



C. BECHSTEIN

Digital

**C. BECHSTEIN Connect
Installation instructions for grand pianos**



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Last updated 5 February 2024

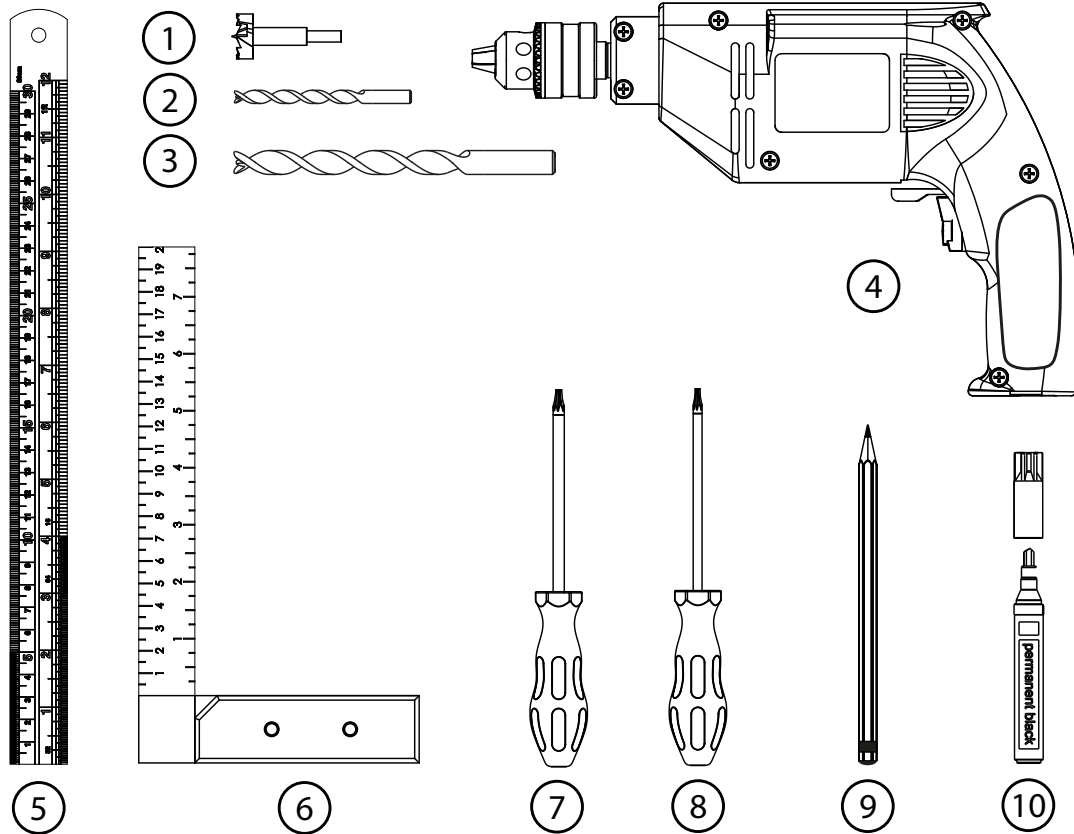
This document is available in the current version
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REQUIRED TOOLS



1. Forstner drill Ø 20.0 mm

2. Drill Ø 2.5 mm

3. Drill Ø 10 mm

4. Drilling machine

5. Meter ruler

6. Right angle

7. Torx screwdriver/ Bits T20

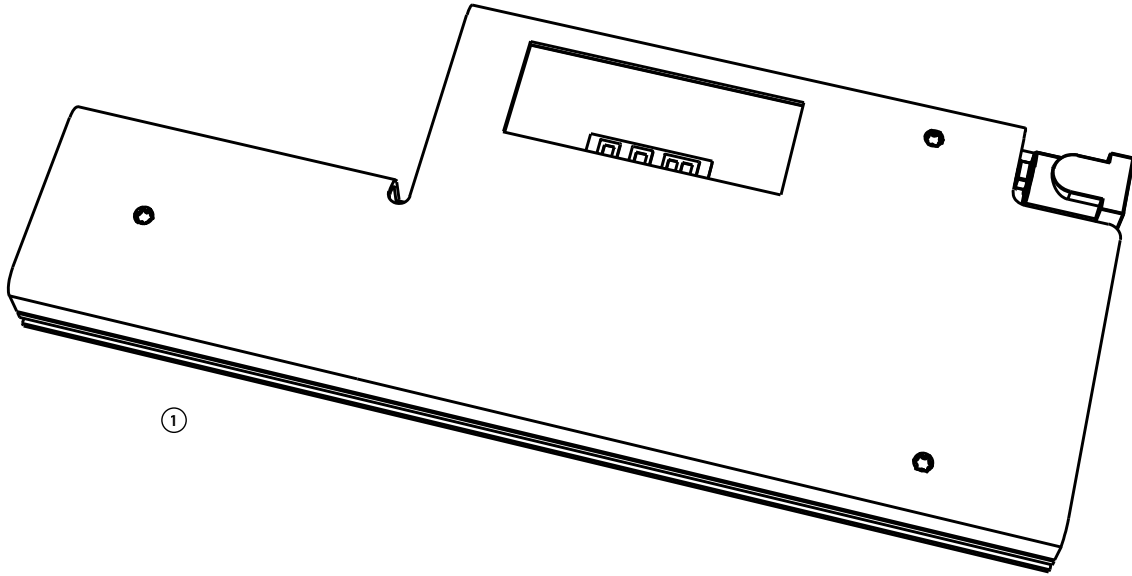
8. Torx screwdriver/ Bits T10

9. Pencil

10. Permanent marker

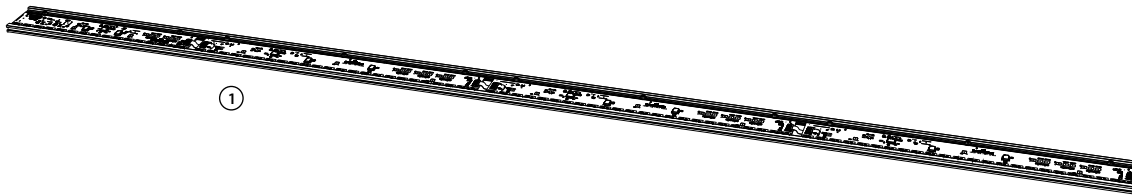
PART LISTS

Part list - Base board incl. housing



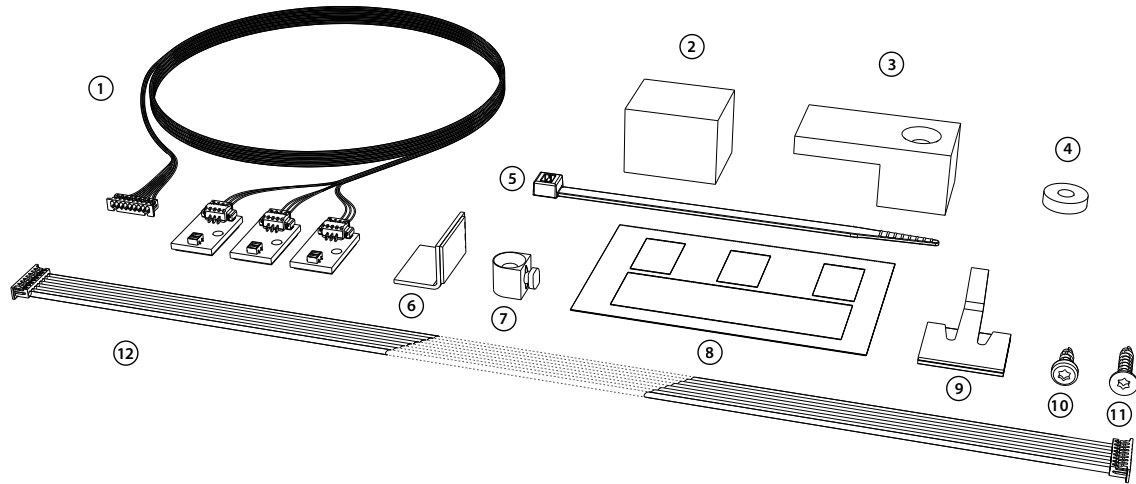
①	VE01001000000	C. Bechstein Connect base board incl. housing	1
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Part list - Key sensor rail



