D-BOX MOTION SYSTEM FOR OEM

TROUBLESHOOTING GUIDE

2172 de la Province, Longueuil, QC J4G 1R7 CANADA
IMPORTANT SAFETY INSTRUCTIONS

1. READ, FOLLOW AND KEEP THESE INSTRUCTIONS.

   a. Obey all warnings.
   b. Do not use this device near water.
   c. Clean only with a dry cloth.
   d. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
   e. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
   f. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
   g. Protect the power cord from being walked on or pinched particularly at outlets, receptacles, and the point where they exit from the device.
   h. Only use attachments/accessories specified by the manufacturer.
   i. Unplug this device during lightning storms or when unused for long periods of time.
   j. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
   k. Do not expose this device to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the device.
   l. To completely disconnect this device from the AC mains, disconnect the power supply cord plug from the AC receptacle.
   m. The mains plug of the power supply cord shall remain readily operable.

   The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated «dangerous voltage» within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

   The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

   This symbol indicates that you must communicate with the manufacturer for disposal of the equipment.

   WARNING: To reduce the risk of fire or electric shock, do not expose this device to rain or moisture.

LIMITATION OF LIABILITY

In no case and in no way, the provider of this product (d-box technologies inc., The distributor or reseller, or any other party acting as provider) shall be liable and sued to court for damage, either direct or indirect, caused by and to the user of the motion system and which would result from an improper installation or misuse of the product. “Misuse” and “improper installation” mean, without limitation, installation and use not corresponding to the instructions in this manual.

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1. INTRODUCTION

This guide provides the information required to troubleshoot the D-BOX Motion System (MS) used with OEM equipment. It is a guide to help diagnose and correct hardware and network problems.

2. GENERAL

Read the installation and operation guide before troubleshooting the MS. It is important that the MS is set up as depicted in the guide. This ensures a top performance of the system.

Some problem can be fixed locally. However, most issues require removing and replacing the faulty part.

3. D-BOX SUPPORT

If a problem persists after performing the corrective action, or if it can’t be solved locally, contact D BOX Support. Make sure you have your serial number (SN) and date of purchase before contacting the D-BOX team. To find our service agreement, hours of operation and best practice to open a case go to Appendix 1.

TECHNICAL SUPPORT: 1-888-442-3269, EXT. #931
FAX: 450-442-3230
E-MAIL: SUPPORT@D-BOX.COM
VISIT US AT: D-BOX.COM

The D-BOX Support team may at any time request that you to disassemble the D-BOX equipment from your platform for testing purposes.
4. MOTION SYSTEM COMPONENTS AND CONNECTIONS

The D-BOX MS consists of a variable number of actuators – depending on the platform configuration – and an Actuator Control Modules (ACM). There are different generation of products (Gen-I, Gen-II) which ARE NOT compatible and present important differences in connections and protocol. The troubleshooting steps are, however, similar.

Some ACMs use an absolute encoder* and some ACMs use a non-absolute encoder. The two are not compatible with each other. An actuator is programmed per the type of ACM in the motion system. A sticker on the ACM housing indicates its type.

* The encoder is part of the actuator. The ACM gets the actuator position from the encoder.

A USB Controller - KAI-1P or KCU-1P - is connected between the computer and the master ACM via shielded CAT 5e cables. To allow proper communications between all the D-BOX components all the CAT 5e cables must be shielded. The Motion Codes are stored on the computer. Various D-BOX system management applications are also stored on the computer.

A proprietary application called “System Monitor” is used to troubleshoot most of the systems. It is also possible to troubleshoot remotely when the computer is networked to the web via Team (see section 5).

Note: your configuration may be different.
4.1 ACM-I GEN-I CONNECTIONS

The ACM-I (Gen-I) controller is used with 1.5-inch Gen-I actuators. They can only be connected to a KAI-1P USB Controller or through a KCU-1P + KCA. The following figure shows the ACM-I (Gen-I) connections with shielded CAT 5e cables.
4.2 ACM-II CONNECTIONS

Note: ACM-II Gen-I and ACM-III GEN-II connections are the same.

ACM-II (Gen-I) controllers are used with 3 and 6 inches Gen-I actuators. They can only be connected to a KCU-1P USB Controller. The following figure shows the ACM-II (Gen-I) connections with shielded CAT 5e cables.

ACM-II (Gen-II) controllers are used with all Gen-II actuators. They can only be connected to a KCU-1P USB Controller. The following figure shows the ACM connections with shielded CAT 5e cables.

