invebo SD20

Bluetooth Upgrade Kit
Installation Instructions

Installation of the Bluetooth SD20 Upgrade KIT in Bose SoundDock Original Series II

The installation of the board can be carried out without any previous experience.

SD20 Kit Comprises

- **Invebo BC7A Bluetooth Upgrade**
- **Invebo plastic base Part number PK1-889**
- **Torx T8 Screwdriver**
- **Qty 2 x Domed Rubber Feet**

NOTE: **The BC7A must be secured in place with the Invebo PK1-889 plastic base supplied in the kit. The standard plastic base will damage the electronics by crushing.**

Overview:

Fitting the BC7A kit Replacement is relatively straight forward but like everything the first time will go smoothly if these instructions are followed carefully.

The Bose SoundDock is still the best sounding and most affordable compact speaker around and one of the few things that can't be upgraded by going out

and buying a better sounding unit at reasonable cost.

Note the BC7A has the 30-pin legacy iPod docking connector with USB charge mode support,.

Which docks are compatible?
The SD20 kit is designed to work with all Bose SoundDock II SoundDocks.

Before you Start: It is a good idea to watch the detailed 'how to' videos on YouTube. A full step-by-step video version of these BC7A instructions is available in the technical guide section of our website. See the Technical Guides section at www.invebo.com

For a problem free installation watch the full SD20 Instruction procedure on YouTube:
https://www.youtube.com/watch?v=JWNF32V9Ubo

Tools Required:
1. T8 Torx Driver (from Kit)
2. Sharp craft knife
3. Pliers (flat nose)

General:

1. The full kit contains the T8 Torx screw driver, BC7A Bluetooth Controller, PK1-889 Base Moulding, 2 x Domed Rubber feet. Check that you have everything.

2. Place suitable protective padding on the work surface and stand the doc on its top.

3. It is necessary to loosen the base cover so that the ribbon cable can be retraced. Locate the rectangular plastic cover with the product information label on it. Loosen the four cross-head screws in the plastic cover by 1 to 2 turns only. **Do not remove them**.

4. Three T8 screws hold the dock assembly in place. These are found on the underside of the half-round front moulding where the IPod plugs in. Once the T8 three screws removed have been removed the half-moon plastic base can be removed leaving the docking board in place tethered by the 24 way umbilical ribbon cable.

5. The 24-way ribbon cable is tucked under the rectangular cover. Carefully pull the ribbon cable out from the body of the dock by 1 inch (2.5cM). Only enough ribbon needs to be exposed to enable you to hold it between your thumb and fore finger. Then hold onto the cable to prevent it coming out any further and pull it from the plug on the docking board which can now be discarded.

6. Take the BC7A controller board in your hand and have a look at it. Notice the ribbon connector at the edge of the board. See that there is a small darker section at each end that can be moved back and forth. This is the locking mechanism.

7. Using your fingernail ensure that the locking mechanism is out at both ends of the connector. In the out position the tabs are about 0.08" (2mm) out from the home position.

8. If the locking mechanism isn't in the open position then the ribbon cannot be inserted. The insertion force is near to zero when it is correct. If you have to push to get the ribbon into the connector then check the lock mechanism is out at both ends.

9. The half moon base plastic par that you removed from the dock has a piece of self

adhesive foam rubber attached located on the raised round sections under the volume control buttons. Carefully peel the rubber parts from the moulding and stick them on the corresponding areas on the PK1-889 plastic base supplied in the kit.

10. Bend the ribbon cable backwards so that the end is parallel to and lying over the flat base moulding.

11. Lay the BC7A controller with the dock connector uppermost lower base of the dock with the ribbon connector on the BC7A aligned with the ribbon cable. . You will see that when plugged in the BC7A will flip 180 degrees and be in the correct orientation to be refitted.

12. Ensure that the ribbon connector locking tabs/bar are in the fully out position (unlocked). Feed the end of the ribbon cable into the connector and when fully engaged and it is exiting perpendicular to the connector, push the locking tabs into the engaged position. You can use your fingernail. Note that moderate force is required to do this and it is necessary engage each side more than once. Sometimes the other end pops out slightly when you push the other end in.

