.

There are no field-serviceable parts inside the Lifting Column.

OBTAINING REPLACEMENT PARTS

Contact your local Steelcase dealer to help identify and order Service Parts.
If you need help, call 888.STEELCASE.

PROBLEM ILLUSTRATIONS

Fig. 1 - Power Cable not fully seated in Control Box

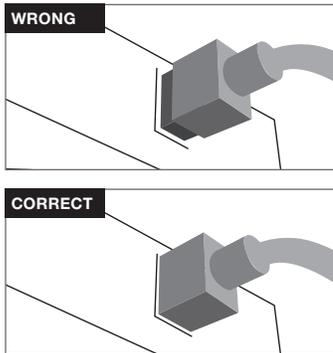


Fig. 2 - Damaged pins in the low-voltage wiring connectors

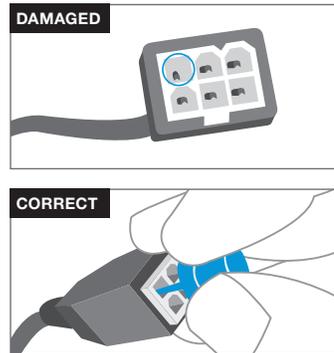
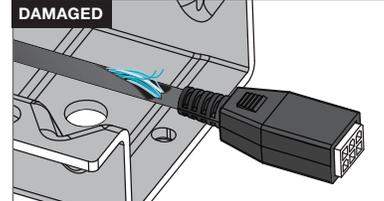


Fig. 3 - Frayed/damaged Low-Voltage Cables (damaged Lifting Column wiring harness shown)



TROUBLESHOOTING: CAUSES AND SOLUTIONS

| PROBLEM | POTENTIAL CAUSE | POTENTIAL SOLUTION |
|------------------------------------|--|---|
| No power to Desk | No power at wall outlet | Check outlet with another device; check circuit breakers/fuses/wiring. |
| | Power Cable not plugged into wall outlet | Confirm proper cable engagement into wall outlet. |
| | Power Cable not plugged into Control Box | Check that Power Cable is fully seated into Control Box. (see Fig. 1 on page 4) |
| | Faulty Power Cable | Inspect the Power Cable for damage; replace any damaged cables. |
| | Desk wiring not properly assembled | Check that all cables are connected per the Assembly Directions. |
| Desk will not go up or down | No power | See above. |
| | Desk is severely overloaded | Base supports a maximum distributed weight capacity of 295 lbs/133.8 kg*. Overloading the Desk could lead to damage that would not be covered by warranty. <i>Tip: When calculating lifting capacity, subtract the weight of the worksurface, understructure and options. See spec guide for weight capacity by configuration.</i> |
| | Control Box requires reset | Perform initialization procedure. (see Common Procedures) |
| | Damaged pins inside multi-pin connectors (Low-Voltage Cable/connector) | Ensure the Desk is in Standby mode (>10 seconds of inactivity). Unplug each multi-pin connection point and inspect the pins. Are they all straight and making good contact? If not, try using a pushpin to straighten them. (see Fig. 2 on page 4) (Otherwise, replace necessary components with undamaged versions.) |
| | Damaged Lifting Column wiring harness | Carefully check the condition of the Low-Voltage Cable in the Lifting Column. (see Fig. 3 on page 4) If the Low-Voltage Cable is damaged, the entire Lifting Column must be replaced. |
| | Faulty Lifting Column | To prevent further damage, the Control Box will shut the whole Desk down if the Lifting Column is faulty. Test Lifting Column (see Common Procedures), and replace faulty Lifting Column. |

