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## getting ready: 5 steps to switch back on

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**Disclaimer:** The following information is intended as a guide for a booth operator who has been trained on projector operation and the recommended actions should not be undertaken by anyone who has not been trained. For the startup of Barco DP4K60L, 45L, 30L, 22L, 40LHC and 20LHC, please contact your local helpdesk or dealer.

## why?

Cinionic is providing this information because we know that many of you have had to switch off for a while as we have dealt with the current situation as a global community. When it is safe to do so, you can refer to the below documentation to support your switch on process.

## who's affected?

The following guidance is recommended for all customers who have switched off their Barco cinema projector for a while.

## in this guidance document:

- 5-Step Guide
- Reference links and materials for specific models

## still have questions?

If you still have questions or concerns about restarting your Barco projector after reading this guidance document, please get in touch with the team who are only a phone call or email away. For helpdesk contact details, please visit [www.cinionic.com/contact](http://www.cinionic.com/contact)

# 5 step guide


The following guidelines outline steps applicable to most Barco digital cinema projectors. For model-specific instructions, please refer to the manual for your model [here](#) (myBarco account required). The following information is intended as a guide for a booth operator who has been trained on projector operation, and the recommended actions should not be undertaken by anyone who has not been trained.

## step 1: perform maintenance A and B

Start by removing the front and side covers. Clean the filters of the projector by removing accumulated dust. Remove the dust gently from the lens with a clean, dry cloth. Check if the porthole window and lens need-to be cleaned. For ease of reference, you can find examples of Maintenance A & B below.

*Illustration 1: Example Maintenance A guidance*

### MAINTENANCE TYPE A (perform every month)

 The monthly maintenance actions, listed below, may be performed by a trained projectionist who is familiar with potential hazards associated with the product.

N- o.	Maintenance action	Remarks
1	Clean all dust filters of the projector. <ul style="list-style-type: none"> <li>• dust filter at the front of the projector (electronics).</li> <li>• dust filter at the top of the projector (cold mirror).</li> <li>• dust filter at the bottom of the projector (heat exchanger).</li> </ul>	Use a vacuum cleaner and blow away the remaining dust away with compressed air in another room. Take care of orientation when reinstalling the cleaned filters.  Frequency at which filters should be replaced is dependant on environmental conditions and the way they can be cleaned. Replace damaged filters immediately.  Front dust filter, "Removing the front dust filter", page 369 , cold mirror filter, "Clean the dust filter on the top side", page 372 , heat exchanger filter, "Clean the dust filter on the bottom side", page 371.
2	Check the surface of the lens output side for dust. (it is not needed to remove the lens from the projector)	Clean the lens output side in case dust is clearly visible upon the surface. See "Cleaning the lens", page 205. Note that if the lens was removed from the projector, a home and return must be executed. See user guide of the Communicator software.
3	Check the porthole (both sides) for dust.	Clean the porthole in case dust is clearly visible upon the surface. Use an optical cloth.

*Illustration 2: Example Maintenance B guidance*

**MAINTENANCE TYPE B (perform every three months)**



The 3 month maintenance actions, listed below, may be performed by a trained projectionist who is familiar with potential hazards associated with the product.

No.	Maintenance action	Remarks
1	<p>Check dust filters of cooler for dust and grease.</p> <p>Grease on the filter can build up after several months in an environment contaminated with greasy air. Note that areas where popcorn is consumed are subject to greasy air.</p> <ul style="list-style-type: none"> <li>• If the filters are contaminated with dust than cleaning the filters with a vacuum cleaner should be sufficient.</li> <li>• In case the filters feel greasy than the filters must be washed.</li> </ul> <p>Take into account that the time needed to dry the dust filters may be 24 hours or more. For that, it's recommended to have a second set of dust filters which can be used while cleaning the first set.</p>	<p>Replace damaged filters immediately.</p> <p>See procedures "Check the cooler dust filters", page 479.</p> <p>To speed-up drying, allow the filter(s) to dry at 50°C max in a well ventilated room.</p>
2	Clean the back/side air inlet vents.	Use a vacuum cleaner.
3	Clean the housing of your projector.	Removal overall dust accumulation on projector covers. See cleaning instructions in this manual.
4	Clean the cooler housing	Remove all dust accumulation on the cooler housing and especially cleaning the area in proximity of the air inlets. Remove the dust from the fans below the filter inlets. Pay special attention to cleaning these fans if the cooler is installed above the projector because, due to the heat, this location has a greatest potential for dust accumulation.
5	Verify the internal clock of the ICMP with real time clock. Correct if needed.	ICMP version 1.2.1 is required at least.
		Communicator version 5.0 or higher is required.
		See user guide of Communicator for detailed instructions.