There may be 2 different types of ACM-II: a Master and a Slave. The ACM Master is the first one in the loop and identified by a black lexan showing “Master”.

Note: there can be more than one SLAVE ACM in a network (see next figure).

Note: 2250i and 3250 Motion Systems work only with a MASTER ACM.
5 INITIAL TROUBLESHOOTING STEPS

5.1. CHECKING CONNECTIONS AND COMMUNICATION WITH COMPUTER

Before you use the motion system:

1. Do a visual inspection to make sure nothing prevents the MS from moving; check that there is no interference from foreign objects.

2. Verify that the power cables are firmly plugged in.

3. Verify that the USB cable from the MS is firmly plugged into the KCU-1P or KAI-1P.

4. Verify that all the CAT 5e cables starting from the KCU-1P or KAI-1P to the last ACM in the chain is firmly plugged in their dedicated port.

5. Verify the connection diagram showed above is respected and that all termination loops are closed if applicable.

6. Check that the simulator, MS and computer are ON.

If the system is not operational, try the following:

7. Power off all devices for at least one minute.

8. Restore power to the ACM. The platform should do its “homing” sequence. The “homing” sequence is when the actuators move all the way to their highest position, then to their lowest position, and then to mid-position (standby).

9. If the USB controller is a KCU-1P, restore power to the device. If the USB controller is a KAI1P, go to the next step.

10. Start the simulator and PC.

11. Proceed with a communication and motion validation test with the D-BOX Control Panel application.

If the MS performs the communication test, then the computer can communicate with the MS and the connections are OK.

If the system can’t perform the communication test, repeat steps 1 to 11 and prepare for distance troubleshooting by connecting your PC to Internet.
5.2 UPDATING THE FIRMWARE (GEN-II ACM ONLY)

If the setup is a Gen-II MS, a firmware update is the first recommended step before troubleshooting the system.

1. Download and install the Configuration Manager (tech.d-box.com/?wpdmdl=22304)
2. Follow the instructions in the software to do a firmware update.

To download the Configuration Manager software, installation guide and user manual, go to the DBOX website download center at tech.d-box.com/corporate-page/downloads/.

5.3. CHECKING THE MOTION CORE VERSION

Click Start > Control Panel > Programs > Programs and Features and find an item called “D-BOX Motion Core”. Check the version number.

3.

6. TROUBLESHOOTING WITH LED STATUS

6.1 KAI-1P

Once you plug the KAI-1P, the STATUS LEDs illuminate.

<table>
<thead>
<tr>
<th>LED</th>
<th>OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB connection LED (green)</td>
<td>The LED turns GREEN as soon as the KAI-1P is connected into the computer. It stays on until the device is disconnected or the computer is powered off.</td>
</tr>
<tr>
<td>Motion streaming LED (yellow)</td>
<td>The LED turns YELLOW when Motion Codes are streaming from the computer.</td>
</tr>
</tbody>
</table>

If LEDs don’t illuminate, the KAI-1P is defective, or not connected to a properly configured USB port. See Appendix 4 for the KAI-1P detection procedure.

6.1 CONFIGURATING THE KAI-1P (UNCOMMON)

If LEDs don’t illuminate, configuring the KAI-1P might resolve the problem. To configure the KAI-1P, do the following.

Go to the Control panel – System – Device manager.

There should be a device called “D-BOX KineAudio” under a category called “audio, video and game controller.”

If not, make sure the KAI-1P is connected and look for a USB device with a yellow icon and exclamation mark.
You may need to install the driver by going to Start Menu>D-BOX> Reset KAI Motion Player USB Driver. This also configures the Default format:

Start-D-BOX Utilities, Reset KAI Motion Player USB Driver

Press Install.

Only if the KAI is still connected.

After removing the KAI from the USB port, and “Retry”, or if the KAI was already disconnected.