TROUBLESHOOTING: CAUSES AND SOLUTIONS

| PROBLEM | POTENTIAL CAUSE | POTENTIAL SOLUTION |
|--|---|--|
| Desk will not go up or down <i>(continued)</i> | Faulty Low-Voltage Cable | Swap with Low-Voltage Cable known to work. |
| | Faulty Control Box | Swap with Control Box known to work. |
| | Blown fuse in Control Box | In order to prevent control box failures at installation, please use a volt meter to ensure that every outlet into which a height-adjustable desk will be connected has 120 volts, plus or minus 10 volts, between the hot and neutral contacts (the parallel openings) BEFORE the height adjustable desk is plugged in. If this voltage reading is above 130 volts, please contact the building electrician for correcting the building wiring. |
| Desk goes up, but not down (or vice versa) | Damaged pins inside multi-pin connectors (Low-Voltage Cable/connector) | Unplug Power Cable from wall. Unplug each multi-pin connection point, and inspect the pins. Are they all straight and making good contact? If not, try using a pushpin to straighten them. <i>(see Fig. 2 on page 4)</i> (Otherwise, replace necessary components with undamaged versions.) |
| Desk does not go through full range of motion | Faulty Lifting Column | Test Lifting Column <i>(see Common Procedures)</i> , and replace faulty Lifting Column. |
| Desk movement is not smooth; Lifting Column jerks or hops while raised or lowered | Faulty Lifting Column | Test Lifting Column <i>(see Common Procedures)</i> , and replace faulty Lifting Column. |
| Error Code displayed on Digital-Display Controller | Refer to Error Code listing | Follow instructions on Error Code listing; is Desk functioning normally? Try initializing the Control Box. <i>(see Common Procedures)</i> |
| Height display is inaccurate | The desk height is shown in centimeters instead of inches (or vice versa) | Follow instructions in the Slim Leg User Guide to switch from inches to centimeters, or vice versa. |
| | The desk height is inaccurate | Follow instructions in the Slim Leg User Guide to adjust the height displayed. If using the Active Touch controller, refer to page 3, "Resetting the Active Touch Display Height". |

SLIM LEG DESK ERROR CODES

Error codes are only available with the Active Touch Controller.

| ERROR CODE | ERROR CODE NAME | DESCRIPTION | POTENTIAL CAUSE | SOLUTION/TROUBLESHOOTING |
|---------------|--|---|---|---|
| E01 | INITIALIZATION | The table has an unknown position and needs to be initialized | <ul style="list-style-type: none"> Position error New Lifting Column added | <ul style="list-style-type: none"> Initialize the Control Box (see Common Procedures) |
| E08 | Watchdog | Software failed to activate routine that checks calculations | <ul style="list-style-type: none"> Program fault | <ul style="list-style-type: none"> Unplug Power Cable for 15 seconds Initialize the Control Box (see Common Procedures) Replace Control Box |
| E10 | Power fail | Power fail happened | <ul style="list-style-type: none"> Power Cord pulled during driving Internal fault | <ul style="list-style-type: none"> Check Power Cord is not caught, and is allowed to freely travel Plug table into reliable 120v/240v outlet and test Replace Power Cable or Control Box |
| E11 | Port/Channel mismatch | Change in number of Lifting Columns since initialization | <ul style="list-style-type: none"> Disconnection Lifting Column added | <ul style="list-style-type: none"> Check Low-Voltage Cable connections and integrity Change Low-Voltage Cable or Lifting Column Initialize the Control Box (see Common Procedures) |
| E12 | Position error | One Port/Channel has a different position than others | <ul style="list-style-type: none"> Too much back drive occurred | <ul style="list-style-type: none"> Move table to lowest position Initialize the Control Box (see Common Procedures) |
| E13 | Short circuit | One of the motor outputs has short-circuited | <ul style="list-style-type: none"> Squeezed Low-Voltage Cable Short in motor | <ul style="list-style-type: none"> Check Low-Voltage Cable connections Isolate and replace Low-Voltage Cable Isolate and replace Lifting Column |
| E15 | Power limit | System has reached its power limitation | <ul style="list-style-type: none"> Low-Voltage Cable pulled during driving Internal fault | <ul style="list-style-type: none"> Check Low-Voltage Cable is not caught, and is allowed to freely travel Use strain-relief loop built into control box |
| E16 | Button error | Illegal buttons pressed | <ul style="list-style-type: none"> Hitting multiple buttons simultaneously | <ul style="list-style-type: none"> Check Controller |
| E17 | Safety missing | LIN bus unit does not support safety feature | <ul style="list-style-type: none"> Controller does not have up-to-date software | <ul style="list-style-type: none"> Check Controller |
| E23, E24, E25 | Port/Channel 1, 2, 3 missing respectively | Port/Channel 1, 2, 3 are detected missing respectively | <ul style="list-style-type: none"> Disconnection | <ul style="list-style-type: none"> Check Low-Voltage Cable connections and integrity Change Low-Voltage Cable or Lifting Column Initialize the Control Box (see Common Procedures) |
| E29, E30, E31 | Port/Channel 1, 2, 3 type error respectively | <ul style="list-style-type: none"> Port/Channel 1 is not same type as when initialized Port/Channel 2, 3 are not same type as when initialized or not same type as Port/Channel 1 | <ul style="list-style-type: none"> Change in Lifting Column type | <ul style="list-style-type: none"> Check Lifting Column type Change Lifting Column Initialize the Control Box (see Common Procedures) |
| E35, E36, E37 | Port/Channel 1, 2, 3 pulse fail respectively | Port/Channel 1, 2, 3 had too many pulse errors respectively | <ul style="list-style-type: none"> Loose/faulty Low-Voltage Cable Hall sensor PCB inside Lifting Column | <ul style="list-style-type: none"> Check Low-Voltage Cable connections and integrity Initialize the Control Box (see Common Procedures) Replace Lifting Column |
| E41, E42, E43 | OVERLOAD | Overload up occurred on Port/Channel 1, 2, 3 respectively | <ul style="list-style-type: none"> Hit obstruction Leg is overloaded Reached end stop (before initialization at upper end-stop occurs) | <ul style="list-style-type: none"> Remove obstruction Remove load Initialize the Control Box (see Common Procedures), if necessary |

