

## WELCOME TO CERTABO® WORLD!

Thank you for buying a Certabo® chessboard, your new Certabo® chessboard is built with selection of finest woods and is hand finished by expert artisans in Italy. Certabo® chessboards integrate a sophisticated state of art electronic board with advanced chess pieces recognition and will guarantee incredible interactive chess gaming experience over time. Certabo® chessboards have a multiplatform compatibility and can be interfaced to the most powerful chess engines. The default Certabo® software\* is open and runs Stockfish chess as main engine but any UCI chess engine can be used. The software is provided under GPL v3.0 license and this basically means that you have the freedom to use, modify, make your own version under same license terms, to tailor the Certabo® chessboard experience according to your desires. See developer section for further information and limitation.



### HOW TO PLAY

1. Install drivers and software on PC, connect Certabo® chessboard to your PC or Raspberry PI
2. Start the game on your PC or on touch screen display of your raspberry PI
3. Avoid check mate from Stockfish if you can

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## Instruction Manual

You should have received link to download drivers and software on your email if not, just download the most updated version from our website.

### **Install drivers and software before connecting the chessboard to a PC.**

Attach the provided self-adhesive recognition chips on bottom of your preferred set chess (an additional chip is provided for spare queen for both white and black pieces). Start the setup software and install the drivers and Certabo® software before connecting the chessboard to PC.

Connect chessboard to your PC, or raspberry PI using the USB cable. Start the software on PC, on raspberry PI the software starts automatically when powering the unit on. After starting the software all the chessboard leds will blink for a second. The digital chessboard will be displayed on the screen.

### INITIAL SETUP

If you are using the chessboard for the first time please place the electronic pieces centered on the squares of the chessboard in the start position, as shown in (fig. 1) and click on **Setup** button, this will start the recognition process which will take few seconds. At the end of recognition process all pieces will be recognized and actual status of the pieces will be shown on the screen. In case of wrong position please repeat the setup process. Each press on setup button will delete the previous set up and save a new one. After initial setup process the chessboard will recognize automatically the pieces and there will be no more need to repeat the initial setup process.



Fig. 1

In case you need to add extra piece to the current setup (e.g. a spare extra queen required for promotion or for example if you want you add an extra set of piece) just place the new queen or wanted piece in its starting position and click **Add piece** button this will add the extra queen or other pieces to the set-up and the additional pieces will be properly recognized in case you need to change or add during the game.

**Tip:** you can add as many extra pieces as you need at same time for both the black and white. Just put the piece and click on **Add piece** button.

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## START THE GAME

To start new game click on **New Game** button, you will be prompted with selection of depth level and to select if play with white or black (fig. 2). Level of depth can be set between 1 and 20. This level will set the depth of search of the Stockfish or other chess engine. You can either select if you want to play against another human, engine or start from position on the board, (**please note if you start from position on the board you need to place pieces before pressing New Game**). If you select “use board option” another option white or black to move will pop up and you have to state the turn if black or white too. You can also select to flip the board if you want to play with black on bottom side. If you eventually want to play the Random Fischer please select “Chess 960” this will activate the Random Fischer castling rules and automatically the same option for UCI engine if it supported by the specific engine you are using.

