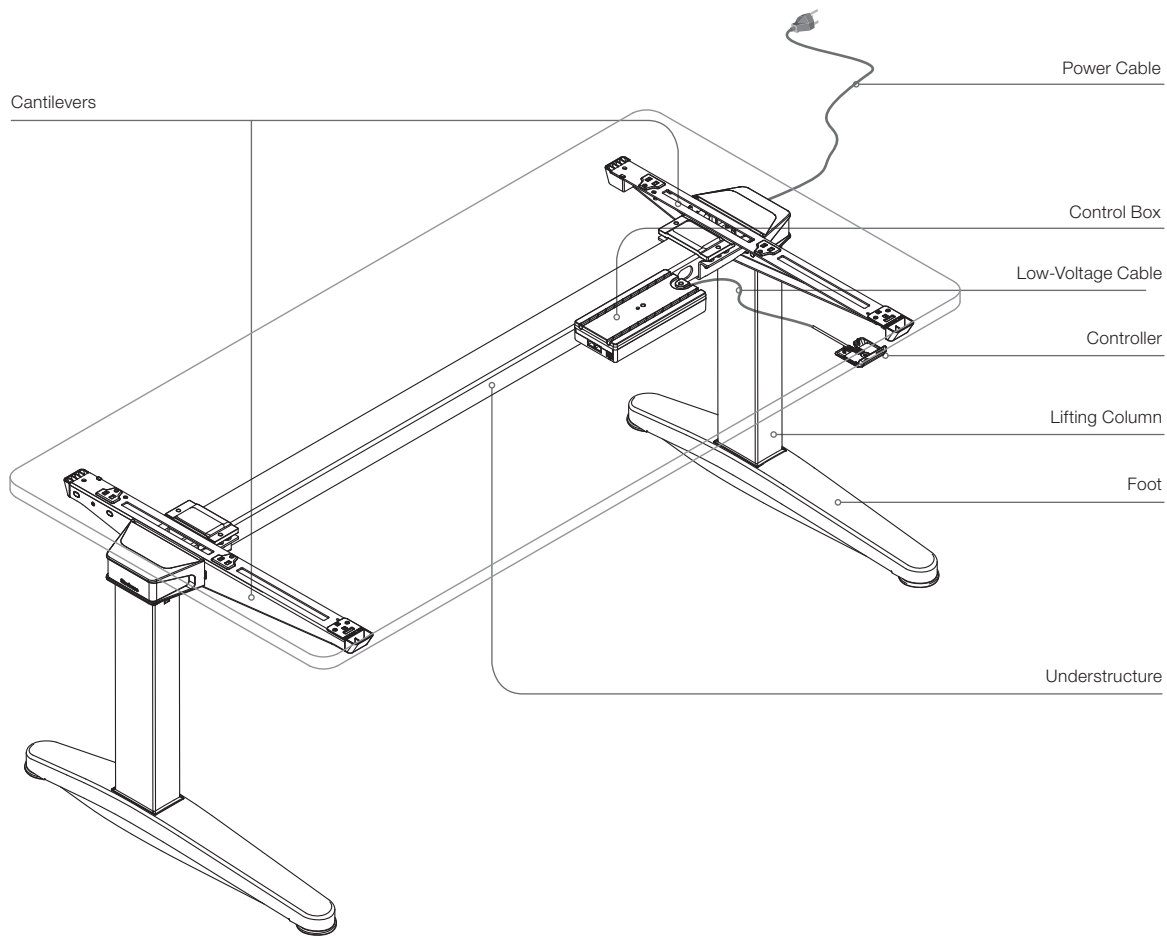


Troubleshooting Guide



LOGY 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 or 240v) to low-voltage 18v DC current, which powers the Lifting Columns.
- 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, and synchronizes motion of the individual Lifting Columns.
- The Control Box will shut down the entire Desk if a fault is detected. For example, if one Lifting Column is binding or trapped, it will draw significantly more current than the other Lifting Column, and the Control Box will shut down the entire Desk to prevent further damage.
- The Controller is the user interface to the Desk, and directs all Desk movements via the Up-Down buttons and the Preset buttons.
- 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 and Leg Assembly | qty=2 | Service Part No. 24315601 (LH)/24315602 (RH) |
| 2. Control Box | qty=1 | Service Part No. 841364900 (2-leg)/841300004 (3-leg) |
| 3. Controller (digital) | qty=1 | Service Part No. 24316101 |
| 4. Low-Voltage Cable (2m) | qty=2 | Service Part No. 24012601 |
| 5. Power Cable | qty=1 | Service Part No. 22047301 |

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 connections of Low-Voltage Cables. Are any of the pins in the connectors damaged or not making contact? (*see Fig. 2 on page 5*)
- 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 Columns one by one (*see Common Procedures*). Replace any faulty Lifting Columns.

