

# Service Bulletin No 4/2022

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Date: 09.3.2022  
Product: Nesis III A20, Nesis 7, Aetos  
Subject: Black Screen

## Revision History

The following table shows the revision history of this document.

Rev.	Date	Description
1.0	March 2022	Initial release
1.1	April 2022	A20 power management chip reset.

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## 1 Effectivity

Only when needed - in the case if the Nesis or Aetos got a black screen and do not want to start anymore.

## 2 Purpose & Background

In some cases, Nesis/Aetos do not want to start and they only show a black screen but they still consume some power. This can be related to:

1. Main computer module (A20) power chip issue,
2. Bad power cable contact,
3. Internal SD card contact problem,
4. Power chip failure,
5. LCD controller failure,
6. LCD screen failure,
7. Some other electronics problem.

This document describes how to check for the first two problems, the bad contact and the internal SD card problem. A repair in the factory is needed for the other cases.

## 3 Compliance

Only when the problem appears.

## 4 Instructions: A20 Power Chip Issue

This section does not apply to Nesis III equipped with IGEP computer. Check `Options|Info` window for computer in use, when unsure.

This is the most likely cause of the *black screen* problem. It seems to happen when device was not used for longer period while outside temperatures were low. It looks like the power management system on the A20 module goes into some special state which prevents to power up correctly.

## 4.1 Solution

The following procedure will reset the A20 power management.

1. Press and hold (long press) the **Esc/Close** button, figure 1. Release the button after about 10 s. This will force the A20 power management chip into reset. If you are able to measure the current consumption of the device, you will notice the current drop from about 60 mA to 30 mA.
2. Press and hold the **Esc/Close** button again for about 5-10 seconds. This will restart the A20 power management in normal mode. You should see device starting to boot. Device shall start working normally.

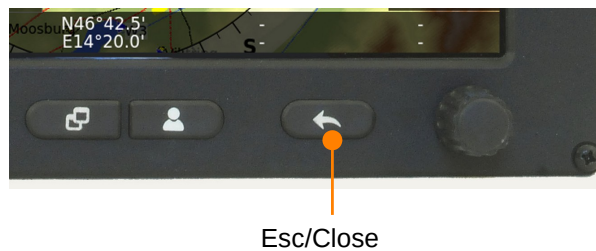


Figure 1: The **Esc/Close** button on Nesis III.

After this the device shall work normaly as it did before. When solve, the problem seldom appear again.

## 5 Instructions: Power Cable Contact

There could be a bad contact on the cable part of connector, which is inserted into Nesis. This is a weak point. The problem is in pins on the cable side (female pins). If the cable is inserted and removed several times, they spread and may cause contact problems. This can also happen after some time

### 5.1 Check

Slightly move/shake the power cable close to the point where it connects to Nesis. If there is a contact problem, Nesis will turn on/off – flicker.

### 5.2 Solution

The correct solution is to replace the connection cable. Please contact Kanardia or one of our representatives and we will send you a new cable.

As a quick fix you may try to follow the steps mentioned next. This shall be only a temporary fix until the cable is replaced with a new one. Sharp pointy precision tweezers is needed for this fix.

1. Disconnect the power cable from Nesis.
2. Take pointy tweezers and gently compress together the female pins inside the plastic plug. Alternatively, you may also try to bend the deformed part of the pin back into the shape. Figure 2 shows an example. Do not try to remove the pins from the plastic. Squeeze them inside the plastic plug.
3. Plug the cable back and turn the Nesis on.

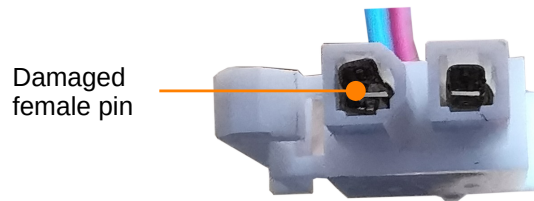


Figure 2: An example of damaged female pin inside the plastic plug.

## 6 Instructions: Internal SD Card Contact Problem

Due to the slightly different construction of Nesis III 8.4" vs Nesis 7" and Aetos, there are two different instructions.

### 6.1 Nesis 7 and Aetos

1. Remove the instrument from the instrument panel. Mark all the cables, in particular mark both pitostatic tubes before removing them.
2. Remove the top lid of the housing. Keep the bottom lid on.
3. Locate the A20 processor module and an SD card on the side. See Figure 3.
4. Remove the SD card from the module by gently pushing it inwards. The mechanism will eject the card on release.
5. Take some alcohol and carefully clean the contacts in the SD card.
6. Insert the SD card back. Push it into the slot. The mechanism will lock on release. Put the lid back on.
7. Reinstall the instrument back into the instrument panel. Be careful with the pitostatic tubes.
8. Start the instrument. If it starts properly, the problem was solved.
9. If the problem persists, the problem is somewhere else and the instrument must be sent back to us for repair. You can contact [support@kanardia.eu](mailto:support@kanardia.eu) for more information.

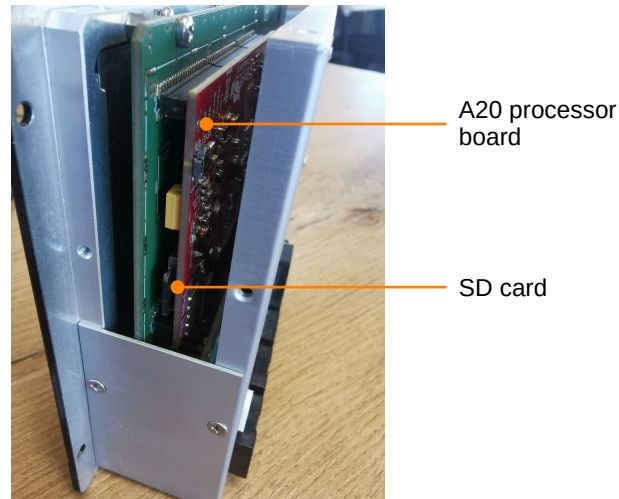


Figure 3: Location of the A20 processor and its SD card in Nesis 7 and Aetos.

## 6.2 Nesis III, A20

1. Remove the instrument from the instrument panel. Mark all the cables, in particular mark both pitostatic tubes before removing them.
2. Remove the bottom lid of the housing. Unscrew the outer screws first to relieve the frame. Keep the top lid on.
3. The SD card is located in the middle of the lower part of the instrument. Exact location is shown in Figure 4.



Figure 4: SD card location in Nesis III, A20.

4. Remove the SD card from the module by gently pushing it inwards. The mechanism will eject the card on release.

5. Take some alcohol and carefully clean the contacts in the SD card.
6. Insert the SD card back. Push it into the slot. The mechanism will lock on release. Put the lid back on. Screw-in the inner screws first.
7. Reinstall the instrument back into the instrument panel. Be careful with the pitostatic tubes.
8. Start the instrument. If it starts properly, the problem was solved.
9. If the problem persists, the problem is somewhere else and the instrument must be sent back to us for repair. You can contact [support@kanardia.eu](mailto:support@kanardia.eu) for more information.

## 7 Additional Instructions

**Weight and Balance:** Not affected.

**Manual:** Not affected

**Repetitive Inspections:** Not required

**Continuing Maintenance:** Not required.