DIGITAL GAME TECHNOLOGY

DGT Centaur manual

English

English

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1. Introduction

Congratulations on your purchase of DGT Centaur, your perfect chess friend!

Chess is best when you are challenged but still have a fair chance to win. It is most satisfying when you have a suitable opponent of similar strength or just above your level. This is exactly what DGT Centaur offers. It has a unique system to analyze your play during the game and it uses that information to challenge you at your own personal level. In addition, Centaur plays in a very human way for your perfect playing experience.

Centaur is a high-tech chess computer with a sensor board and innovative circular LED lights to indicate the moves. There is no need to look at the display; you can fully focus on the board and the pieces. Playing Centaur resembles playing a real person and practicing chess with Centaur is beneficial to your development. Of course, Centaur is always there for you, ready for another game!

The board has an e-paper display to change settings, to view the game notation or see an image of the board, to show hints or to see the computer evaluation of the position. The screen has a soft contrast that is pleasant to the eye and can be viewed well from all directions and under any light.

DGT Centaur is designed as a lightweight, modern chess board with designer chess pieces allowing you to play, practice and enjoy the world's most popular board game whenever you want, wherever you are. Centaur is always there to be your perfect chess friend.
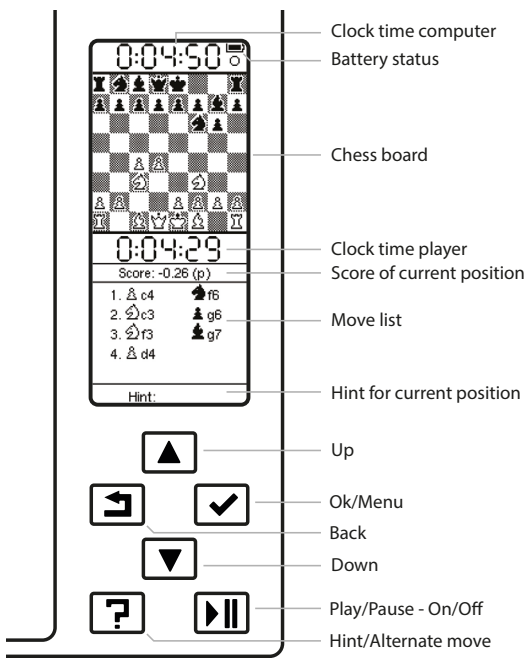
Lets play chess!

Figure 1. Button overview.

2. Button explanation

Up
Use the arrow up key to move up through the menu list. In the game notation you can keep this button pressed down for fast scrolling.

Down
Use the arrow down key to move down through the menu list. In the game notation you can keep this button pressed down for fast scrolling.

Back
Use the back key to return to the previous screen. When this button is pressed in the play screen, the e-paper display is refreshed.

Ok/Menu
The Ok button is used to enter the settings menu and the sub-menus and it is also used to confirm a selection.

Hint/Alternate move
This is the hint key. When this button is pressed, Centaur gives a hint or alternative move.

Play/Pause - On/Off
Use this key to switch on Centaur or to turn it off. When playing with a timer, this button is used to pause or start the clocks.

Operate the menu
To operate the menu, press the "Ok/Menu" button. The main menu opens.
Use the up arrow and down arrow buttons to navigate through the menu. If necessary, you can select another submenu with the "Ok/Menu" button. If the cursor is on an option, the current selection can be activated or deactivated by pressing the "Ok/Menu" button again. Use the "Back" button to return to the last menu/play screen.
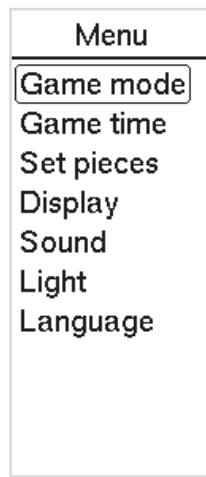
Menu

Game mode
Game time
Set pieces
Display
Sound
Light
Language

Figure 2. Menu.

3. Start playing chess

When first using Centaur, it is recommended to fully charge the battery. To charge it connect the adapter as indicated in the quick guide.

Begin a game
Turn on Centaur by pressing the "Play/Pause" button. During start-up, Centaur beeps and the LED's in the board light up and the chess pieces are detected.

Place the pieces on the board in their starting position.

You can now make your first move and the game begins. You do not have to press on the squares but you can simply move the pieces just like you would on a regular chess board.

To turn off Centaur keep the "Play/Pause" button pressed in for three seconds. A short tone is heard. During shutdown the LED in the right corner pulsates slowly until Centaur is completely turned off.
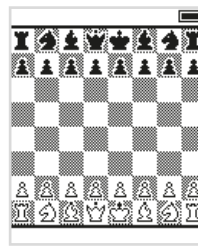
Figure 3. Starting position.

