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# **Installers - DO NOT REMOVE**

Rev.1.0

# **IMPORTANT SAFETY INFORMATION - READ AND SAVE**

Safe use of the system is possible only when the user manual is read completely and the instructions contained are strictly observed.

Failure to comply with instructions marked with the "NOTICE" symbol may result in serious damage to the system or one of its components.

Read all instructions before using this product.

Important safety information on TBC<sup>®</sup> products can be found under the following headings:



**DANGER -** Failure to comply with these instructions will result in severe personal injury.



**WARNING** - Failure to comply with these instructions may result in severe personal injury.



**CAUTION -** Failure to comply with these instructions can result in minor personal injury.



**NOTICE** - Failure to comply with these instructions can result in property damage.



# WARNING

- This appliance can be used by children aged from 8 years and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

#### **Only for US and Canadian markets**

- Persons who do not have the necessary experience or knowledge of the product/ products must not use the product/products. Besides, persons with reduced physical, sensory or mental abilities must not use the product/products, unless they are under surveillance or they have been thoroughly instructed in the use of the apparatus by a person who is responsible for the safety of these persons.
- Moreover, children must be under surveillance to ensure that they do not play with the product.
- It is the operator's responsibility to ensure that there is free space for the application to move without risk for the operator or bystanders before operating the application.

# CAUTION

#### Load on the table

#### Risk of injury to persons and of malfunction

- Do not overload the frame.
- Place heavy load centrally on the desk.
- Do not use the desk as a work bench.
- Do not use the frame for lifting persons.
- Do not stand on the desk while it is driving up or down.

# PRODUCTS



#### DPI1K

Up/down drive

# Desk Connect<sup>™</sup> App



- Up/down drive
- Displays actual height
- Up to four favorite positions
- Automatic connection to desk
- Possibility to enable automatic drive
- Possibility to enable keylock
- Works via Bluetooth Low Energy Technology
- Available for iOS and Android smart phones



#### DPI1C

- Up/down drive
- Up to four favorite positions
- Bluetooth<sup>®</sup>
- Display



# NOTE:

This user guide is only in reference to operation of the DPI controllers. For detailed assembly instructions, including how to attach the controller to your console, please consult the respective assembly guide(s) or email support@tbcconsoles.com.

## **OPERATION**

Operate the DPI by tilting it.

- 1. Tilt and hold up DPI to drive desk up, press and hold down DPI to drive desk down.
- 2. Release DPI when you have reached your requested position.







Figure 2 Press and hold the DPI to drive the desk down

#### DPI1C only:

If favorite positions have been saved and automatic drive is enabled: Simply double-tap up or down to drive the desk to a favorite position.



Figure 3 Double-tap the DPI to drive the desk to a pre-set favorite position

#### Settings mode (accessible via the DPI)

The settings mode of the DPI1C is primarily meant for installers when installing the system, and for users who do not use the Desk Connect™ App.



End users should not mix the ways to set up/configure the DPI but use <u>either</u> the Desk Connect<sup>TM</sup> App <u>or</u> the DPI settings mode.



If you set up the DPI1C via the settings mode and then connect to the Desk Connect™ App, favorite positions and units set in the app will override the favorite positions and units selected via the DPI settings mode.

#### Via the settings mode of the DPI1C you can access the following menus:

- HEIGHT
- UNITS
- FAV. POS.
- LIMITS
- RESTORE
- EXIT

#### The setup menu

- 1. To access the settings mode, press the connect button and, at the same time, tilt the paddle down for 3 seconds.
- 2. Tilt the paddle up or down to scroll through the menus. The settings mode is identified by the icon in the upper left corner of the display.



3. Press the connect button to select a menu/setting.



After 30 seconds of inactivity, the DPI automatically exits the setup menu.

#### Height

The first menu is 'HEIGHT'. If the height shown in the display is not correct, it can be adjusted via this menu.

- 1. Measure the height from the floor to the tabletop.
- 2. Press the connect button to enter the menu.
- 3. Tilt the paddle up or down to adjust the displayed height.
- 4. Press the connect button to save the new height.



Units can be changed in the 'UNITS' menu.



Revisit your favorite positions if you change the desk height.

#### Units

The second menu is 'UNITS'. In this menu you can change the height unit.

- 1. Press the connect button to enter the menu.
- 2. Tilt the paddle up or down to scroll through the options 'CM', 'MM' and 'INCH'.
- 3. Press the connect button to save the selected option.



If the desk is connected to the Desk Connect<sup>™</sup> App, the units set in the app will override the units selected via the DPI settings mode.

#### **Favorite positions**

The third menu is 'FAV. POS'. In this menu you can set your favorite positions.

- 1. Press the connect button to enter the menu.
- Tilt the paddle up or down to reach the desired favorite position, the option to clear all set favorite positions, or 'CANCEL' to leave the menu and return to the settings menu.
- 3. When the desired option is displayed, press the connect button.
- 4. Adjust the desk to the preferred height.
- 5. Press the connect button to select the height and then again to save the favorite position.