If the problem persists:

1. Change the USB cable if a problem occurs with the chair.
2. Also, try another USB PORT on the PC.
3. Connect the KAI-1P directly to the PC without using a USB-HUB.
Once you plug the KCU-1P - the controller draws 48V from the available power supply - the front STATUS LED illuminates:

<table>
<thead>
<tr>
<th>LED</th>
<th>OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>48V power present, but no USB connection.</td>
</tr>
<tr>
<td>Yellow/Orange</td>
<td>Device connected to PC via USB port – waiting for data from PC; or no MS detected by PC – System not powered, not connected, etc.</td>
</tr>
<tr>
<td>Green</td>
<td>The device is operational – receiving motion data or silence data.</td>
</tr>
</tbody>
</table>

6.3 ACM

Once you plug the ACM, the STATUS light illuminates.
### LED COLOUR PROBLEM SOLUTION

<table>
<thead>
<tr>
<th>LED COLOUR</th>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Colour</td>
<td>ACM not powered</td>
<td>Plug the ACM in outlet. Change internal fuse may resolve problem. However, opening the ACM box voids the warranty.</td>
</tr>
<tr>
<td>Green</td>
<td>No Fault</td>
<td>The ACM is powered and running fine.</td>
</tr>
<tr>
<td>Red</td>
<td>Actuator or ACM fault</td>
<td>Manual reinitialization required; unplug and replug ACM. If the problem persists, contact D BOX support.</td>
</tr>
<tr>
<td>Orange</td>
<td>Actuator or ACM fault</td>
<td>The ACM reinitializes itself after a few minutes. If the problem persists, contact D BOX support.</td>
</tr>
</tbody>
</table>

### 7. TROUBLESHOOTING WITH SYSTEM MONITOR (VIA TEAMVIEWER)

The System Monitor application shows a live information feed from the D-BOX MS. The System Monitor can be accessed via Team Viewer for remote troubleshooting (See Team Viewer connection steps in Appendix 3).

#### 7.1 USING THE SYSTEM MONITOR APPLICATION

**Overview Tab**

From the Overview tab you can:
- Identify each Actuator
- Perform a test of the Platform.
- Reset the Platform
Details Tab

The details tab provide information about the different elements of the MS architecture.

If a component fails, the information related to the failure shows in red (and shows as Fault).

ACM Section

ACM GEN-II: update the ACM firmware to its most recent version and that the numbers appearing in each column titled ACMx are similar.

Common faults

The faults display in the Details Tab of the System Monitor window.

Next table gives the cause and corrective action for each fault.
If you have to do work on an actuator or an ACM, FOLLOW this safety rule:

**WARNING:** HANDLING ACTUATOR CABLES AND CONNECTIONS WHILE THE ACM IS POWERED COULD CAUSE INJURY OR DEATH. THESE EQUIPMENT OPERATE UNDER EXTREMELY HIGH VOLTAGE.

YOU HAVE TO ASK D-BOX SUPPORT FOR A FORMAL AUTHORIZATION BEFORE OPENING THE MAIN COVER OF AN ACM. OPENING THE MAIN COVER OF AN ACM WITHOUT FORMAL AUTHORIZATION FROM D-BOX SUPPORT VOIDS THE WARRANTY.