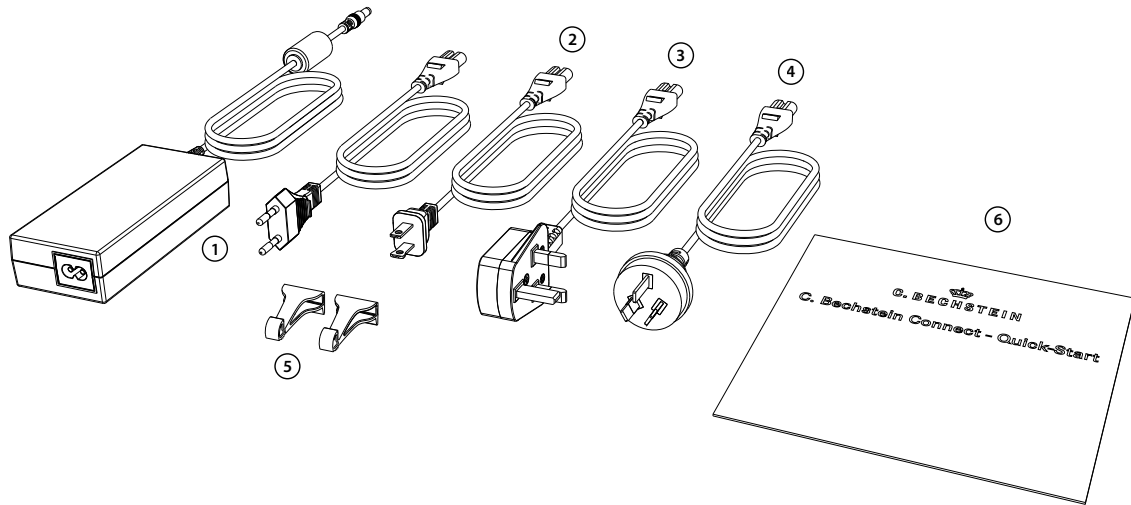
①	VE01110000000	C. Bechstein Connect key sensor rail	1
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Part list - Mounting material & pedal sensors



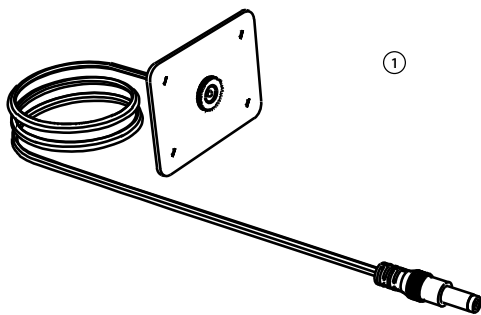
①	VE01004000000	C. Bechstein Connect pedal sensors incl. connection cables	1
②	CBD-00289	Wooden block for pedal sensor	1
③	CBD-00290	Wooden block for pedal sensor (Concert)	1
④	CBD-00211	Cable ties 2.5 x 100 mm	6
⑤	CBD-00045	Spacer ring (SW) for mounting	14
⑥	VE01005000000	C. Bechstein Connect Aluminium bracket f. pedal sensors (Set)	3
⑦	CBD-00022	Clamping sockets TPE (SW)	14
⑧	CBD-00019	Reflector stripes	1
⑨	CBD-00024	Cable clamp (SIL)	13
⑩	VE00003000001	Round-head screw TX10 3x10 mm (SW)	4
⑪	CBD-00021	Countersunk screw TX10 3,5x16 mm (SIL)	14
⑫	CBD-00023	Flat ribbon cable VSKS 500 mm	1

Part list - Accessories & Documents



①	CBD-00028	C. Bechstein Power supply 19 V incl. connection cable C (Euro)	1
②	CBD-00033	C. Bechstein connection cable A (USA)	1
③	CBD-00032	C. Bechstein connection cable G (UK)	1
④	CBD-00279	C. Bechstein connection cable I (AU), as needed	1
⑤	VE00004000001	C. Bechstein Display Stand (SW)	1
⑥	CBD-00280	C. Bechstein Connect Quick Start Manual DE/EN/FR	3

Part list - DC socket incl. connector



①	VE0100200000	C. Bechstein Connect DC socket incl. connector	1
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PREPARING THE INSTRUMENT

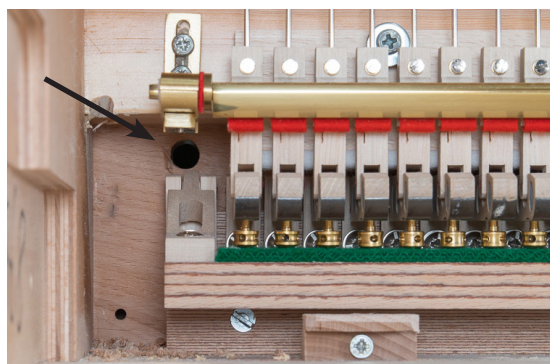
Remove fall board, cheek-blocks, key slip and action.

Check the regulation of the piano and adjust it if necessary.

INSTALLATION OF THE DC POWER CONNECTION

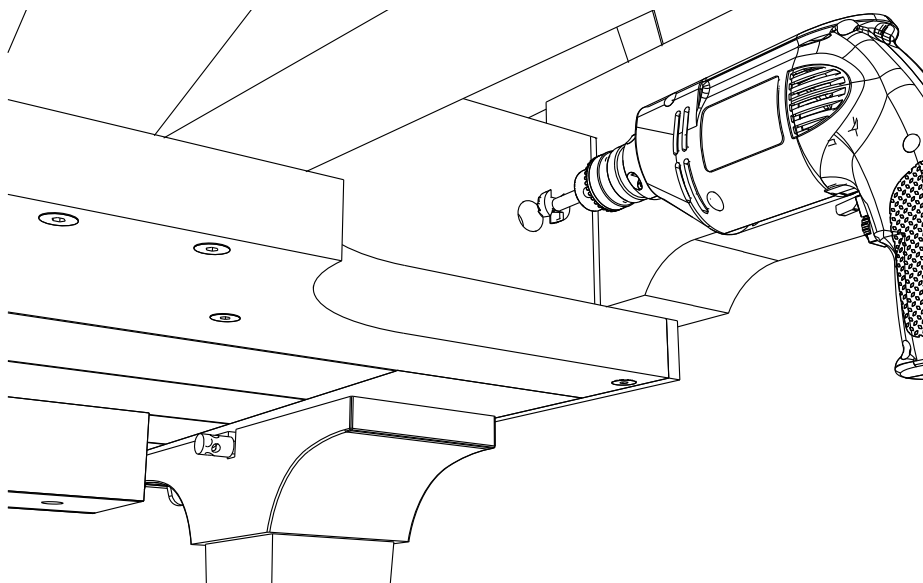


Unscrew the bumper strip.