SLIM LEG DESK ERROR CODES

Error codes are only available with the Active Touch Controller.

| ERROR CODE | ERROR CODE NAME | DESCRIPTION | POTENTIAL CAUSE | SOLUTION/TROUBLESHOOTING |
|---------------|---|---|---|--|
| E47, E48, E49 | OVERLOAD | Overload down occurred on Port/Channel 1, 2, 3 respectively | <ul style="list-style-type: none"> Reached end stop Hit obstruction | <ul style="list-style-type: none"> Remove obstruction Initialize the Control Box (see <i>Common Procedures</i>), if necessary |
| E53, E54, E55 | COLLISION | Anti collision triggered on Port/Channel 1, 2, 3 respectively | <ul style="list-style-type: none"> Hit obstruction | <ul style="list-style-type: none"> Remove obstruction Initialize the Control Box (see <i>Common Procedures</i>), if necessary |
| E59, E60, E61 | COLLISION | Safety limit switch activated on Port/Channel 1, 2, 3 respectively | <ul style="list-style-type: none"> Hit obstruction | <ul style="list-style-type: none"> Remove obstruction Initialize the Control Box (see <i>Common Procedures</i>), if necessary |
| E65, E66, E67 | Port/Channel 1, 2, 3 pulse direction respectively | Pulses counted wrong direction in Port/Channel 1, 2, 3 respectively | <ul style="list-style-type: none"> Motor poles are crossed Hall sensor cables crossed inside Lifting Column | <ul style="list-style-type: none"> Check Low-Voltage Cable connections and integrity Initialize the Control Box (see <i>Common Procedures</i>) Replace Lifting Column |
| E71 | Ch1A short | Short circuit on channel 1 (If T-splitter is used, short circuit on 1A) | <ul style="list-style-type: none"> Damage to power cable Damage to cable exiting leg (if applicable) | <ul style="list-style-type: none"> Inspect power cable for damage, replace if damaged Inspect cable exiting leg (if applicable), replace if damaged |
| E72 | Ch1B short | Short circuit on channel 1 (If T-splitter is used, short circuit on 1B) | <ul style="list-style-type: none"> Damage to power cable Damage to cable exiting leg (if applicable) | <ul style="list-style-type: none"> Inspect power cable for damage, replace if damaged Inspect cable exiting leg (if applicable), replace if damaged |

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