**CAUTION:** THE PLATFORM IS HEAVY. IT TAKES AT LEAST TWO PERSONS TO HANDLE THE PLATFORM

<table>
<thead>
<tr>
<th>FAULT</th>
<th>CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
</table>
| No Communication & ACM Communication Lost | The power cable is disconnected from the platform. | 1. Make sure the ACM power cable is securely plugged in.  
2. Inside the ACM, check that the white 4 pins power connector (next to the fuse) is secured. |
| Actuator Hard                   | This is a Hard fault; the faulty actuator is immediately deactivated to prevent damage to the ACM, and all other actuators go to the lowest position. | Replace faulty actuator. |
| Bridge Temperature Sensor       | The error can be triggered by starting the system when the temperature is too low.  
The sensor for the temperature of the power bridge inside the ACM is defective. | Replace the ACM. |
<table>
<thead>
<tr>
<th>FAULT</th>
<th>CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command Overrun</td>
<td>The Actuator changed task in the middle of another Task.</td>
<td>1. Try removing the power, wait for a minute and try again.</td>
</tr>
<tr>
<td></td>
<td>Maybe linked to another problem, possibly on another actuator; usually a Travel Fault.</td>
<td>2. If error persists, take a screenshot of system monitor and export status (Exporting must be done right after reproducing the fault. See page 18).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. If problem persists, the actuator cable might be defective. In this case, replace actuator.</td>
</tr>
<tr>
<td>Critical Actuator</td>
<td>This is a Hard fault; the faulty actuator is immediately deactivated to prevent damage to the ACM, and all other actuators go to the lowest position.</td>
<td>Replace faulty actuator, or only the motor if possible.</td>
</tr>
<tr>
<td>Encoder</td>
<td>Either the encoder or the Hall sensor is defective.</td>
<td>1. Try removing the power, wait for a minute and try again.</td>
</tr>
<tr>
<td></td>
<td>This faults typically occurs on a Gen-II ACM if the actuators were unplugged from the ACM.</td>
<td>2. If error persists, take a screenshot of system monitor and export status (Exporting must be done right after reproducing the fault. See page 18).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. If problem persists, the actuator cable might be defective. In this case, replace actuator.</td>
</tr>
<tr>
<td>Fail State Travel</td>
<td>Actuator piston was fully extended when powered off.</td>
<td>1. Do a visual inspection to make sure nothing is stuck on the actuator/platform</td>
</tr>
<tr>
<td></td>
<td>Actuator piston is stuck, due to a mechanical problem or bad installation of captive ending.</td>
<td>2. Remove the power from the MS. Try manually moving the actuator - pull to extend at maximum, push to fully retract. Use a jack to free the actuators if needed.</td>
</tr>
<tr>
<td></td>
<td>Fault may also be triggered by a Travel, Encoder, or Hall Sensors fault on another actuator, and may be accompanied by Fail State, and Command Overrun faults.</td>
<td>3. Try removing the power, wait for a minute and try again.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Review captive installation methods.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Test the motion with Test mode.</td>
</tr>
<tr>
<td>FAULT</td>
<td>CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>High Voltage Rail Overvoltage</td>
<td>Too high voltage detected. The voltage from the wall outlet is too high for the motion system.</td>
<td>1. The system works natively on 120V. If 230V electric configuration is required, use D-BOX converter. You could also use an isolated transformer such as: 2. Hammond 172D: 550W &amp; isolated; 3. Hammond 172E: 750W &amp; isolated. 4. Try to connect to another wall outlet / electrical circuit. 5. Make sure the power cable is correctly plugged and serviceable. 6. Make sure the power connector is secured inside the ACM. 7. Make sure the fuse is not blown inside the ACM. 8. Check voltage of the UPS or voltage regulator (AVR) if needed. 9. If problem persists, ACM may be defective. Replace ACM.</td>
</tr>
<tr>
<td>High Voltage Rail Undervoltage</td>
<td>Too low voltage detected. Defective or disconnected power cable.</td>
<td></td>
</tr>
<tr>
<td>Logic Voltage Undervoltage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Hall Sensor</td>
<td>Could be a problem with the actuator, or the ACM, or both.</td>
<td>Swap 2 actuators in their respective slots on the ACM motherboard to isolate if the actuator or the ACM needs replacement.</td>
</tr>
<tr>
<td>Out of bounds</td>
<td>When the position of the actuator is over its limits. Should never occur in normal operation conditions.</td>
<td>1. Check if the motion code generation has been done by D-BOX. Call D-BOX for validation. 2. Try with the Test mode 3. If error persists, actuator might be defective. Replace the actuator.</td>
</tr>
<tr>
<td>Motor Temperature High</td>
<td>Maybe related to actuator. If the temperature shown is around 561 degrees, it may be that the connector from the actuator’s encoder inside the ACM is unplugged, the cable is defective, or a Gen-II Actuator is plugged into a Gen-I ACM.</td>
<td>1. Make sure that all the Connectors inside the ACM - control box’s access cover - are correctly secured. 2. If error persists, take a screenshot of system monitor and export status (Exporting must be done right after reproducing the fault. See page 18). 3. Problem might be the actuator motor. Replace actuator.</td>
</tr>
<tr>
<td>FAULT</td>
<td>CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Motor Temperature Sensor</td>
<td>Motor temperature sensor not detected. The temperature sensor on the actuator or the sensor reading system on the ACM is defective.</td>
<td>Swap 2 actuators in their respective slots on the ACM’s motherboard to isolate if an actuator or the ACM needs replacement.</td>
</tr>
</tbody>
</table>
| Overcurrent           | ACM may be programmed for a different type of actuator than are on the platform - ex: for 24D, while the actuators are 22C | 1. Check the motor type and the programming.  
2. Contact D-BOX Customer Support. |
| Overspeed             | When the speed of the motor is over its speed limit. Should not happen in normal operation. Might come from Motion Code | 1. Check if the motion code generation has been done by D-BOX. Call D-BOX for validation.  
2. Try with the Test mode  
3. If error persists, actuator might be defective. Replace the actuator. |
| Overweight            | There’s too much weight on the platform. The weight is unbalanced on the platform. | 1. Make sure that the weight on the platform is no heavier than the maximum supported weight. Limits in “Newton D-Box”:  
1. JE (250 lb): 1900N D-Box  
2. 24D (400 lb): 2400N D-Box  
3. 32D (500 lb): 2800N D-Box  
2. Make sure that the weight is evenly distributed among the actuators of the platform (as centered as possible).  
3. If fault persists, replace actuators. |
| Power Bridge Temperature High | Problem with ACM and possibly actuator. The power bridge has overheated, or the sensor is defective. | 1. Let the system cool down for a while, and see if the temperature cools within normal limits.  
2. Try removing the power, wait for a minute and try again.  
3. If problem persists, return the complete motion system for repair and investigation. |
| Soft Actuator         | If it shows alone, try removing the power, wait for a minute and try again. If it shows with actuator faults, apart from the hard faults, check for the main fault. | Check for the main fault. |
| Temporary Actuator    | Shows with actuator faults, apart from the hard faults. |  |
## 8. TROUBLESHOOTING SOFTWARE ISSUES