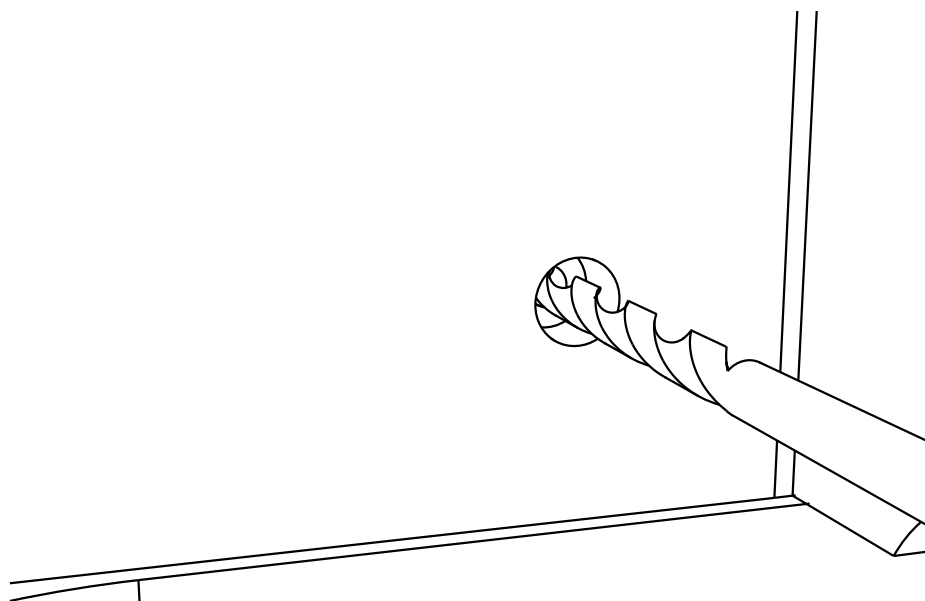


Position of the hole for the DC connection.

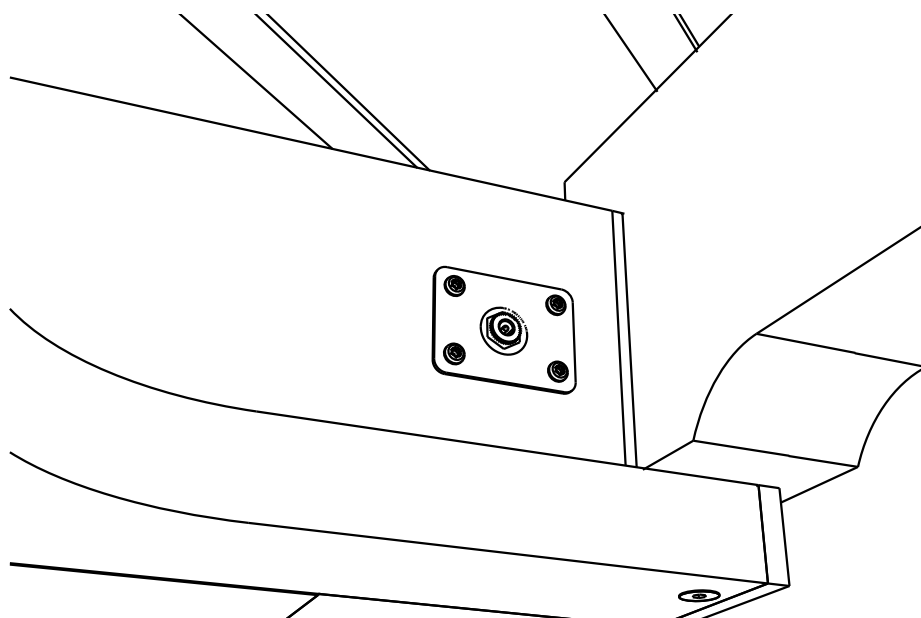
Position the hole for the DC connection in the center below the angle of the sostenuto rail. If necessary, temporarily unscrew the bumper strip. To pre-drill the hole, drill through from the inside using a 4 mm drill bit. Use the 20 mm Forstner bit to widen the pre-drilled hole on the back of the dam. To do this, drill about 20 mm deep with the Forstner bit so that the DC connection can be fitted.



Drill a 10 mm hole through the pre-drilled hole for the cable guide.



Guide the connection cable of the DC connection through the hole and fasten the DC connection plate (VE01002000000) to the dam using 4 TX10 3.0 x 10 mm round-head chipboard screws (VE00003000001).