13. When the locking mechanism is fully engaged, give the ribbon cable a gentle tug to ensure that the ribbon is securely held in the connector. You should see a line of 24 bright tin contacts protruding an equal distance of approximately 1 millimetre out of the connector. If you can see more at one end than the other then the ribbon is not correctly inserted.

14. Note that if for any reason you want to unplug the ribbon, you must first disengage the locking mechanism to let the ribbon slide out with zero force.

15. Flip the BC7A over by 180 degrees and feed the ribbon cable back into the body of the dock until the docking connector is aligned with the aperture in the cradle. Then lower the BC7A whilst guiding the dock connector through the aperture in the cradle.

16. Manoeuvre the base PK1-889 half moon plastic part into position.

17. Refit the three Torx T8 screws and tighten them down.

18. Inspect your work.

19. Now tighten down the four cross head screws in the base moulding.

20. Check that the BC7A controller is located over the pegs and that all pegs are present in the holes in the BC7A board.

21. Apply power to the dock. You should hear a series of beeps indicating that the dock is powered up and ready to be used.

SD20 Bluetooth Upgrade
User Instructions

A YouTube video demonstrating the operation of the SD20 Kit installed in a SounDock Series II can be found here:

https://www.youtube.com/watch?v=iGRAuBUCS64

The BC7A is certified to be compliant with Bluetooth 5.0. It also supports any source device that complies with Bluetooth version 2.0 and above.

Note: Indicator LEDS are only visible fitted to a series 1 dock with a cradle support Upgrade

Power on Auto Power Up: When the mains power is applied the dock will power up with a series of tones in rising note and the RED power LED will illuminate.

THE DOCK WILL REMAIN IN LOW-POWER STANDBY MODE UNTIL MUSIC IS REQUIRED

Manually Powering Down the Dock: If the red standby LED is annoying then the dock can be completely powered down by pressing and holding both volume buttons until a series of tones falling in pitch are heard. The Red LED extinguishes and the dock is fully powered off.

Manually Powering Up the Dock: When the dock is powered down, hold the + volume button down until you hear a series of tones rising in pitch. Release the button. The dock powers up and the unit is now in standby. The red LED illuminates.

Auto Standby: The dock will automatically place itself in Standby if no audio has been played for a few minutes.

LED Indicator Modes

NOTE THE INDICATOR LEDS WILL ONLY BE VISIBLE IF THE CRADLE SUPPORT UPGRADE IS FITTED

RED Power status LED Illuminates when powered up and ready to play or perform Bluetooth operations.

Blue LED Off: BC7A is not in pairing mode and not connected to another Bluetooth Device.

Blue LED Fast Flash: BC7A has entered the pairing process.

Blue LED Short flash every 3 seconds: A source device is connected but is not streaming

Blue LED Permanently Illuminated: A Bluetooth device is connected and is currently streaming audio.

Docking and Playing an iPod

Any Apple 30 Pin iPod or iPhone that supports USB charge Mode* will charge and play when plugged into the 30-pin socket. The docks can be controlled as before using the standard infrared remote control, the volume buttons and the controls on the iPod/IPhone.

* (USB Charge Mode is an Apple term and does not mean that there is an USB charging socket – it refers to the USB signals present on the 30-pin iPod dock socket)

Audio Source Priority

Bluetooth audio has priority over the docked iPod and will take over the dock and play.(even if an iPod is playing at the time). The iPod audio is disconnected when a connected Bluetooth source commences streaming. Approximately 10 seconds after Bluetooth Streaming ceases the iPod audio will be reconnected.

Bluetooth Operations

To stream audio over Bluetooth: Your Bluetooth device must be paired and connected to the BC7A. Refer to the instruction for your phone or tablet. The playback volume can be adjusted to the desired setting using the dock's **+** and – buttons and on your mobile device, the Dock remote control or the volume buttons on the dock.

Amazon Alexa Support: When connected to Amazon Echo the auto power down feature is disabled. This is to ensure reliable operation with the Amazon devices. Instead the unit maintains the connection and puts the hardware into standby mode when no sound is streaming.

Note: *If paired with Amazon Echo Dot* These products not surrender the Bluetooth audio channel when silent. . This means that it may override the dock connector. If you have this problem then disconnect Alexa from Bluetooth.