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

- Step 5:** If all Lifting Columns operate properly, progressively swap out parts in the test setup as follows:
- A. Swap the known-good Power Cable with the original from the non-functioning Desk. If it stops working, the Power Cable is faulty.
 - B. 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.
 - C. 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.
 - D. 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.
- With the Control Box in Standby mode, the Desk can lose power without affecting the synchronization of the Lifting Columns.
- However, if the Control Box is still active and not in Standby mode, a power loss will require that the Lifting Columns be re-synchronized.
- Power fluctuations and brownouts can also cause the need for re-synchronization.

Note: The Control Box does not reset (initialize) by being unplugged and plugged back in. Refer to the Initialization procedure below.

INITIALIZING 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 and synchronize the Lifting Columns as outlined below.

SYNCHRONIZE THE LIFTING COLUMNS:

- Operate the Desk all the way down to the lowest position, and release the Down button.
- Press the Down button again, and hold.
- After a few seconds, the Desk will visibly move up and down, settling to its correct "bottom" position.
- The Lifting Columns are now synchronized via the software in the Control Box.
- Operate the Desk all the way up and down to confirm proper function.

TEST INDIVIDUAL LIFTING COLUMNS:

- Lifting Columns can be operated individually, even if they are sitting on a bench, not assembled into a Desk.
- 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 targeted 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.
- If the Control Box is unplugged from the wall outlet, plug the Power Cable back in.
- With the system hot, operate the individual 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.*

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 5)
	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 314 lbs/142.4 kg* (2-leg) and 471 lbs/213.6 kg* (3-leg). 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 (i.e. integrated rail, power and data access door or soft edge). See spec guide for weight of each feature.</i>
	Control Box requires reset	Perform initialization procedure. (see Common Procedures) Lower Desk all the way down, and perform synchronization 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 5) (Otherwise, replace necessary components with undamaged versions.)
	Damaged Lifting Column wiring harness	Carefully check the condition of the Low-Voltage Cable of each Lifting Column. (see Fig. 3 on page 5) If any Low-Voltage Cables are 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 one Lifting Column is faulty. Test Lifting Columns individually (see Common Procedures), and replace any faulty Lifting Columns.
	Faulty Low-Voltage Cable	Swap with Low-Voltage Cable known to work.
Faulty Control Box	Swap with Control Box known to work.	
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. (see Fig. 2 on page 5) (Otherwise, replace necessary components with undamaged versions.)

TROUBLESHOOTING: CAUSES AND SOLUTIONS

PROBLEM	POTENTIAL CAUSE	POTENTIAL SOLUTION
Desk does not go through full range of motion	Re-synchronize Desk	Refer to synchronization procedure. (see <i>Common Procedures</i>)
	Faulty Lifting Column	Test Lifting Columns individually (see <i>Common Procedures</i>), and replace any faulty Lifting Columns. Be sure to test all Lifting Columns! Why? Because another Lifting Column may have the same problem at a different height.
Lifting Columns not synchronized (one is higher than the other)	Re-synchronize Desk	Refer to synchronization procedure. (see <i>Common Procedures</i>)
	Faulty Lifting Column	Test Lifting Columns individually (see <i>Common Procedures</i>), and replace any faulty Lifting Columns. Be sure to test all Lifting Columns! Why? Because another Lifting Column may have the same problem at a different height.
Desk movement is not smooth; Lifting Columns jerk or hop while raised or lowered	Faulty Lifting Column	Test Lifting Columns individually (see <i>Common Procedures</i>), and replace any faulty Lifting Columns. Be sure to test all Lifting Columns! Why? Because another Lifting Column may have the same problem at a different height.
	Lifting Columns are not parallel with one another, causing them to bind	<p>First ensure that glides are properly adjusted and the Desk is level.</p> <p>Loosen (but do not remove) all of the screws attaching the Lifting Columns to the Worksurface.</p> <p>Operate the Desk through a complete up/down cycle and then re-tighten Worksurface attachment screws.</p> <p>Still binding? Take everything off the Desk, flip it upside down, and remove the Worksurface screws completely. Run the Desk through another up/down cycle. The position of the Lifting Columns may shift slightly; re-install Worksurface screws in the adjusted position.</p>
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. (see <i>Common Procedures</i>)

PROBLEM ILLUSTRATIONS

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

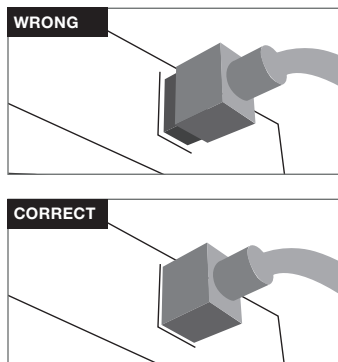


Fig. 2 - Damaged pins in the low-voltage wiring connectors

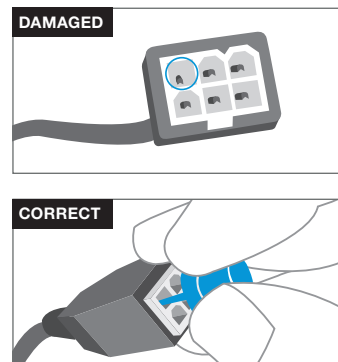
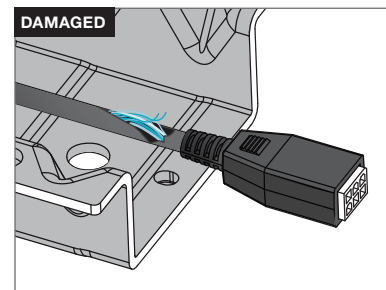


Fig. 3 - Frayed/damaged Low-Voltage Cables (damaged Lifting Column wiring harness shown)



OBTAINING REPLACEMENT PARTS

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

LOGY DESK ERROR CODES

Error codes are only available with the 4-Preset Programmable Controller.