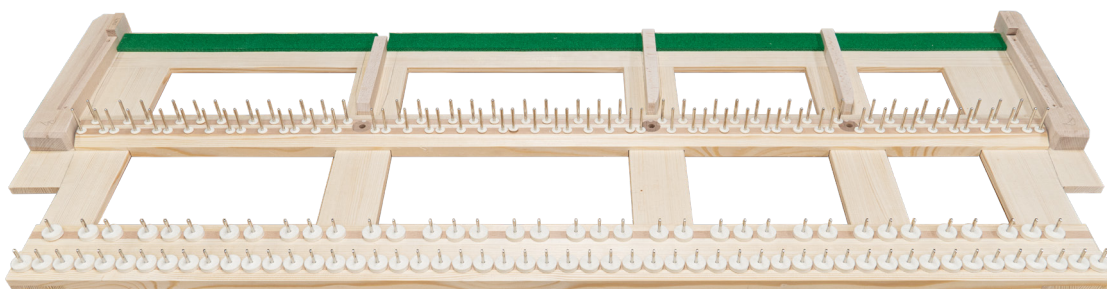


INSTALLATION OF THE SENSOR RAIL

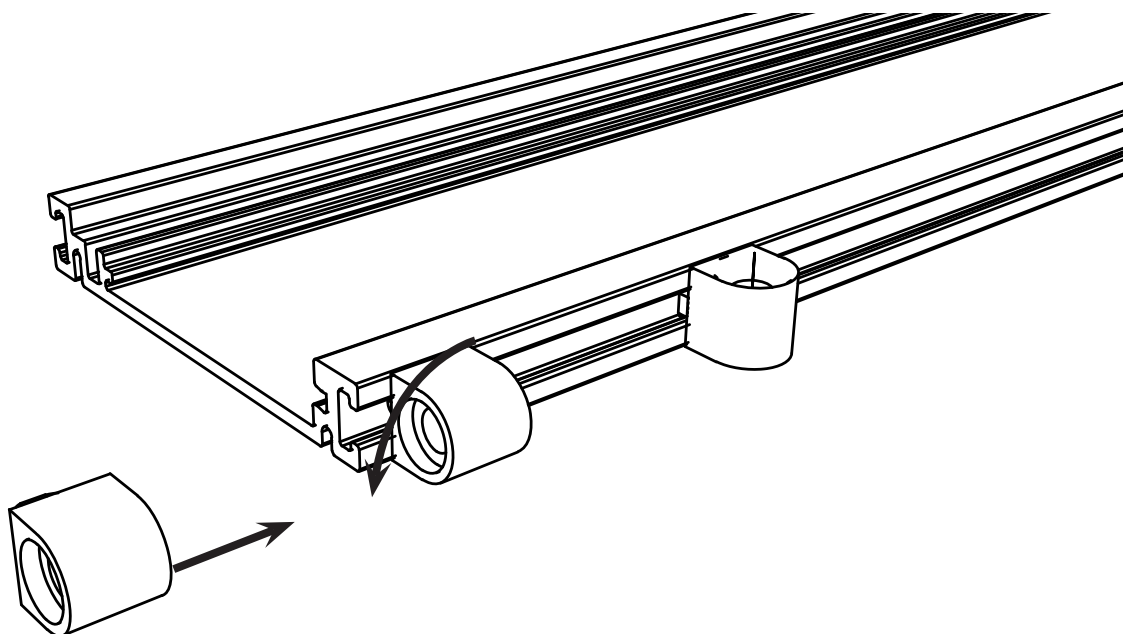
Remove the action from the keyboard and take out all the keys.



Remove all keys from the instrument.



Thread six to seven clamping sockets (CBD-00022) onto each side of the sensor rail and move them to the appropriate positions in the center of the key frame combination rail. The sockets can only be rotated by 90° in one direction without requiring more force without greater force. Align the bushes so that the countersunk head recess points upwards.

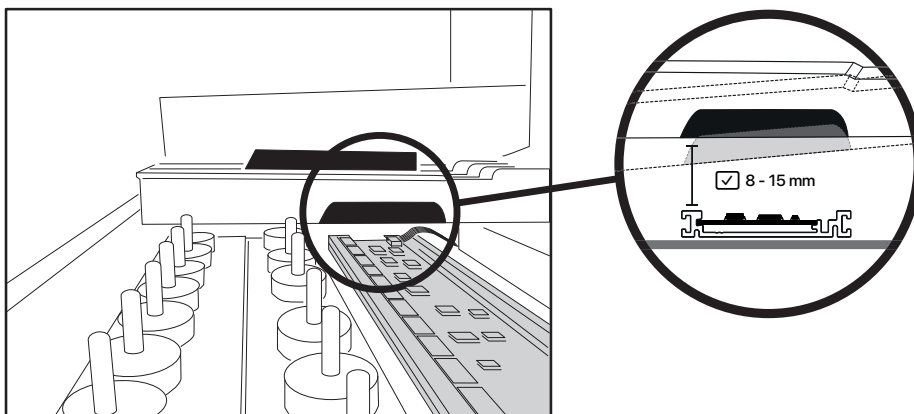


Threading the clamping bushes.

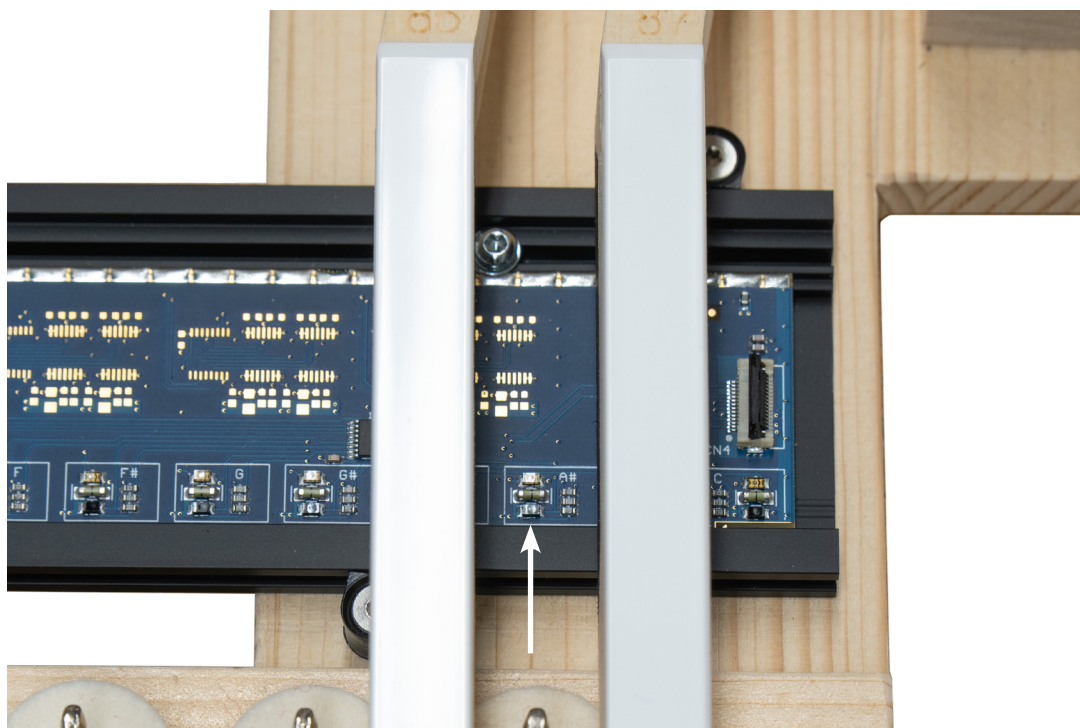


Positioning of the clamping bushes.

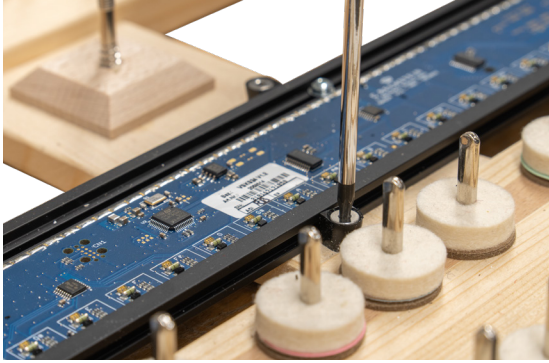
A minimum distance of the sensor strip within the keyframe results from the size of the clamping sockets. The strip should be as parallel as possible to the keyframe. The height of the upper edge of the sensor rail to the lower edge of the key in the rest position must not exceed 15 mm. If required, the clamping sockets can be underlaid with the spacer rings (CBD-00045) to reduce the distance between the sensor strip and the keys. At a minimum, the sensor rail must not be touched by the key which is heavily struck. This corresponds to about 8 mm distance in the rest position.



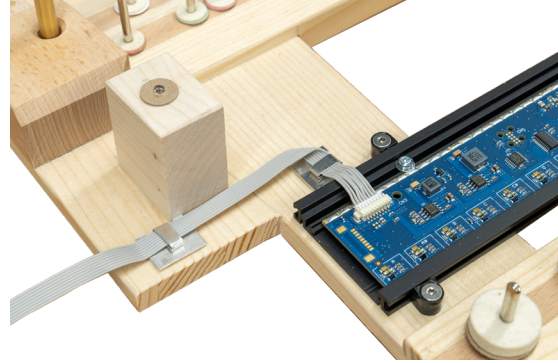
The horizontal position (left / right) of the sensor rail, must be positioned in such a way that the sensors (not the white square printed on the circuit boards for each key) are as centrally as possible under the keys. For positioning we recommend to insert keys 1, 3, 85 and 87. Then move the sensor rail to the left or right so that the respective sensors for the black keys (A#) appear in the middle between these keys.