In case you do not want to save this position as a favorite, tilt the paddle and then press the connect button to cancel and return to the favorite positions menu.

If the desk is connected to the Desk Connect™ App, the favorite positions set in the app will override the favorite positions set via the DPI settings mode.

#### **Deleting favorite positions**

In the favorite positions menu, tilt the paddle up or down to get to menu 'CLR FAV.'



- 1. Tilt the paddle up or down to scroll to the 'CLR FAV.' menu.
- 2. Press the connect button to select this option and then again to confirm deletion of all favorite positions.



In case you do not want to delete the favorite positions, tilt the paddle and then press the connect button to cancel and return to the 'CLR FAV.' menu.

#### Limits

The fourth menu is 'LIMITS'. In this menu you can change the upper and lower desk height limits to prevent collision with for example a shelf above the desk or a cabinet placed under the desk.

- 1. Press the connect button to enter the menu.
- Tilt the paddle up or down to reach either the 'LOWER' or the 'UPPER' limit menu, the option 'CLEAR LIM.' to clear all set limits, or 'CANCEL' to leave the menu and return to the settings menu.
- 3. When the desired option is displayed, press the connect button.
- 4. Adjust the desk to the preferred height.
- 5. Press the connect button to select the height and then again to set the limit.



In case you do not want to save this position as a favorite, tilt the paddle and then press the connect button to cancel and return to the favorite positions menu.

#### Restore

The fifth menu is 'RESTORE'. In this menu you can restore the DPI to its factory default settings.

- 1. Press the connect button to enter the menu.
- 2. Press the connect button again to confirm.



In case you do not want to restore the DPI, tilt the paddle and then press the connect button to cancel and return to the restore menu.

#### Exit

The last menu is 'EXIT'. From here you can exit the settings menu when all settings are done.

1. Press the connect button to exit the settings menu.

After 30 seconds of inactivity, the DPI automatically exits the setup menu.

#### Downloading the app

The app is connected to the desk via Bluetooth<sup>®</sup> Low Energy technology integrated in the DPI1C.

The app is called 'Desk Connect' and it has the following app logo:

#### **Onboarding flow**

To connect the app and the desk, set the DPI in pairing mode by pressing the connect button on the bottom of the DPI for two seconds.

To indicate that the DPI is in pairing mode, the display shows the ID: All IDs are named 'DESK' followed by a four-digit number.

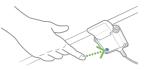
#### Need more help with the app?

Download the complete user guide here

Use the QR Code or follow this link:

https://www.tbcconsoles.com/DPI-user-guide.pdf









# TROUBLESHOOTING

#### **Glossary of Common Terms**

- Components
  - » Desk leg (DL) The lifting columns, typically with powder coated steel profiles, responsible for lifting the working load of the application.
  - » Control box (CBD6S) Both the computer and power supply of the system.
  - » Desk panel (DP) The user interface. Depending on the model, it is used to activate the application, set memory positions, display the height, display error codes, connect to mobile apps, and give reminders to the user.
  - » Motor cable Transmits low voltage power (18-39 VDC) from the control box to the desk legs, and also transmits PIEZO signals when available from the desk leg.
  - » Mains cable Transmits high voltage power (120 VAC in US and Canada) to the control box.
- Other
  - » Initialize Procedure to reset all desk legs to the fully retracted position so that the control box knows where they are.
  - » Reference Any group of desk legs that run in parallel when an Up or Down command is sent to the control box. It is possible to have a custom control box configuration that allows for more than one Reference. [Example: Two (2) desk legs on Reference #1 (Channels #1 and #2) to lift a work surface, and one (1) LA31 on Reference #2 (Channel 3) to adjust a monitor array.]

#### Standard Troubleshooting Procedures

#### P1 – Initialize the control box ("reset")

Note: This is commonly the solution when a complaint is that a desk will move down but not up. When a control box requires initialization, this is how the system is programmed to behave.

STEP 1. Hold Down button on desk panel to ensure the desk is retracted to its lower limit (whether it's the fully retracted hard stop, or a configured lower limit).

- STEP 2. Briefly release Down
- STEP 3. Press and hold Down for 5 seconds, wait until all desk movement has stopped, then release
  - a. If initialization is successful, you should see a slight up/down "handshake" movement of the desk legs
  - b. If you have a desk panel with display, you should also see E01 during this part of the procedure.

#### P2 - Check all cable connections

- STEP 1. Mains cable, connected to both the control box and power outlet.
- STEP 2. All motor cables, connected to both the control box and desk leg.
  - a. Assuming a standard control box configuration, these must be connected in channels 1 and 2, or channels 1, 2 and 3 for a 3-leg table. They can't be connected in channels 1 and 3 or 2 and 3 unless there is a configuration on the control box specifying this arrangement.
- STEP 3. Desk panel cable, connected to the control box in either port A1 or A2 (doesn't matter which)

#### P3 - Check for obstructions

STEP 1. Check under, above and on the sides of the desk for any obstructions that could prevent movement in either direction.