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	SOLUTION/TROUBLESHOOTING
E01	Initialization	The Desk has an unknown position and needs to be initialized	<ul style="list-style-type: none"> Position error New Lifting Column added 	Initialize the Control Box (see <i>Common Procedures</i>)
E02	Up Overload	Overload has occurred	<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
E03	Down Overload	Overload has occurred	<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
E08	Watchdog	Software failed to activate routine that checks calculations	Program fault	<ul style="list-style-type: none"> Unplug Power Cable for 15 seconds Initialize the Control Box (see <i>Common Procedures</i>) Replace Control Box
E09	Stack overflow	Software caused a stack overflow (infinite loop)	Program fault	<ul style="list-style-type: none"> Unplug Power Cable for 15 seconds Initialize the Control Box (see <i>Common Procedures</i>) Replace Control Box
E10	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
E11	Double button pressed	One or more buttons are pressed on passive matrix	Multiple buttons pressed on 2 different handsets	Check Controller
E12	Cable orientation	One Low-Voltage Cable is not mounted correctly	<ul style="list-style-type: none"> Low-voltage cable plugged upside down Bad Low-Voltage Cable 	<ul style="list-style-type: none"> Check Low-Voltage Cable connections Replace Low-Voltage Cable
E13	Position error	One Port/Channel has a different position than others	Too much back drive occurred	<ul style="list-style-type: none"> Move Desk to lowest position Initialize the Control Box (see <i>Common Procedures</i>)
E14	Power fail	Power failure occurred	<ul style="list-style-type: none"> Power Cord pulled during movement Internal fault 	<ul style="list-style-type: none"> Check that Power Cord is not caught, and is allowed to move freely Plug the Desk into reliable 120v/240v outlet and test Replace Power Cable or Control Box
E15	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 <i>Common Procedures</i>)
E17 E18 E19	Port/Channel 1, 2, 3 missing respectively	Port/Channel 1, 2, 3 are detected missing respectively	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 <i>Common Procedures</i>)
E20 E21 E22 E23	Port/Channel 1, 2, 3, 4 type error respectively	<ul style="list-style-type: none"> Port/Channel 1 is not same type as when initialized Port/Channel 2, 3, 4 are not same type as when initialized or not same type as Port/Channel 1 	Change in Lifting Column type	<ul style="list-style-type: none"> Check Lifting Column type Change Lifting Column Initialize the Control Box (see <i>Common Procedures</i>)

LOGY DESK ERROR CODES

Error codes are only available with the 4-Preset Programmable Controller.

ERROR CODE	NAME	DESCRIPTION	POTENTIAL CAUSE	SOLUTION/TROUBLESHOOTING
E24 E25 E26 E27	Port/Channel 1, 2, 3, 4 pulse fail respectively	Port/Channel 1, 2, 3, 4 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 <i>Common Procedures</i>) Replace Lifting Column
E28 E29 E30 E31	Port/Channel 1, 2, 3, 4 overload up respectively	Overload up occurred on Port/Channel 1, 2, 3, 4 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 <i>Common Procedures</i>), if necessary
E32 E33 E34 E35	Port/Channel 1, 2, 3, 4 overload down respectively	Overload down occurred on Port/Channel 1, 2, 3, 4 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
E36 E37 E38 E39	Port/Channel 1, 2, 3, 4 anti collision respectively	Anti collision triggered on Port/Channel 1, 2, 3, 4 respectively	Hit obstruction	<ul style="list-style-type: none"> Remove obstruction Initialize the Control Box (see <i>Common Procedures</i>), if necessary
E40 E41 E42 E43	Port/Channel 1, 2, 3, 4 SLS respectively	Safety limit switch activated on Port/Channel 1, 2, 3, 4 respectively	Hit obstruction	<ul style="list-style-type: none"> Remove obstruction Initialize the Control Box (see <i>Common Procedures</i>), if necessary
E44 E45 E46 E47	Port/Channel 1, 2, 3, 4 direction respectively	Pulses counted wrong direction in Port/Channel 1, 2, 3, 4 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
E48	Port/Channel 4 missing	Port/Channel 4 is detected missing	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 <i>Common Procedures</i>)
E49	Input error	Multiple Controllers activated simultaneously	Multiple Controllers being activated at the same time	<ul style="list-style-type: none"> Test Controllers one at a time, and then together One Controller is likely faulty



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