LED indication
When making a move the destination square will briefly light up indicating that Centaur has recognized your move. Centaur is now thinking about its move. Centaur's move will be indicated the alternating flashing of the starting square and the destination square for the piece it wants to move. It will stop flashing as soon as you make the move for Centaur. After this it is your turn and you can make your next move.

You can always decide to ignore the indicated move that Centaur wants to play and make a different move for Centaur instead. Centaur will automatically detect any other move you make and play will continue with that move.

An illegal move
If you play a move that, according to the rules of chess, is not allowed, the departure square and the destination square will blink rapidly and, when sound is on, a beep will be heard. Three question marks will be shown on the display to indicate an illegal move. The blinking of the squares will stop when the piece is put back on its original square or when a legal move is made.

The three question marks are shown when:

Figure 4. Three question marks.

- Centaur checked your King but your move did not defend against the check; defend against the check by either moving a piece between your King and the attacking piece, by capturing the attacking piece or by moving your King to a square where it is no longer in check.

- Centaur detected a move that contradicts the rules for the movement of that piece; check whether you placed the piece on the correct destination square in line with the movement rules for that particular piece.

- Centaur cannot detect the piece; check whether you placed the piece in the center of the destination square.
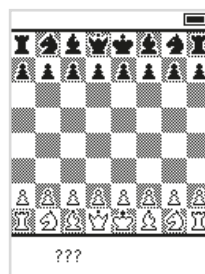
A move is not correctly detected

In rare cases Centaur does not correctly detect a move. You can easily solve this problem by lifting the piece and putting it back on the destination square. You can also return the piece to its original square and repeat its move.

Take back

Centaur allows you to take back one or more moves. You can take back as many moves as you wish but must always do this exactly in the reverse order in which the moves were originally made. To take back a move simply put the piece back on the square where it came from. You can consult the move list to see what moves were made and in which order they were made. When taking back moves do it one by one, taking back the last move first and so on. Centaur will automatically detect when you are taking back moves and it will automatically adjust the move list and the board position as indicated on the display.

Hint

Centaur can suggest good moves. By pressing the button "Hint/Alternative move", Centaur will indicate the best move as well as several alternatives. As soon as you make a move on the board, the hint screen will disappear. The move you make does not have to be one of the suggested moves. You can also hide the hint screen by again pressing the hint button.

It is possible to continuously receive hints at each turn by turning on the "Hint" option in the "Display" menu (see fig.12). With this option switched on, at each turn a hint will be shown at the bottom of the display.

Figure 5. Take back/movelist.

Alternative move

The button "Hint/Alternative move" can also be used to get suggestions for the computer move. If it is Centaur's turn it will first indicate its best move. By pressing the "Hint/Alternative move" button, it will show alternative moves in the display. At any moment you can decide to play the proposed move, to play one of the alternative moves, or to play an entirely different move altogether. Centaur will accept any move you play as its own move and continue the game. The screen with alternative moves will disappear as soon as a move is made. You can always make another move than what is indicated on the display. The display with suggested alternative moves will also disappear by again pressing the "Hint/Alternative move".

Long and short castling

Long castling is indicated in the display by 0-0-0 and short castling by 0-0. You perform this move by first moving the King two squares and then moving the Rook.

Figure 6. Hint.

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Pawn promotion

When a pawn reaches the other side of the board it is promoted to another piece. The display shows the different pieces you can select. If you do not select a piece, Centaur will assume you want the pawn to turn into a Queen. In that case you can simply play Centaur's next move and continue the game. To promote to a different piece, select the piece by pressing the "Up" and "Down" buttons and confirming your choice by pressing the "Ok/Menu" button. The selection screen will disappear and you can continue the game.

To end the game

You have won the game if you have checkmated Centaur or you lost the game when Centaur has checkmated you. Other reasons for ending a game are a draw, a stalemate or insufficient material to checkmate. The result of the game is shown in the display.

- **Checkmate**
  A checkmate is displayed with a 1-0 (white won) or 0-1 (black won) and "Checkmate" appears on the display.
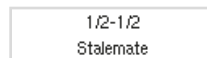
- **Stalemate**
  The game is drawn when the player to move has no legal move and his King is not in check. The game is said to end in "Stalemate" . The result of the game is a draw and "Stalemate" appears in the display.

- **Draw**
  In a draw, the game ends in a tie. The display will show the "½ - ½" notation with the word "Remis".

Figure 7. Pawn promotion.