The next two procedures (P4 and P5) are for a two leg desk system. The same concepts can be used for a three leg system using Channel 3 and so forth.

#### P4 - Check for faulty component(s) WITH error codes (digital display on Desk Panel, or on app via Bluetooth)

Notes: Check the error code list in the appendix of this troubleshooting guide for assistance. The code should read E##. Some error codes are channel-specific which can help pinpoint the problem.

# TROUBLESHOOTING

Symptom	Procedure
System will move down but not up	1. Initialize (P1)
	1. Check mains cable connection
System unresponsive (no power to display with any button is pressed).	2. Test power outlet using another device (lamp, phone charger, etc.)
If any of these steps activates the digital display, initialize the system ( <b>P1</b> ).	3. Plug in a new switch and test
	4. Connect all existing cables to a new control box and test
System is powered, but will not initialize	1. Try pressing and releasing the down button a few times before pressing and holding for 5 seconds.
	2. Also, be aware if the control box has a special configuration: If the desk is programmed with a lower stroke limit, so as to avoid a collision with something like a file cabinet, it is possible that it also has a custom, longer Forced Initialization Time. This is the time required to hold Down before initialization begins. Sometimes this is 10 seconds or longer.
	3. If you have a standard control box without a special configuration (i.e. "Plug & Play"), try to initialize each leg in Channel 1 by itself, with nothing else plugged into the motor channels on the control box. Also, swap the motor cables so that a different motor cable is used to initialize Channel 1 by itself. The problem could be a faulty desk leg or a faulty motor cable.
Channel-specific error (Ex: E41 – Channel 1 overload) – Everything except PIEZO errors (E59-E63)	<ol> <li>Swap the motor cable connections at the control box (Motor cable #1 from channel 1 to 2, motor cable #2 from channel 2 to 1). If It remains E41, there could be a problem with the application (load or obstruction on one side) or a bad control box. If the error changes to E42, go to step 2.</li> </ol>
	2. Swap the motor cable connections at the desk legs, so that the leg that was originally connected to Channel 1 is back in Channel 1, but with the motor cable that was originally connected to Channel 2. If it remains E42, it is most likely a bad motor cable, now connected to Channel 2. If it goes back to E41, it is most likely a bad desk leg, now connected to Channel 1.

# TROUBLESHOOTING

Symptom	Procedure
Desk is uneven	<ol> <li>Initialize the desk. If both legs begin to run down, complete the initialization. If only one leg moves, stop and move to Step 2.</li> </ol>
	2. Check motor cable connections. Check to ensure motor cables are not pulled during movement. With a standard, Plug & Play control box, it's possible that only one leg is connected, and connected to Channel 1. In this case, it will initialize and run Channel 1 only. If there is only one leg but it's connected to Channel 2, it will not initialize.
	3. If a motor cable was disconnected, try initializing again.
	<ol> <li>If unsuccessful, connect the desk leg from Channel 2 into Channel 1, with nothing i Channel 2, and initialize.</li> </ol>

5. Try initializing the same leg that's in Channel 1, but with a different motor cable. If it still won't initialize, replace the desk leq.

Symptom	Procedure		
System will move down but not up	1. Initialize (P1)		
System will not initialize. OR	<ol> <li>Check mains cable connection. Test power outlet using another device (lamp, phone charger, etc.)</li> </ol>		
System won't complete the full range of motion.	2. Plug in a new switch.		
– After each of these steps, attempt to initialize (P1).	3. Connect all existing cables to a new control box.		
	<ol> <li>Try pressing and releasing the down button a few times before pressing and holding for 5 seconds.</li> </ol>		
	5. Also, be aware if the control box has a special configuration: If the desk is programmed with a lower stroke limit, so as to avoid a collision with something like a file cabinet, it i possible that it also has a custom, longer Forced Initialization Time. This is the time required to hold Down before initialization begins. Sometimes this is 10 seconds or longer.		
	6. If you have a standard control box without a special configuration (i.e. "Plug & Play"), try to initialize each leg in Channel 1 by itself, with nothing else plugged into the motor channels on the control box. Also, swap the motor cables so that a different motor cable is used to initialize Channel 1 by itself. The problem could be a faulty desk leg or a faulty motor cable.		
Desk is uneven	1. Desk is uneven (P4)		

#### P5 - Check for faulty component WITHOUT error codes (no digital display on Desk Panel, no Bluetooth)

### **Troubleshooting and Error Code help**

Download the Troubleshooting guide here

Use the QR Code or follow this link:



https://www.tbcconsoles.com/DPI-troubleshooting-guide.pdf

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Thank you for your business. We hope your experience using our product is excellent, and we can't wait to see you again soon. We welcome your input on this guide, our products or services by emailing <u>feedback@tbcconsoles.com</u>.

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These assembly instructions are meant as a guide. As we provide custom consoles based on a modular standard design, it is not possible to cover all possible customizations. In the event that a customization applies for your project beyond this guide then a detailed drawing or additional instructions will be provided.



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