For Xenon models, if you need to change a lamp, you can follow the video here:  
[https://youtu.be/j\\_Mg-jMnweQ](https://youtu.be/j_Mg-jMnweQ)

## step 2: sequential theater start-up

**NOTE:** If you are switching on a multiplex, we recommend switching on auditorium by auditorium to avoid power surges.

Suggested start-up sequence:

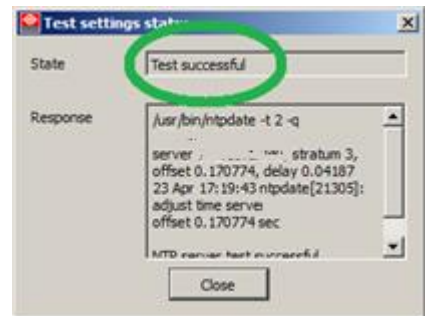
- Theater Management System and network components to ensure connectivity
- HVAC system
- External Media Server (e.g. Doremi ShowVault or equivalent)
  - If you have an integrated media server or Barco Alchemy (ICMP), you can skip this point
- Projector - wait 10 minutes for the boot sequence to complete.
- Turn on the light source

## step 3: verify internal clock

In order to assure that movies will start on time, and that KDM's will work properly, you should verify that the Internal clock on the ICMP is set correctly. Typically, the projectors and servers all sync their internal clocks to either the site's local TMS or to a remote NTP server. In order to allow the projection equipment to reach the NTP Server, it is important to make sure that before powering up the projectors, you first power on the TMS, if present, and any networking equipment such as routers and switches. Once this is done, you can follow the procedure below to verify that NTP is working properly, and the clock is set on the ICMP.

### Verifying NTP on the Projector and ICMP:

- In Communicator:
  - Log in as "Service technician"
  - Select: Installation->Advanced->InternalClock->TimeZone&DST
  - Click on the NTP Server Address to highlight it
  - Press the Test button
  - In the pop-up window, verify "Test Successful" is returned, which confirms that the projector was able to connect to the NTP server and update the ICMP clock.



*Illustration 3: NTP Status Window*

For non-Barco servers, please refer to the manufacturer's manual for the procedure to test & verify the internal clock.

## step 4: check for errors

Monitor the projector taillight for yellow or red color. Check the smart status light on the Series 4 projector.

If you see a red or yellow taillight, use the Communicator Touch Panel or Barco Communicator software to create a diagnostic package, and send it to your service provider.

If you get a green status indicator or taillight, proceed to step 5.

## step 5: the test sequence

If your projector shows a green taillight meaning no error nor warning, switch on the light source for at least 1 hour. Then run test clips to check image and sound quality.

- ✓ Ensure your audio system is powered on.
- ✓ Load a playlist with 2D, 3D clips, and automation cues using your TMS or your Screen Management System.
- ✓ Start the playlist and check image and sound in 2D flat and scope, and 3D clips.
- ✓ Ensure the automation system works correctly and controls audio, lighting, curtains, and 3D system if applicable.
- ✓ We also recommend loading and playing encrypted content that requires a valid KDM

If you have a Xenon projector, it is recommended after a warm-up of 20 minutes, to realign the Xenon to optimize the brightness output. This operation has to be done by trained projectionists.

For more information on the specific alignment procedure:

<https://youtu.be/VRJKY9b48LE>

*Then you are ready to go. Enjoy the show!*

# reference links and materials for specific models

Please use the links included in the table below for model-specific guidance on how to restart your Barco digital cinema projector. You will need a valid myBarco account to view these materials. If you do not have a myBarco account, you can request one here: <https://www.barco.com/en/register>

Projector Type	Resource Link
<b>For Barco Cinema Xenon Projectors</b>	
DP2K and DP4K -19B, -23B, -32B and -P series	<a href="https://www.barco.com/en/support/docs/R5905011?revision=36">https://www.barco.com/en/support/docs/R5905011?revision=36</a> (page 32-33-34)
DP2K-C series	<a href="https://www.barco.com/en/support/docs/R5905014?revision=26">https://www.barco.com/en/support/docs/R5905014?revision=26</a> (page 30-32)
DP2K-E series	<a href="https://www.barco.com/en/support/docs/R5906694?revision=06">https://www.barco.com/en/support/docs/R5906694?revision=06</a> (page 26-27-28)
DP2K-S	<a href="https://www.barco.com/en/support/docs/R5977694?revision=12">https://www.barco.com/en/support/docs/R5977694?revision=12</a> (page 28-29-30)
<b>Barco Smart Laser Projectors</b>	
DP2K SLP series	<a href="https://www.barco.com/en/support/docs/R5906848?revision=06">https://www.barco.com/en/support/docs/R5906848?revision=06</a> (page 26)
DP2K CLP series	<a href="https://www.barco.com/en/support/docs/R5906066?revision=12">https://www.barco.com/en/support/docs/R5906066?revision=12</a> (page 28-29)
DPxK-BLP-series	<a href="https://www.barco.com/en/support/docs/R5906077?revision=12">https://www.barco.com/en/support/docs/R5906077?revision=12</a> (page 32-33)
<b>Barco Series 4 Laser Projectors</b>	
SP4K-C	<a href="https://www.barco.com/en/support/docs/R5910029?revision=02">https://www.barco.com/en/support/docs/R5910029?revision=02</a> (page 28-29)
<b>Barco Flagship Laser Projectors</b>	
DP4K-L, DP4K-LHC	<a href="https://www.barco.com/en/support/docs/R5905876?revision=11">https://www.barco.com/en/support/docs/R5905876?revision=11</a> (page 32-33)