DGT Centaur –Diagnostic tool guide

1   Introduction

If you have received this document, you will already have been in contact with DGT support. If this is not the case, please contact DGT support first to discuss any problems with Centaur you may be experiencing.

This document will guide you through using the diagnostic tool in your Centaur.

The purpose of the diagnostic tool is to check if all hardware and software is (still) working correctly. This process is described in chapter 2. By following the steps, it is possible to search for problems with the board on a basic level.

Part of the process is re-calibration of the board. Re-calibration of the board can fix detection issues of your Centaur in some cases. To test the piece detection of each square, we direct you to the tool described in chapter 3. But we recommend completing the process in chapter 2 first.

If your Centaur is defective, one or more of the steps in chapter 2 will fail. In that case a checkmark will not appear. Or in the case of the LED and sound check the problem will be observed.

If any of the checks fail, you may turn off the centaur in the manner described below. It is then recommended to contact DGT support, by replying to the original message, by email at support@dgt.nl or via ticket at the support page of our website: dgt.nl

Turning off the centaur during the diagnostic process.
The process described below can be stopped at any moment by pressing and holding the

Play/Pause [▶❙❙] button for 3 seconds. The Centaur will turn off and a "Test Failed" message will be shown

on the screen. Then restart the Centaur by pressing the Play/Pause [▶❙❙] button again. The Centaur will turn on normally and the "Test failed message will disappear.

2   Test screen

1. Your Centaur must be off.

2. Make sure the power adapter is not connected.

3. Press the Play/Pause [▶❙❙] button. Centaur will turn on and a circling LED pattern will appear on the board. While the pattern is blinking, press the Hint [❔] button at least 4 times.

4. The circling LED will continue, after a couple of seconds the LED's will stop circling and the screen will start cycling between a fully black and white screen a couple of times. Then the test screen will be shown. An example can be seen in figure 1.
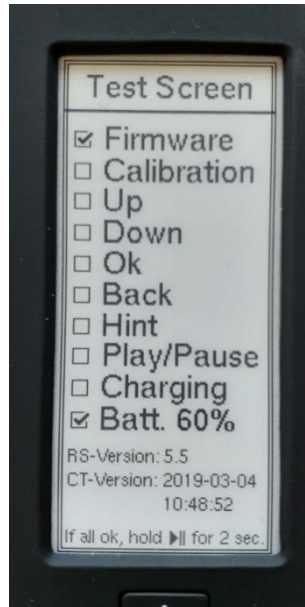
Figure 1: Test screen

5. The first checkmark for Firmware will appear after a short delay. No action from the user is required.

6. During the test mode the board will do a continuous LED check. Each second a row of 8 LEDS will turn on and off, scrolling down. Visually check if the LED for each square is working. (See figure 2)

Figure 2: LED control.

7. Each time the LED bar reaches the bottom row Centaur will beep.

8. Make sure the playing area is empty, clean and free of any dirt or small objects.

9. In the next step we will calibrate the chess board. Do not touch the playing surface during the calibration process!

10. Press and hold the hint [?] button for 3 seconds. The LEDS will turn off, the calibration process will now start.

11. The centaur will calibrate itself now. After about 10 seconds, the calibration is complete. A short series of beeps will be heard, the LED's will start blinking again and a checkmark will appear in calibration checkbox. The playing surface may now be touched again.

    a. If the checkmark does not appear the calibration was unsuccessful. Please contact DGT support to discuss any further steps.

12. Press each of the Centaur buttons once. If the button is working correctly a checkmark will appear.

13. Plug in the power adapter. If the battery is working correctly a checkmark for "Charging" will appear.

14. If the battery is above 40% charge, a checkmark will be visible. If the battery is below 40% charge, simply wait until the battery is charged to a higher level and the checkmark will appear.

15. If all checkmarks are visible, press and hold the Play/Pause [▶❚❚] button for 3 seconds. Centaur will now turn off. While powering down the square A8 will blink slowly. Centaur is fully off when the blinking stops.

16. The next time you start the Centaur it will go to the normal playing menu.

17. If any of the checks failed, you may also turn off the centaur. It is then recommended to contact DGT support, by replying to the original message, by email at support@dgt.nl or via ticket at the support page of our website: dgt.nl

3   Test screen – Square detection check

From the test screen it is possible to go to a second screen where it is possible to check the current detection value of each individual square.

1. You may enter this process at any moment during the Test screen, but it is recommended to complete the steps outlined in chapter 2, up to step 15 first. However, do not turn off the centaur at that moment.

2. Press and hold the up button [▲] for at least 3 seconds. A screen as shown in figure 3 will appear.

3. The screen shows a detection value for each square. The values are constantly changing.

4. The black square in the bottom left of the screen is linked to the square A 1. The white square top left is linked to square A8.

5. When the board is empty all squares have shifting values roughly between -100 and +100.

6. Place a chess piece on any square you suspect is not working correctly.
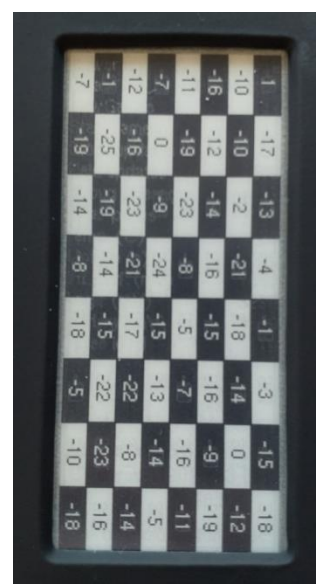

Figure 3: Antenna value check screen.

7. When placing a centaur piece on a square the value should increase, a normal value for a square with a piece is between +200 and +1000. Smaller pieces such as pawns have values near +200. Larger pieces such as a king will have values of 800 or higher. An example can be seen in figure 4, on row C pieces have been placed causing high detection values.

8. In some cases, the piece itself is not working correctly. Please test the same square with multiple pieces of the same type. The values should be roughly the same per piece type. But small differences can occur.

9. If the value of a square does not change. Or if a chess piece is defective, please contact DGT support, by replying to the original message, by email at support@dgt.nl or via ticket at the support page of our website: dgt.nl

10. You may exit this screen by pressing and holding the back button [⬏] for at least 3 seconds. You will return to the main test screen.

18. If all checkmarks are visible, press and hold the Play/Pause [▶❚❚] button for 3 seconds. Centaur will now turn off. While powering down the square A8 will blink slowly. Centaur is fully off when the blinking stops.
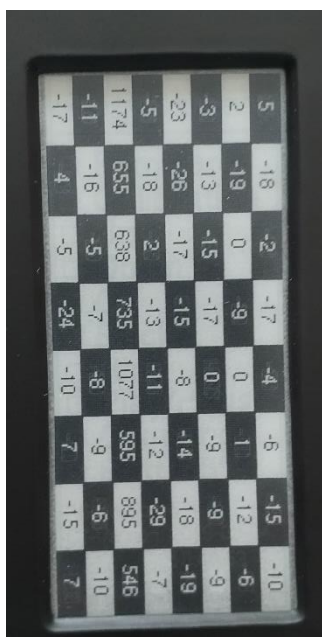

Figure 4: High values of squares with pieces placed