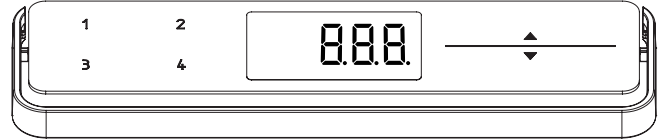


TROUBLESHOOTING

If your hand switch looks like this, reference the codes on page 1-2 of this guide.



Unit

Error Code	Source	Solution
Table does not move	System is not connected to power source	Ensure main power cord is properly connected to outlet.
	Leg motor is not connected	Ensure motor cord is properly connected to control box.
	Hand switch is not connected	Ensure hand switch is properly connected to control box.
	Max lifting capacity is exceeded	Reduce weight or load on table top.
	Max time limit is exceeded	Control box is deactivated automatically for roughly 20 minutes.
	Defective motor	Replace motor. Contact customer service.
	Defective control box	Replace control box. Contact customer service.
Table only moves downward	Power failure occurred while table was in motion	Perform initialization (reset) procedure.
	Leg realignment required	
Table moves slightly on one side then stops	Defective motor	Replace leg or leg motor. Perform initialization (reset) procedure.
Hand switch does not work	Hand switch is defective	Replace hand switch.
	Hand switch is not properly connected	Ensure hand switch is properly connected to control box.

Hand Switch Display

Error Code	Message	Required Action
HOT	Overheating protection has been activated. Duty cycle possibly exceeded.	Wait 20 minutes for components to cool.
E00	Internal error motor plug port M1	Unplug and contact customer service.
E01	Internal error motor plug port M2	
E02	Internal error motor plug port M3	
E12	Defect motor, plug port M1	Disconnect control box from outlet. Fix external short circuit. Ensure all cables are properly connected. Reconnect and initialize system.
E13	Defect motor, plug port M2	
E14	Defect motor, plug port M3	

If it is not possible to resolve an error as described, disconnect the power cord, wait a few minutes and reset the table again. If the error still occurs, remove the table from the power source and contact customer service.
(Error Code list is valid from firmware 1.7.5 and higher)

Hand switch Display (cont'd)

Error Code	Source	Solution
E24	Overcurrent, motor plug port M1	Check for obstacles blocking table's range of movement. Remove excess load from table.
E25	Overcurrent, motor plug port M2	
E26	Overcurrent, motor plug port M3	
E36	Motor not detected in motor plug port M1	Connect motor to motor plug port on control box. Ensure cables are properly connected. Perform initialization (reset) procedure.
E37	Motor not detected in motor plug port M2	
E38	Motor not detected in motor plug port M3	
E60	ISP activated	Remove source of obstruction.
E61	New installation New leg (replacement) Loss of power to work station	Perform initialization (reset) procedure.
E70	Leg motor configuration changed	Perform a factory reset procedure. Perform initialization (reset) procedure.
E71	Collision sensor defective	Perform a factory reset procedure. Perform initialization (reset) procedure.
E81	Internal error	Disconnect control box from outlet. Reconnect control box to outlet and perform a factory reset. Perform initialization (reset) procedure. Contact customer service if problem persists.
E90	Cascading error (secondary control box)	Check all connection points, perform initialization (reset) procedure. If problem persists, disconnect control boxes from outlet then reconnect control boxes to outlet and perform initialization (reset) procedure again. Contact customer service if problem persists.
E91		
E92		
E93	Connection error during cascading	Check all connection points, perform initialization (reset) procedure. If problem persists, disconnect control boxes from outlet then reconnect control boxes to outlet and perform initialization (reset) procedure again. Contact customer service if problem persists.
---	Control box, parameter file corrupted or missing	Contact customer service to replace control box.

Initialize Product After These Situations

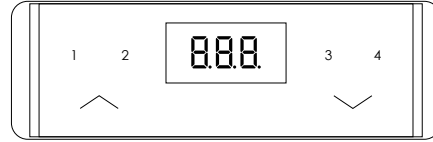
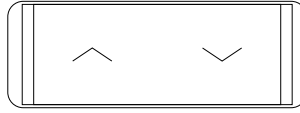
1. Initial set-up
2. Table reconfiguration
3. Interruption in power supply
4. Impact to table top.

Initialization (Reset) Procedure

1. Move table top to its lowest position by pressing the down button on hand switch.
2. Release down button
3. Press down button again until table top moves down slightly, then back up slightly to its operation zero point.
4. Release down button.

If down button is released too soon on hand switch, table top will malfunction. If this occurs, repeat procedure.
Upper and lower travel limits are programmed into control boxes; for this reason, only use control box that is shipped with table legs.
Never assume that a control box can be moved from one table to another without creating problems.
Table legs have different ranges of movement, mechanical failure can occur when connected to the wrong control box.

If your hand switch looks like this, reference the codes on page 3-5 of this guide.