Start a new game

If you want to start a new game, simply place all pieces in the starting position. As soon as Centaur detects that the pieces are in the starting position it automatically starts a new game. You will hear a beep (if the sound is turned on) to indicate a new game can be started.

Beware! *Game information for the previous game is deleted as soon as you finish setting up the starting position; your previous game can no longer be viewed.*

Adjourning and restarting a game

You can interrupt a game and continue it at a later time. During play simply turn off Centaur by pressing the "On/Off" button for 3 seconds. If you wish you can remove the pieces from the board. When restarting Centaur, the adjourned game position is shown on the display. If you had removed the pieces, replace them as indicated on the display and you can continue the game.

Beware! *Do not put the pieces in the starting position. If you do this your current game will be removed from the board memory.*

4. Game mode

Centaur has three playing modes: Friendly, Challenging and Expert. When you first turn on Centaur it is in the "Friendly" mode. You leave the "Game mode" menu by pressing the "Play/Pause" button. Confirm your selection by pressing the "Ok" button. You can change the mode at any time also during a game. Changing the mode does not influence the hints as the computer will always suggest the strongest moves.
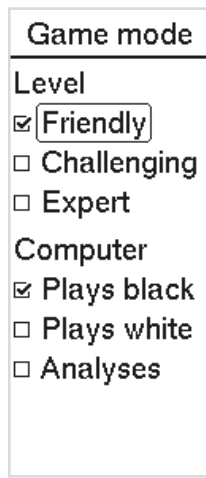
- **Friendly**
  The option "Friendly" gives you a fair chance to win. During the game Centaur analyses your play and determines your strength. Centaur will play at your skill level so that you will have a matching opponent. This is the perfect mode for a relaxed, enjoyable and instructive game of chess.

- **Challenging**
  The "Challenging" mode is a bit more demanding. It is the perfect mode if you want to improve your skills and play against an opponent that is a bit stronger than yourself. Centaur will still play at your level, but will play stronger moves more often.

- **Expert**
  In "Expert" mode Centaur's engine will play at full force without adapting to your level or playing strength.

Figure 8. Game mode.

Computer plays

In the Game Mode submenu, you can specify the colour the computer should play. The game colour of the computer can be set to "Black" or "White".

- **Black**
  When you turn on Centaur and start to play it assumes you play with the white pieces and that Centaur plays with the black pieces. In the submenu "Game mode" you can change the color with which you want Centaur to play.

- **White**
  If you choose to play with the black pieces and want Centaur to play with white, the board in the display will turn around. The white pieces will be on the other side of the board. You will have to switch the pieces on the actual board you will have to switch yourself.

- **Analyses**
  By selecting this option Centaur will observe a game played on the board. During the game Centaur will not propose any moves and the squares will not light up. If you press the "Hint" button you will see hints. Centaur will indicate whether a move played was a good move, or if there is a better option. This analyses mode can therefore be used to replay and analyze a game. It is also a good option to play with an opponent without the fields lighting up. The "Hint" option remains available and can help improve your game.

Score

Centaur uses a number to give a value to each position. With this score (the computer evaluation) Centaur compares the position of the white pieces to the position of the black pieces. A positive score ("+") means white is better; a negative score ("-") means black is better. The score relates to the value of the pieces. For example if white has one extra pawn compared to black, the score is "+1". But if black has four more pawns than white, the score is indicated as "-4". The score is related to the material value of the different chess pieces: a Pawn is 1 point, a Knight or a Bishop is 3 points, a Rook is 5 points and a Queen is 9 points.

When Centaur evaluates a position it does not only look at the material differences between white and black, but it also takes into account the position of the pieces, whether they are active or passive, and whether there are any tactical possibilities in the position. By comparing the scores for different moves you can see which moves result in a better position.

5. Game time

It is possible to use a clock when playing against Centaur.

By default, the game timer is turned off. Switch it on by pressing the "Ok/Menu" button and then selecting the "Game time" option. You can select following game times: 2, 5, 10, 20, 30, 45, 60 or 90 minutes per player per game. Using the arrow keys you scroll through the menu and your choice is confirmed by pressing the "Ok" button. To start the game and exit the menu press the "Play-Pause" button. The clock times will be shown in the display.

The clock starts as soon as you make your first move. Centaur's game clock, will count down and stop as soon as Centaur indicates its move. After you made Centaur's move on the board, your clock will start and continue its countdown. Use the "Play-Pause" button to stop the clocks at any moment to pause the game.

When a player reaches 0:00:00 first and used all his time, a flag will be shown next to the clock. The game can continue however, even when the clock has reached 0:00:00.