Then screw the sensor rail into the keyboard frame and connect the flat ribbon cable (CBD-00023).



Screwing on the sensor rail.



Connection of the sensor rail in the keyboard frame.

Preparing the keys

To prevent the IR light from scattering, the instrument keys must be colored on their sides with black permanent marker.

In practice, it has been shown in many cases that both “white keys” and the (already) black keys should be (additionally) colored (i.e., painted over) on the sides.

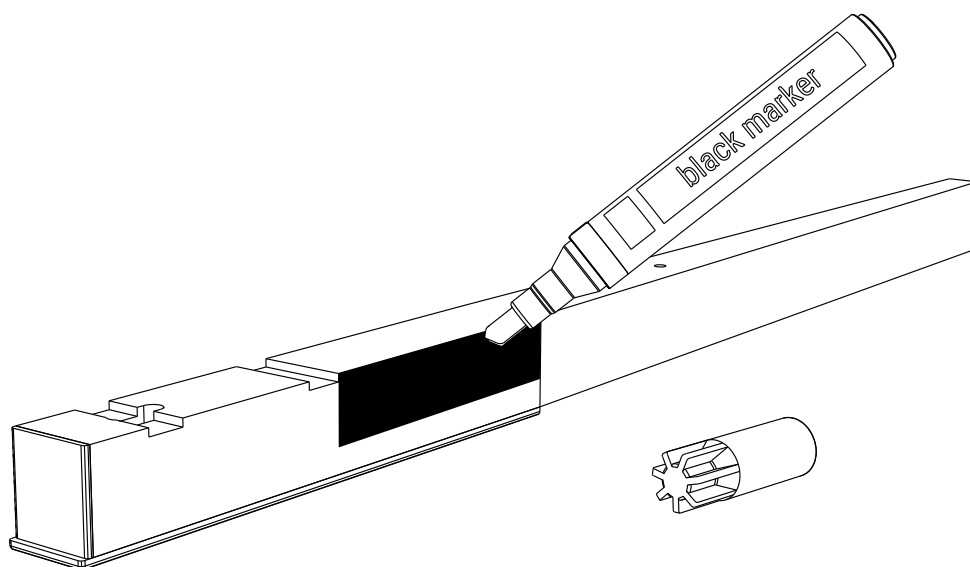
The paint usually used to color the black keys often contains metallic particles (glossy / matte-glossy). Thus, such a coating has a counterproductive effect.

We recommend the product *edding 850* permanent marker black for blackening the keys. Also suitable is the (widely used) product *edding 8750* industrial paint marker black.

However, the 850 model is suitable because of its wide tip (15 mm) to work faster.

The key must only be blackened from the side (i.e. not from the underside). Make sure that the blackening reaches all the way to the bottom edge.

In practice, an area of only 1-2 mm not covered with *edding* has already proven to be problematic (depending on the black paint originally used, which, as mentioned above, may contain reflective particles).



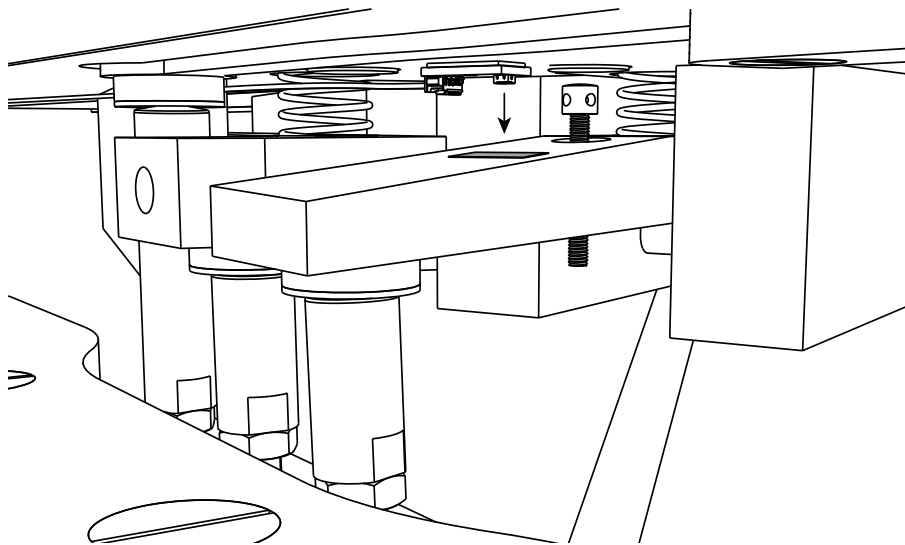
The keys are colored.

Finally, place the keys back in the keyboard frame and screw the action back into place.

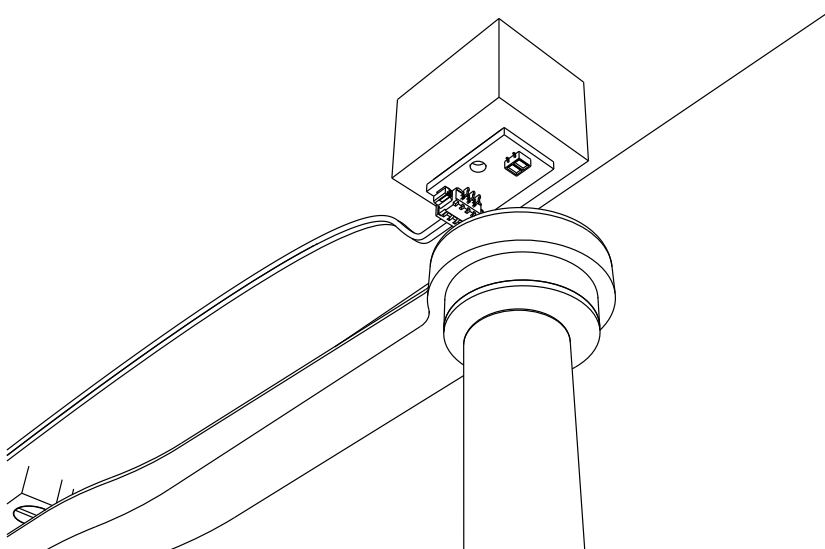
INSTALLING THE PEDAL SENSORS

The pedal sensors are mounted under the key bed above the cross struts of the pedal system.

The distance between pedal sensor and reflection surface has to be 3 to 15 mm and should be chosen in such a way that the greatest possible difference between the pressed pedal and the rest position can be measured.