### 8.1. ERRORS IN GAME CENTER

<table>
<thead>
<tr>
<th>FAULT</th>
<th>CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game not found</td>
<td>The game version is not the same one D-BOX has coded.</td>
<td>The integration could have been done on another version of the game. Try starting the game; movement should still work. Verify the game version to make sure it's matching the one listed on the D-BOX website: <a href="http://www.d-box.com/en/downloads/gaming/">http://www.d-box.com/en/downloads/gaming/</a> Upgrade the game version to the latest one available.</td>
</tr>
<tr>
<td>Motion Code status “disable”</td>
<td>Configuration is incorrect.</td>
<td>Open the settings for this Motion Code and select automatically start with game.</td>
</tr>
<tr>
<td>Motion Code status “disable”</td>
<td>Configuration is incorrect.</td>
<td>Open the settings for this Motion Code and select automatically start with game.</td>
</tr>
<tr>
<td>Motion Code not working / No movement</td>
<td>There was a problem during the installation</td>
<td>Uninstall all version of the game and D-BOX software. Reinstall game, start the game, play once and exit. Do not connect the KAI-1P (via USB) before the software has been installed. Install the latest D-BOX software and Motion Code.</td>
</tr>
<tr>
<td>MS is moving when sound or music is playing but is not matching the action on screen.</td>
<td>The KAI-1P is detected as the default sound card. The KAI-1P got connected to the PC before the software was installed.</td>
<td>In the control panel, under sound, make sure there is a sound card installed and configured as the default playback device. Also, the KAI-1P should never be selected as the default playback device. To change the default playback device, right click the sound card or any device other than the “D-BOX KineAudio” and select default playback device.</td>
</tr>
<tr>
<td>FAULT</td>
<td>CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Error in game center: «Game not installed»</td>
<td>Problem during the game or motion code installation.</td>
<td>The Motion Code of the game should be installed where the installer is suggesting. For newer games (after 2010) it’s in the “C:\Program Files\D-BOX\Gaming\” folder. The problem could be related to the version of the game used: DVD version / online download version. The supported version is specified on the D-BOX web site.</td>
</tr>
</tbody>
</table>
| Error message: «dbxMotionPanel.exe - Fatal error CLR error: 80004005. The program will now terminate» | The software package .NET v4 is not installed.                        | Download and install the .NET update from the following link: http://www.microsoft.com/download/en/details.aspx?id=17851  
D-BOX recommends to update the software / Motion Code to the latest version. See web site at www.d-box.com for the latest software and the all new Motion Code™. |

9. **REMOVING HARDWARE**

**WARNING:** USE CAUTION WHEN HANDLING ACTUATOR CABLES AND CONNECTIONS INSIDE THE ACM. THESE EQUIPMENT OPERATE UNDER EXTREMELY HIGH VOLTAGE. SERIOUS INJURY OR DEATH COULD OCCUR IF HANDLED WHILE OPERATING.