6. Start from a game position/Set pieces

You can set up a position and continue play from that position. This can be used to analyze or play out an interesting position or to solve a chess puzzle.

There are two ways to set up a position: beginning with the starting position or beginning with an empty board.

Setting up from the starting position
The easiest way to set up a position is by beginning in the starting position. For this, first place all pieces in the starting position as if you want to start a new game. You can do this in the main screen before entering the menu and selecting the "Set pieces" option.

At this moment you can lift a piece and move it to any square (or remove it from the board). Moving pieces during set up does not have to be according to the rules of chess.

Centaur remembers which piece was last raised and any subsequent piece you place on the board will be of that type. You will also see the type being indicated in the Centaur display. Setting up a position this way is very intuitive as you will see when trying it a few times.

When you have set up the desired position on the board, press the "Ok/Menu" button. The display will show the following settings (see fig. 11).
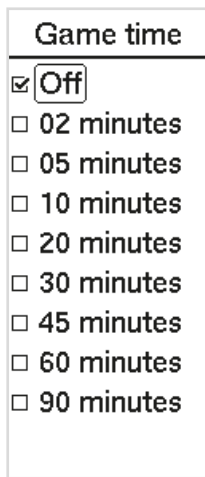

Figure 9. Game time.

Figure 10. Set pieces.

9

Direction of play

With the desired position on the board, Centaur must now be instructed whose move it is and into which direction the pawns move.

- **White ♠**
  The playing direction of the white pawns is from bottom to top on the chessboard.

- **White ♥**
  The playing direction of the white pawns is from top to bottom on the chessboard.

To move

Now indicate which side is to move in the position.

- **White**
  Select white if white must make the first move in the position.

- **Black**
  Set black if black must make the first move.

Figure 11. Second display of Set pieces.

Computer plays with

If you want to play out the position against Centaur, you must now specify whether Centaur plays with the black pieces or with the white pieces. Alternatively you can set Centaur to analyze the position.

- **White**
  Set white if you want Centaur to play with the white pieces.

- **Black**
  Set black if you want Centaur to play with the black pieces.

- **Analysis**
  When you choose this option, Centaur analyses the game. Centaur will not make any moves during the game and the squares will not light. If you press the question mark button, you will see hints. Centaur indicates whether the move that was played was a good move, or whether there is a better option. Press the "Play/Pause" button to confirm the settings. If the board position and setting you made is allowed, Centaur will go to the play menu. You can then start your game from the set-up position.
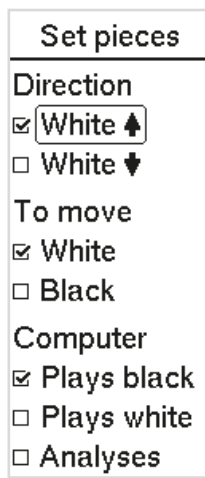
Position or setting not allowed

If the settings or the position on the board is not allowed, a beep will be heard and Centaur will return to the screen settings. If this happens please check whether the set position adheres to the rules of chess. For example, check the following:

- Is there one white and one black King on the board?
- Is one of the Kings perhaps in check but it is the other side to move?
- Is there a pawn on the first or last row?
- Are there too many pieces of one type on the board? For example it is not allowed to have two Kings of the same color or to have nine pawns of the same color.
- The setting cannot immediately be checkmate.

At this moment, if you wish to change one piece to another piece, you can change it by:
- Lifting up the piece you wish to change.

- Use the arrow keys to select the icon of the piece to which you want the lifted piece to change into.
- Put the lifted piece on the required square.
- The piece has now changed to the selected piece.

Setting up from an empty board
Another way to set up a position is to start with an empty board. Go to the menu "Set pieces".
Using the arrow keys, select the icon of the piece you want to put on the board. Then place the actual piece on the board on the intended square. If you want to place more pieces of the same type you can now place all pieces of this type.

After this you can use the arrow keys to select other pieces and repeat the above steps.
Take care to correctly select the icon when placing pieces. If you accidentally placed a wrong piece, you can solve it by re-selecting the correct icon.
When you finished setting up the position, select the "Ok/menu" button and make the selections in the next menu screen as indicated above under "Setting up from the starting position".

7. Display

The information shown on the display can be adjusted to your preferences. Use the arrow keys to scroll through the menu and press the "Ok/menu" button to turn options on or off. Exit the menu by pressing the "Play/Pause" button. If you wish to return to the previous menu display press the "Back" button.

Board
The chessboard can be switched on or off on the display. The chessboard shows all your moves. If you want to withdraw a move, you will see the position of the chess piece on the chessboard.

Clock
The clock can be turned on or off on the display. The clock is displayed as soon as "Game time" is set in the main menu.