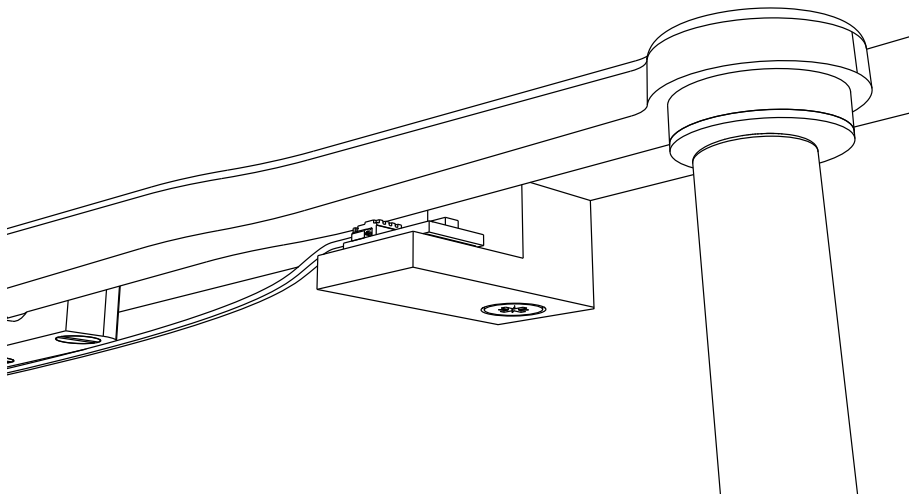


Position of the pedal sensors.

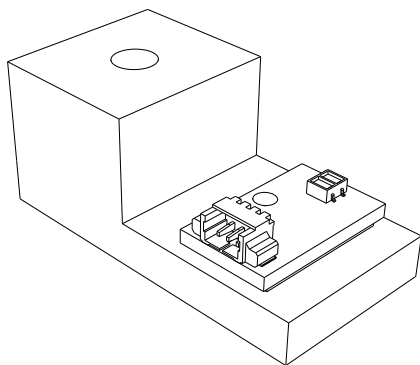


To create an ideal distance between the sensor and the reflection surface on the left pedal, the distance can be shortened using the wooden block (CBD-00289).

On grand pianos with the left pedal lever embedded in the key bed (as in the C. Bechstein Concert line), the pedal sensor is attached below the brace using the wooden block (CBD-00290).



To attach the sensors (VE01004000000), remove the protective film from the adhesive on the sensor and press the sensor onto the key bed or the wooden block. Attach the reflector foil (CBD-00019) to the strut opposite the sensor.

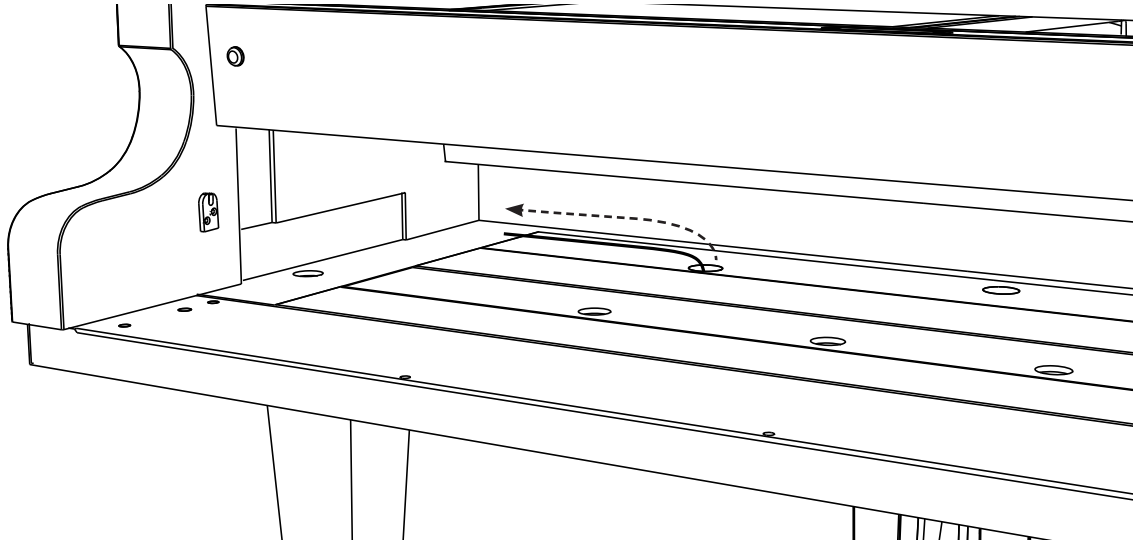


Sensor on wooden block (CBD-00290).

The pedal sensors and their cables are marked in the following colours:

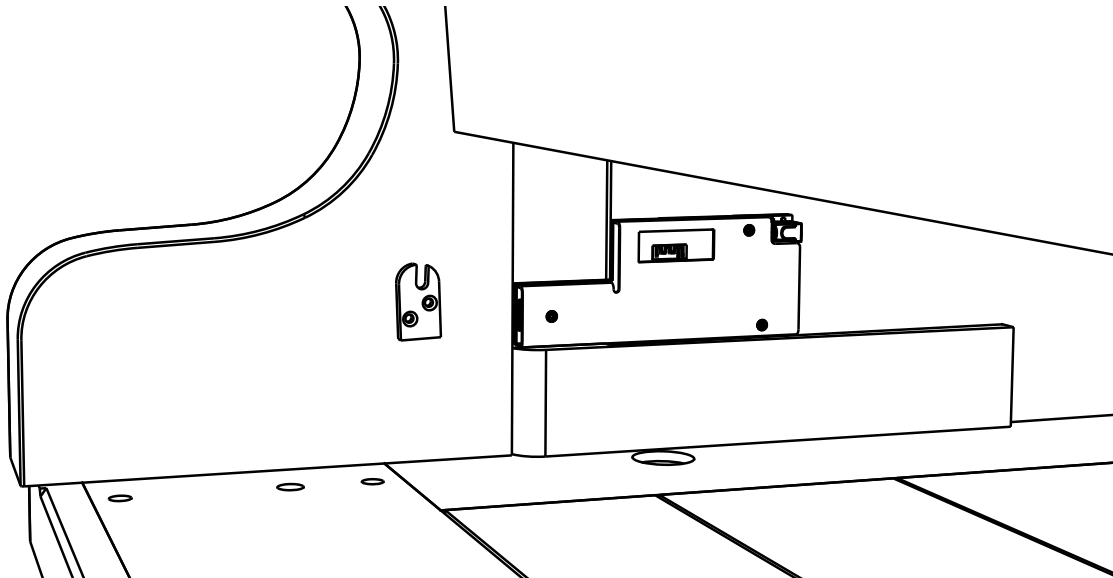
Right pedal:	Red
Middle pedal:	Black
Left pedal:	White

Pull the cables through the Sostenuto hole and guide them underneath the board to the left inside of the grand piano using the cable clamps.



INSTALLATION OF THE C. BECHSTEIN CONNECT BASE BOARD

The base board (VE01001000000) is installed directly on the left-hand side of the piano without surrounding case.



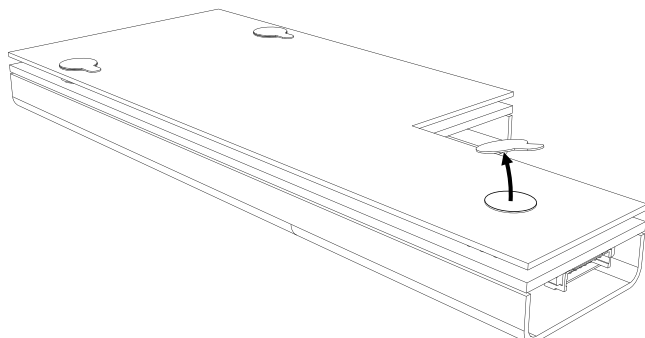
Mounting of the base board

The cables must not be bent in the final position of the C. Bechstein Connect base board. If there is very limited space available due to the action, the housing of the base board can be removed. After removing the housing, make sure that the base board, in particular the DC socket on the board, is not damaged when inserting the action.