Unit

Fault Description	Troubleshooting
Table does not move	Check whether the controller has power.
	Check the connection between the drives and the controller(s). Restore the connections.
	Check the loading of the table. Reduce the weight on the table.
	Powering-on duration exceeded. Wait until the table is ready for use again.
	Drive defective: Contact customer service.
	Controller defective: Contact customer service
	Defective control box: Contact customer service
	Hand switch faulty: Replace the hand switch or contact customer service.
	Carry out an initialization movement.
Table is not moving, but moved earlier	Table is at a slant: Carry out an initialization run.
	Table leg was separated: Check all the connections and carry out an initialization movement.
	Powering-on duration was exceeded: Wait until the table is ready for use again.
Table stops abruptly	Powering-on duration was exceeded: Wait until the table is ready for use again.
	Check the loading of the table. Reduce the weight on the table.
Table stops abruptly and moves back	Collision protection has been triggered: Remove the hindrance and try it again.
Table moves slowly and downwards only	Table is in an initialization movement: Continue it up to the end.
Table only moves briefly on one side, then remains stationary	Table is below the safety stop (downward movement slow; upward movement at normal speed): Move upwards, out of this zone.
	Drive defective: Contact customer service.
Table moves slowly	Table is below the safety stop (downward movement slow; upward movement at normal speed): Move upwards out of this zone.
	Check the loading of the table. Reduce the weight on the table. Check the loading of the table. Reduce the weight on the table.

Acoustic Codes

The controller, as soon as it is supplied electric power, can give the user information about the current system status by means of its integrated relay.



# of Double Click Sounds	When	Status Information
1	Supply of electrical power (dependent on configuration)	Normal Operation: The system is functioning without any problems. Faulty Operation: The controller does not have any firmware: only 1 click sounds.
1	Up key pressed	Reset: Initialization movement is required.
1	Lower blockade detected	Reset: Table has reached the Reset position during the initialization movement. The  key can be released.
1	Lower blockade detected	Reset: Initialization movement has ended;  key continues to be pressed. Release the key.
2	Set container or shelf stop	Confirmation: The position was successfully saved.
3	First movement after sensor out	Caution: A previously detected sensor has been removed. Normal operation can continue.

Acoustic Codes (cont'd)

# of Double Click Sounds	When	Status Information
3	First movement after sensor reinserted	Note: A sensor was reconnected after a previously detected sensor had been removed. Normal operation can continue.
4	Delete container or shelf stop	Confirmation: The position was successfully deleted.
6	Container stop or shelf stop too near in the middle	Warning: An attempt is being made to set the container stop or shelf stop too near the middle of the total stroke.
7	Motor cable pulled or missing	Warning: Motor cable absent when connecting to the mains, or has been disconnected during operation. Connect the missing motor cable with the controller.
7	Table moves at an angle	Warning: Slanted position of the table has become too big. Carry out an initialization movement.

Visual Codes

Visual codes can only be used with using hand switch models with a display.

Display	Description	Remedy	Display After Troubleshooting
C01	Short circuit motor 1	Pull out the mains plug! Remove the external short circuit, check the cables to the motors for possible damage or plug the correct motor into the socket concerned. Put the control back into operation.	001-999 Normal height display
C02	Short circuit 2 motor 2		
C05	Relay contact is sticking	Replace the controller.	C38 An initialization run is required
C11	Cable of motor 1 is pulled	Check the cable or plug connection to the motors.	C38 An initialization run is required
C12	Cable of motor 2 is pulled		
C15	No pulses measurable	Check the cables to the motors for possible damage and secure contact or, if necessary, replace the motor at the relevant socket. Put the controller back into operation.	C38 An initialization run is required
C34	Over current at motor 1	Max load exceeded, remove the load from the table.	00001-999 Normal height display
C35	Over current at motor 2		
C38	The motors have lost sync. An initialization run is required.	Motor positions too different. Distribute the load more evenly on the table. If necessary, reduce the load on the table. Perform an initialization run.	001-999 Normal height display
C39	Cascading error controlling is not communicating	Check whether the STAND.CONNECT connection cable between the controllers is correctly plugged in and a power cable is plugged into both controllers.	001-999 Normal height display
		Use the F3 menu to restore the factory settings in order to carry out a reconfiguration.	C38 An initialization run is required
C40	Sense module error	Further movements are made without collision protection. Movement remains possible. Check sensor module.	001-999 Normal height display
C51	Contradictory movement commands	Stop operation at all present hand switches.	001-999 Normal height display
C52	The  key on the hand switch is stuck	Replace hand switch.	001-999 Normal height display
C53	The  key on the hand switch is stuck	Replace hand switch.	001-999 Normal height display
C81	Voltage too small	Can occur after disconnecting the power cord.	001-999 Normal height display
		Main defective, replace controller.	C38 An initialization run is required
C82	Voltage is too high	Main defective, replace controller.	C38 An initialization run is required

Visual Codes (cont'd)

Display	Description	Remedy	Display After Troubleshooting
C84	No columns connected when the controller is switched on.	First connect the desired number of columns and hand switches and use the F3 menu to restore the factory settings.	C38 An initialization run is required
C85	Number of columns does not match the current configuration.	Check the motor cables or use the F3 menu to restore the factory settings.	C38 An initialization run is required
rEF	Initialization run is carried out.	Perform the initialization run to the lowest block position.	001-999 Normal height display
SP	System protection/ system pause. The powering-on duration of the system was exceeded.	Wait until the controller has cooled and the display SP turns off. Then, the movement duration of 17 seconds is cleared. Only after 18 minutes does the table move again for a full 2 minutes. ATTENTION: The calculation of the powering on duration is performed even if there is no mains voltage present.	001-999 Normal height display
COL	Collision detected	Remove the hindrance.	001-999 Normal height display after moving off in one direction
CAL	Sensor calibrated	Leave table alone.	001-999 Normal height display
001-999	The table moves; height display		

If it is not possible to resolve an error as described, disconnect the power cord, wait a few minutes and reset the table again.

If the error still occurs, remove the table from the power source and contact customer service.

(Error Code list is valid from firmware 1.7.5 and higher)