Score
The score can be switched on or off on the display. The score shows the strength of your position or that of the Centaur, but also how strong a possible move is.

Hint
Hint can be switched on or off on the display. Centaur can give you hints and suggest a good move. If this option is activated, a hint will be shown on the display with every move. If you disable this feature, you can still request hints when you press the "Hint / Alternative move" button.

Move list
Centaur indicates the moves of the game. This list can be displayed in small or large font.
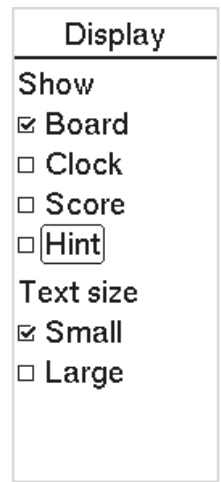

Figure 12. Display options.

8. Sound

By default sound is on. There will be a sound when:
- Starting Centaur and when turning it off
- An illegal move is made
- Centaur turns itself off after 30 minutes of inactivity
- An illegal position has been set up "Set pieces"
- At a hard reset

When the sound is switched off, you will only hear a short beep when turning Centaur on.

9. Light

The intensity of the LED's can be adjusted to Low, Medium or High. When you play in a darker room the LED's can be dimmed. When you play outside or in the sunlight, the intensity can be increased.

10. Language

By default Centaur is set to English. It can be set to German, English, Spanish, French, Italian, Dutch, Polish, Russian or Turkish.

11. Power save

After 30 minutes of inactivity, Centaur turns off. When the sound is activated, a short beep will sound. The current game is saved. (see section "Pausing and Resuming a Game").

Forced shutdown
If Centaur stops responding during a game and cannot be switched it off, you can force it to close down by holding the "Play/Pause" for 10 seconds. Centaur then returns to the factory settings.

12. Accessories

Contents:
- Electronic Chess board
- Chess pieces (with two Queens for each color)
- Universal power adapter
- The manual
- A quickguide

13. Maintenance and support

For warranty purposes and future updates please register your Centaur on our website. For product registration go to the support section of the DGT web site and select "Register your Product".

Centaur is finished with a high quality printed chess board surface. When treated with care it will give you many years of trouble-free performance. To clean the board a lightly moistened soft cloth should be used. Do not use abrasive cleaning liquids.

If you have any questions that are not covered by this manual please consult the FAQ's on the support section of our website. If you are unable to find a solution in the FAQ section, feel free to contact the DGT support department.

14. Warranty conditions

Centaur complies with our highest quality standards. If, inspite of our care in choosing components, materials, production or transport, your Centaur shows a defect within the first two years after purchase, please contact the retailer.

Clean Centaur only with a soft damp cloth. Do not use abrasive cleaning products.
The warranty is only valid if the product is used in a reasonable and prudent manner as intended to be used. The warranty is void if the product has been misused or if any unauthorized attempts to modify it have been undertaken without prior express written consent of DGT support or one of the DGT authorized service centers. A list of Service Centers can be found on the DGT website.

If you have any questions about Centaur which are not answered by this manual, please consult the FAQ on our website.

15. Disclaimer

Digital Game Technology spared no efforts to ensure that the information in this manual is correct and complete. However, there shall be no liability for any errors or omissions. Digital Game Technology reserves the right to change the specifications of the hardware and software described in this manual without prior notice.

No part of this manual may be reproduced, transmitted nor translated in any language in any form, by any means, without the prior written permission of Digital Game Technology.

16. Open Source software

DGT Centaur uses the following Open Source software:
Python, the Python Software Foundation (PSF) license is applicable.
Python-Chess, the GNU Public License version 3 (GPL3) is applicable.
DGT would like to thank the many software developers who made it possible for us to develop Centaur for the many chess lovers around the world.

17. Technical specifications

Board size	444.5 x 400.5 mm (17.5" x 15.8")
Square size	48 x 48 mm (1.9" x 1.9")
Power	Supplied with a USB cable
Housing	Clear PC plastic chassis with a high quality printed chess board surface.
Gross weight	2.3 Kg (81.1 oz.) Chess Computer, chess pieces, cable, documentation and packing.

CE   DGT Centaur complies with the directives 2004/108/EC and 2011/65/EU.

This product is marked with the recycling symbol indicating that, at the end of its life, the product must be disposed at an appropriate waste collection point according local regulations. Do not dispose the product in the normal domestic unsorted waste stream.

This product is not suitable for children of 0 – 3 years of age. Includes small parts.
Choking hazard.

This DGT Centaur complies with the regulation of the German "Der Grüne Punkt" Trademark of Duales System Deutschland GmbH.