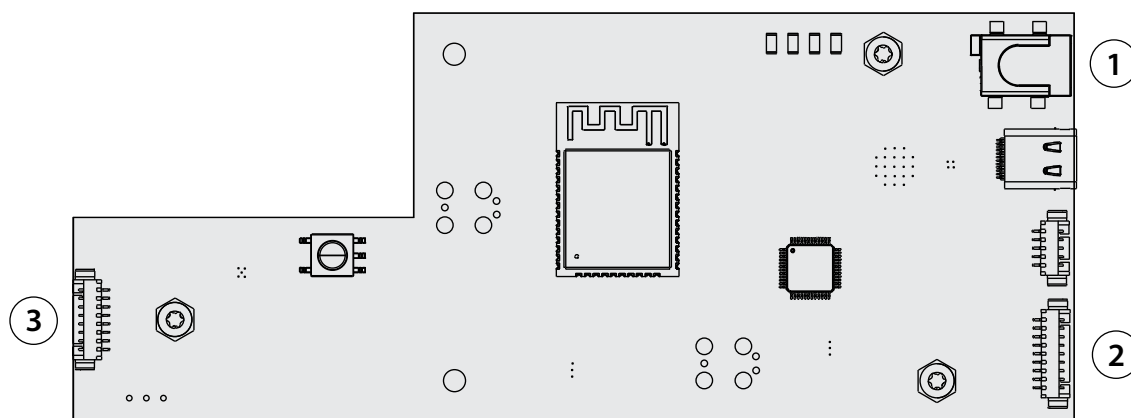
If necessary, the position of the base board must be adjusted again so that it does not collide with the action. It can be loosened again by turning it on the mounting surface and repositioned with new adhesive dots.

The base board is glued on using the adhesive dots that are attached to the housing. Degrease the surface to which the base board is to be attached.

Remove the protective foil from the adhesive dots and place base board with light pressure on the spot you have selected.

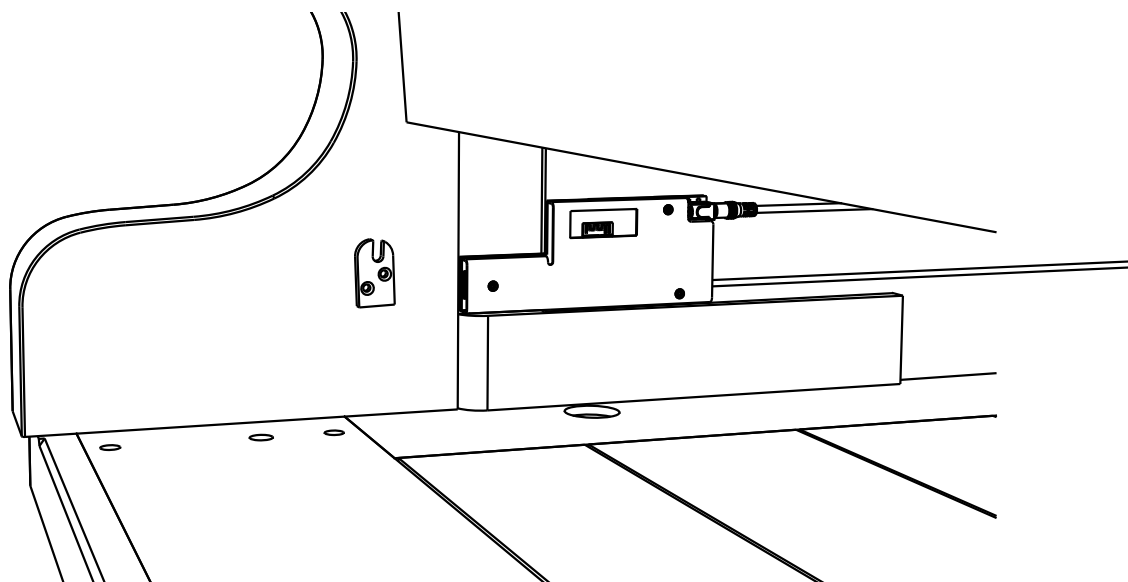


Connecting cables



1. DC connection cable (VE01002000000)
2. Pedal sensors with three-coloured connection cable (VE01004000000)
3. Cable connection to the sensor rail (CBD-00023)

Connect the DC connection cable and connection cable of the pedal sensors. Using the cable clamps (CBD-00024) and cable ties (CBD-00211), the cables can be laid as inconspicuously and properly as possible.



Push the action back into the instrument and connect the connecting cable to the sensor rail to the base board.

INITIAL SETUP OF THE SOFTWARE

After all components have been installed, the sensors of the C. Bechstein Connect system must be calibrated. Without an initial calibration, the system does not generate any key and pedal information.

In addition, the Bluetooth identifier can be replaced by the model name and serial number of the instrument.

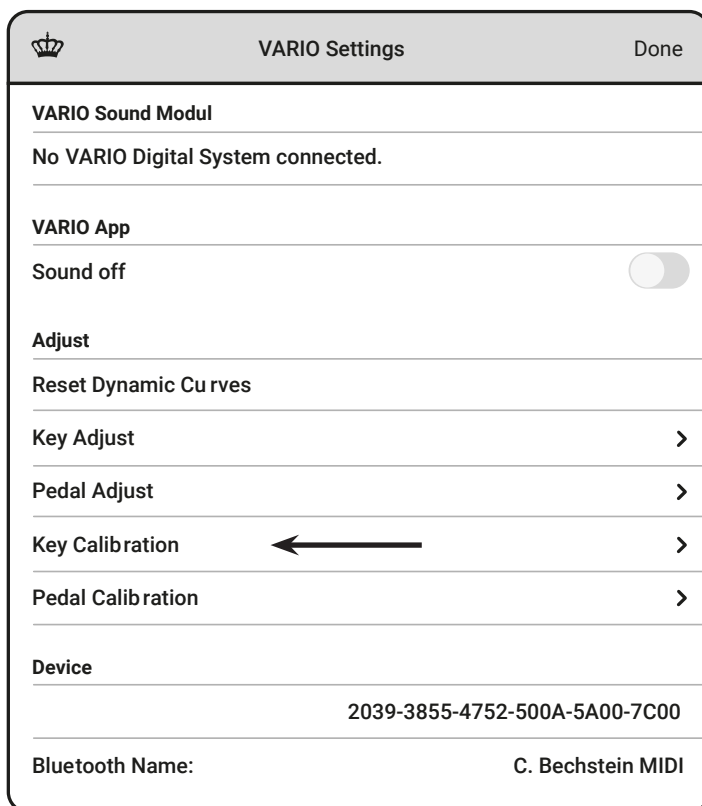
The initial setup of the software requires the use of the VARIO App.

The necessary steps and a list of compatible devices can be found on our service website service.bechstein-digital.com.