9.1. **DISCONNECTING AN ACTUATOR FROM THE ACM**

1. Remove the power from the ACM and the platform.
2. Identify the defective actuator with the position label on the ACM.
3. Remove the actuator.
   **Note:** For more information on how to disconnect an actuator, please refer to D-BOX Guide 170-914-0068-ENL_Actuator Replacement Guide.pdf.
4. Remove the ACM access cover and actuator door panel.
5. Disconnect both connectors of the ACM board.
6. Remove the 3 screws holding the actuator door.
7. Gently pull the actuator from the ACM.
9.2. **DISASSEMBLING AN ACTUATOR - MECHANICAL/MOTOR**

![Disassembling an actuator](image)

Remove the 4 bolts holding the motor to the mechanic.

9.3. **INSTALLING A 230V ACM**

1. Remove the locknuts (qty 8) securing the transformer cover and the ACM to the base plate.
2. Remove the cable cover and the round head screw from the transformer cover.
3. Remove the 2 round head screws the ACM to the transformer cover.
4. Slightly lift up the transformer cover from the base plate. CAUTION: Do not lift the cover too much; some cables can be broken inside.
5. Install the ACM on the base plate.
6. Align back edge of the ACM with the back edge of the base plate.
7. Secure the ACM with 4 locknuts on the base plate.
8. Install the cover on the base plate.
9. Secure the cover with 2 round head screws - previously removed - on the ACM.
10. Secure the cover with locknuts (qty 4).
11. Remove the left button head cap screw from the filter of the ACM.
12. Connect the power cable (from the transformer cover) in the ACM (not shown).
13. Place the button head cap screw inside the cable cover.
14. Secure the cable cover on the transformer cover and the ACM with the button head cap screw and the round head screw.
APPENDIX 1 CONTACTING SUPPORT

1. EXPORTING MS LOGS

If the motion system is still not operating after updating the firmware and the D-BOX Motion Core software, proceed to exporting the logs from D-BOX System Monitor software.

The logs are required by the D-BOX Support team to make a proper diagnostic of the potential failure sources. **To export the logs, please follow the steps below:**

1. Open the D-BOX System Monitor - let it run in the background.

2. With the system monitor running, the game/simulation which produces the error can be started.

3. After the error is reproduced with the game/simulation, click the Export Status button by choosing “Export-> Record (Max:20MB)” in the D-BOX System Monitor.

![D-BOX System Monitor](image)

Send the generated file to D-BOX Support team when opening the case.
APPENDIX 2 LOCATING THE D-BOX SERIAL NUMBER

The D-BOX Serial Number (SN) is an identifier containing a sequence of 3-2-5-2 digits.

Ex: 123-00-00123-A0

Product number: 123-00-00123-A0
Sequence number: 123-00-00123-A0
Part identification: 123-00-00123-A0

2. ACM

![D-BOX Serial number](image1)

For ACM
S/N: 114-00-03276-A0

3. Actuator

![D-BOX Serial number](image2)

D-BOX Serial number for the motor
Ex.: S/N: 114-00-03276-M0

D-BOX Serial number for the mechanic
ex.: S/N: 114-00-03276-C0

4. KCU-1P

![D-BOX Serial number](image3)
APPENDIX 3 REMOTELY ACCESSING A DISTANT COMPUTER VIA TEAMVIEWER

To connect to a distant computer - if required – do as follows.

Click the TeamViewer icon.

Enter the distant computer ID and password.
APPENDIX 4 DETECTING THE KAI-1P

Problem:

Both Windows Device Manager and Audio Playback Devices see the KAI-1P, but the PC and D-BOX Control Panel do not see it.

Furthermore, Audio Capture does not work.

Solution:

1. Go to Device Manager and locate the Intel Audio Peripheral. It is identified as “High Definition Audio Device” under “Sound, video and game controllers.”

2. There could be more than one High Definition Audio Device, depending on hardware configuration. If so, right click High Definition Audio Device. The Properties window appears.

3. Under the Details tab, select the Hardware Ids Property. For Intel the Value contains VEN_8086. If not Intel, the VEN characters will be followed by other digits. If there are no Intel, go to step 8.

4. Uninstall only the Intel High Definition Audio Device.

5. Under Device Manager, click Action and select Scan for hardware changes.
10. Under Action, select Scan for hardware changes.

6. Reboot the PC to make sure the audio system has restarted.

7. Validate that the application is serviceable. If so, the procedure is complete. If not, go to step 8.

8. In Device Manager, under Audio Inputs and Outputs, right-click Digital Audio Interface - D-BOX KineAudio and select uninstall.

9. Next, uninstall the 3 devices under Sound, video and game controllers.

11. Validate that the application is serviceable and the seats are recognized.