Pairing

BlueTooth pairing: When the dock is powered up (Red LED is on), momentarily press and release the both volume buttons. The dock will emit a tone and the Blue Status LED when pairing starts. The BC7A will remain discoverable and ready to pair for 150

seconds after which, if no device has been paired it will exit pairing mode and emit a low tone and the Blue LED will go off.

When will the BC7A Pair? You can pair with the BC7A providing another device is not streaming. If another device is connected it is necessary to disconnect the Bluetooth connection to that device.

Force Bluetooth to Disconnect: *Momentarily* *p*ress and release both volume buttons. The dock will be ready to pair to another device. The BC7A can pair and remember 8 devices but can only connect to one device at a time. It is important to remember to disconnect or switch off the Bluetooth on paired devices that aren't required to operate the dock. You will be unable to connect one device to the dock whilst another is still connected by Bluetooth. This situation can happen when several people have phones and have paired with the dock and they are still in range and they have not disconnected their Bluetooth connection. If this happens you can force disconnection by following the procedure below.

To simplify:

Only **ONE** device can be connected to the innexxis-BC7A at any time.

If you have paired more than one device with the BC7A and you are if you are unable to connect to the BC7A then force disconnection of other devices by momentarily pressing both volume buttons simultaneously to enter pairing mode (see above). **Note:** Turning off the Bluetooth on the other devices will also force disconnection.

Bluetooth Pairing Trouble-Shooting

- Ensure that you have turned on Bluetooth on your phone or Tablet and, if necessary scan f devices while the BC7A is in pairing mode (see above).
- If you are unable to connect then press and release the pairing button on the dock.
- You may receive a message 'innexxis BC7A wants to pair' or something similar. (The exact message depends on the version and manufacturer of your phone or tablet).
- Confirm any requests that appear on your phone/tablet display.
- The device should now be paired with your Invebo BC7A and 'connected' should be displayed.

To stream audio from your phone or table it is necessary to select media to be routed to Bluetooth audio option. Refer to the instruction for your phone or tablet.

When streaming starts the BC7A will power up the main dock electronics dock and begin to play. The playback volume can be adjusted on the dock and on your mobile device.

For best streaming quality set the volume control on your mobile device >50% and set the volume control on the dock to a comfortable listening level.

If you are Unable to connect then try one or more of the following:

1. Ensure no other Bluetooth devices are in range and connected.
2. Reset the Bluetooth on your phone by turning the Bluetooth off and back on again.
3. Follow the pairing procedure.

4. Instruct your phone to forget the BC7A and then follow the pairing procedure.
5. Turn the dock power off, wait 20 seconds and power up the dock.

If you can connect and stream but hear no audio:

1. Try another mobile device.
2. Ensure that the audio is routed to Bluetooth streaming on your device.
3. Press the dock + volume button (Turn up the volume on the dock).
4. Check the video on the website that shows how to check and re-plug your sound processor amplifier ribbon.

IPOD Trouble-Shooting

No Audio:

- Ensure that the dock is connected to power
- Ensure that the Apple device is fully plugged in

iPod Plays but fails to Charge

- Ensure that the dock power is connected.
- Check that your iPod supports USB charge mode*

* A few of the very early 8GB and 16GB iPods support Firewire charge mode only. Please contact Invebo support to solve this issue.

Technical Support

If you have installation issues then please refer to the video and check each step carefully.

I can connect by Bluetooth but No Sound:

- Check that all ribbon cables are correctly plugged in. as detailed in procedure then please see YouTube video on checking and re-plugging sound processor ribbon.
- If your dock serial number begins with 0498 or 052398 then disconnect BC7A and power up the dock. You should hear two beeps. If you do not hear the beeps then your sound processor in the base of the dock is faulty. Contact Invebo.
- If your dock serial starts in 0357 or 0402 and you can connect by Bluetooth your sound processor requires the reliability modification. Contact Invebo.

I can't see or hear any signs of life

- Check that the power adaptor is plugged into the sound processor correctly. (Correct orientation).
- Watch the power adaptor/supply diagnostic video listed in the Invebo Tech Guide on the website.

Contacting Invebo Support

Please email details of your issues to support@invebo.com. Please include as much information and description of the problem. Describe what working and what is not working and if possible send photographs of your sound processor and the BC7A so we can spot any issues. If you supply comprehensive information then our support will be faster and more effective. We endeavour to answer all queries within one working day of receipt.