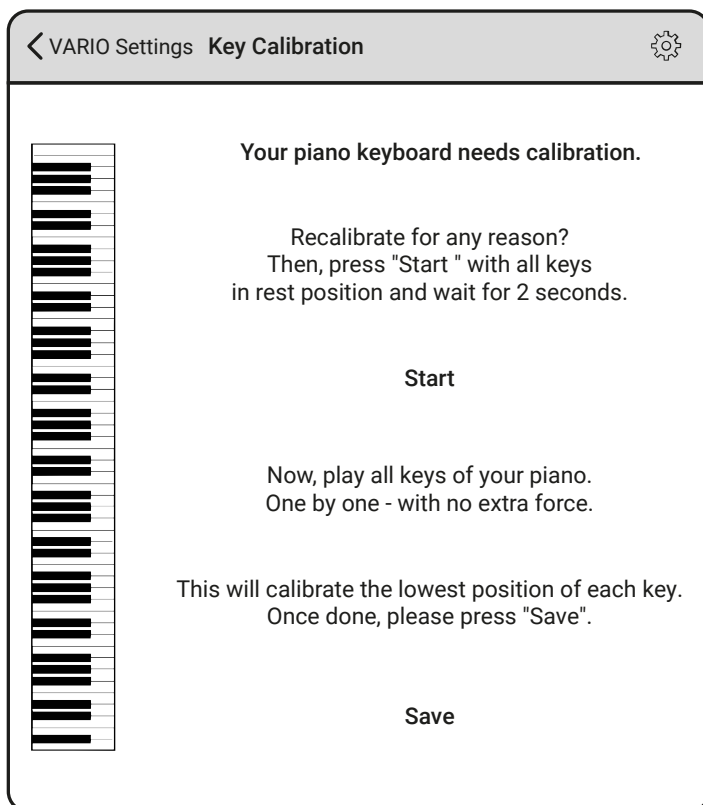
The calibration must be done with the instrument assembled (Reinsert the action, cheek-blocks, fall board, key slip).

Short overview of the calibration:

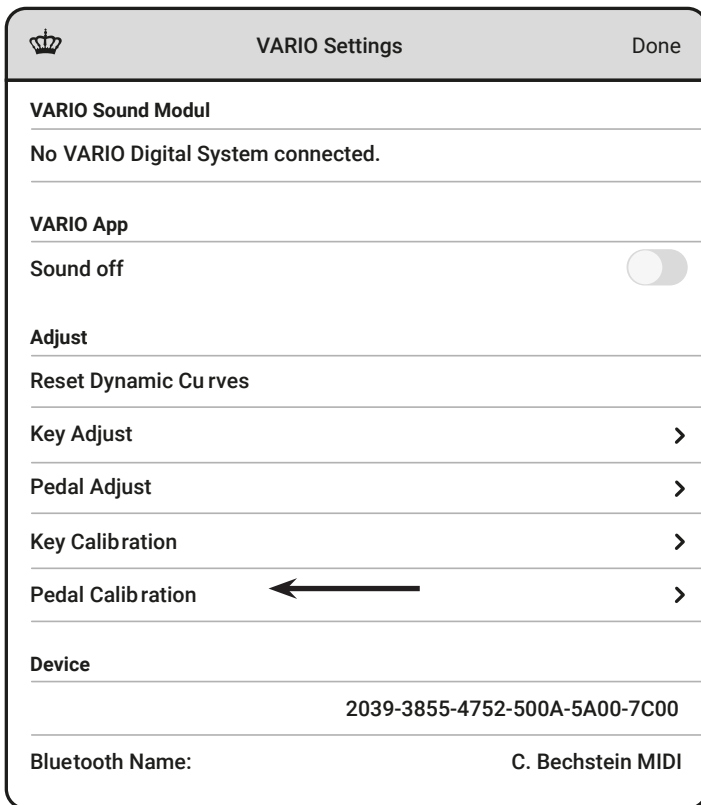
- Connect the instrument to the power supply.
- Start the VARIO App.
- Connect your mobile device to the instrument via Bluetooth-MIDI.
- Switch to Settings → Key Calibration:



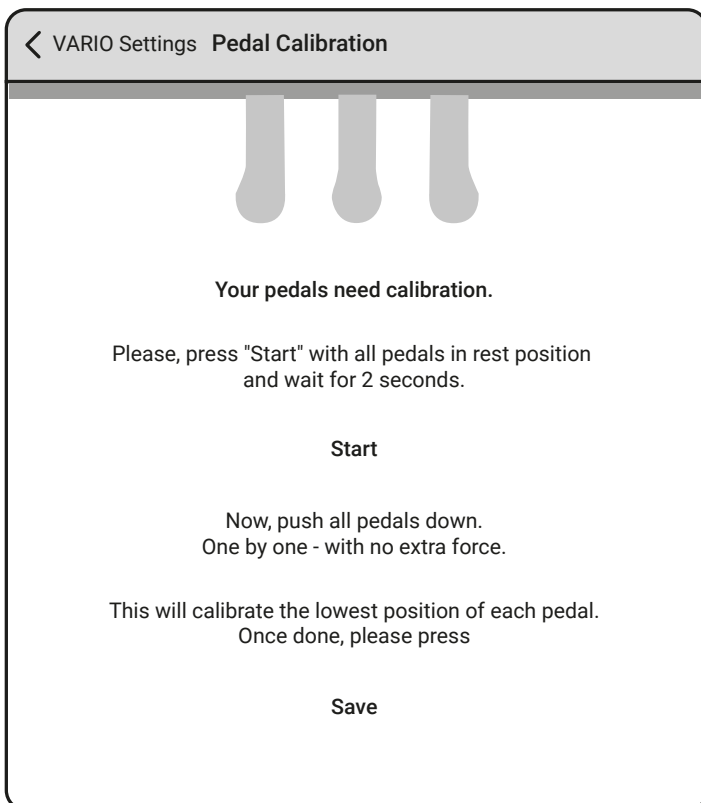
- Press Start - the keyboard in the graphic will be colored. Wait two seconds while the rest position of the keys is calibrated.
- Play one key after the other and „decolorize“ the keyboard in this way.
- Press Save.



- Switch to Settings → Pedal Calibration:



- Calibrate the pedals and save the calibration.



After successful calibration, bars or bubbles can be seen on the VARIO app monitor when playing the grand piano.

- If necessary, fine-tune in the Settings → Key Adjustment and Pedal Adjustment.
- If necessary, make further adjustments using the SENSITIVITY (velocity curve) function to adjust the dynamic response to the instrument.

For assigning an individual Bluetooth identifier (Bluetooth name):

- Open the „Bluetooth name“ item in the VARIO Settings.
- Enter a new name. We recommend choosing an abbreviation for the respective instrument (e.g. A190) plus the serial number of the instrument (#123456), as an example:

A190#123456

- Confirm the entry by pressing the Enter / Return key on the screen keyboard and exit the dialog.
- The Bluetooth MIDI connection must then be re-established.

Use our service on the Internet:

- Manuals in other languages
- Current installation instructions
- Service requests
- Ordering spare parts

Under: service.bechstein-digital.com

Service phone:

+800 1853 0000 (free of charge)

***We look forward to getting in touch with you -
Your service team from C. Bechstein Digital***