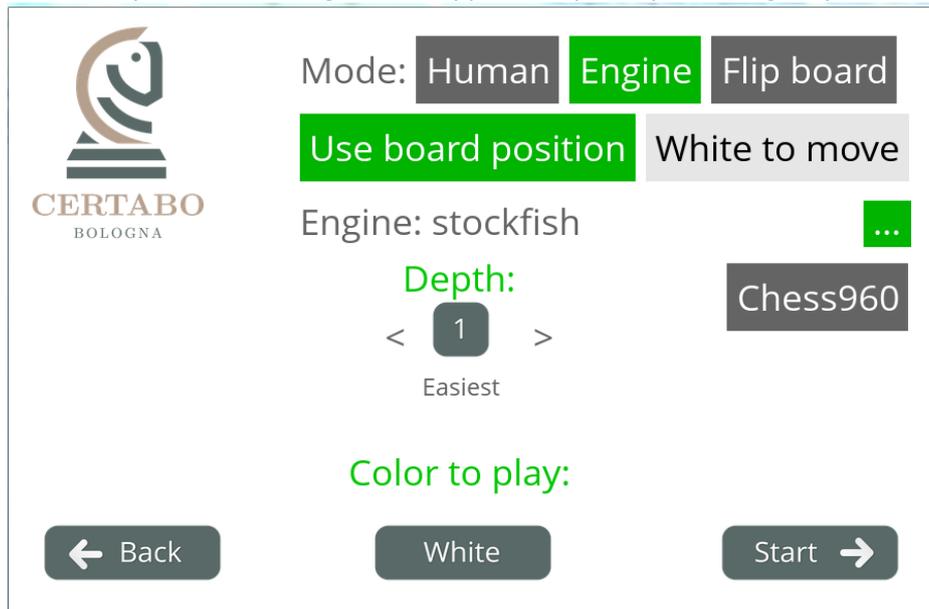


Fig.2

After selection click on **Start →** button.

**Tip:** setting high level of depth may result in very long computation time for the chess engine. Computation time is related to the actual power of the hardware you are running Stockfish chess engine on.

Clicking on **...** will allow you to select the UCI engine to play against see fig 2a.



Fig.2a

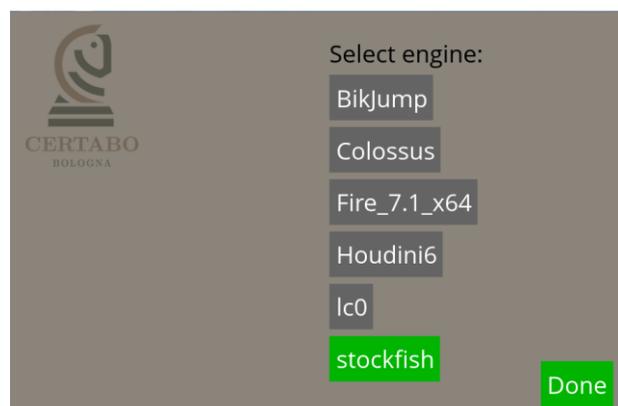


Fig. 2b

**Tip:** In the 64 bit version both latest version 9 of stockfish and LC0 is included, to add any custom engine you can just copy the UCI engine in “engines” directory of the Certabo Software installation path. Once copied, the engines will automatically pop up in chess engine selection window as shown in fig 2b.

## PLAY

After selection made according to previous step click on **Start**  button.

After starting, the chessboard will check for correct position of pieces if eventually there is a piece missing or misplaced (fig. 3) the chessboard will invite to place correctly the pieces according to the start position screen or with black on bottom if you selected "Flip board" option.



Fig.3

After the correct placement of the pieces on the chessboard a green banner will invite to do your move (fig. 4).



(Fig. 4)

Once you complete the move on Certabo® chessboard the chess engine will start analyzing the game and will work out a counter move for Certabo® (fig. 5).



Fig. 5

**Tip:** You can force Certabo® to complete its move at any time clicking on  button. When either in case the best move is found by the chess engine or force move button is pressed the screen will show the movement of the Certabo® piece, the leds on origin and target square will light on the Certabo® chessboard and the screen will invite to move the Certabo® physical piece on the chessboard (e.g. move Certabo® pawn from d7 to d5 fig. 6).



(Fig. 6)

After moving the Certabo® physical piece the leds will turn off and you will be prompted to make again you move.

**Tip:** you can anytime during your turn ask chess engine a hint for your move clicking on  button, the chess engine will suggest and display the best move for you (fig. 7 e.g. best move suggested is c1f4).

**Note** that the hint function is related to the level of depth you set for the game so higher is the depth the longer will be the computation time to get hint.



Fig.7

**Tip:** you can anytime during your turn return back on your moves, clicking on **Take back** button. The press on the take back button will cancel the last move of both black and white players and the display will show the previous situation before your last move. Place the piece according to the layout shown on the display and do again your move.

**Note** The software keeps memory of all moves history so you can go back as many moves as you want till beginning of the game eventually.

#### EXIT, SAVE, RESUME GAME

You can, at any time, save the game clicking on **Save** button, entering name for the game and pressing **Save** button (fig.8)



Fig.8

Clicking on exit button you will be anyhow prompted to save the game before exiting (fig.9).



Fig. 9

To instead resume the game, click on **Resume Game** button, select the saved desired game (Fig. 10) and resume it. The display will show the saved position of pieces, therefore place the chess pieces according to the screen, the game will be automatically restarted from saved situation. To remove a previously saved game select it and then click on **Delete game** button, so it will be deleted.

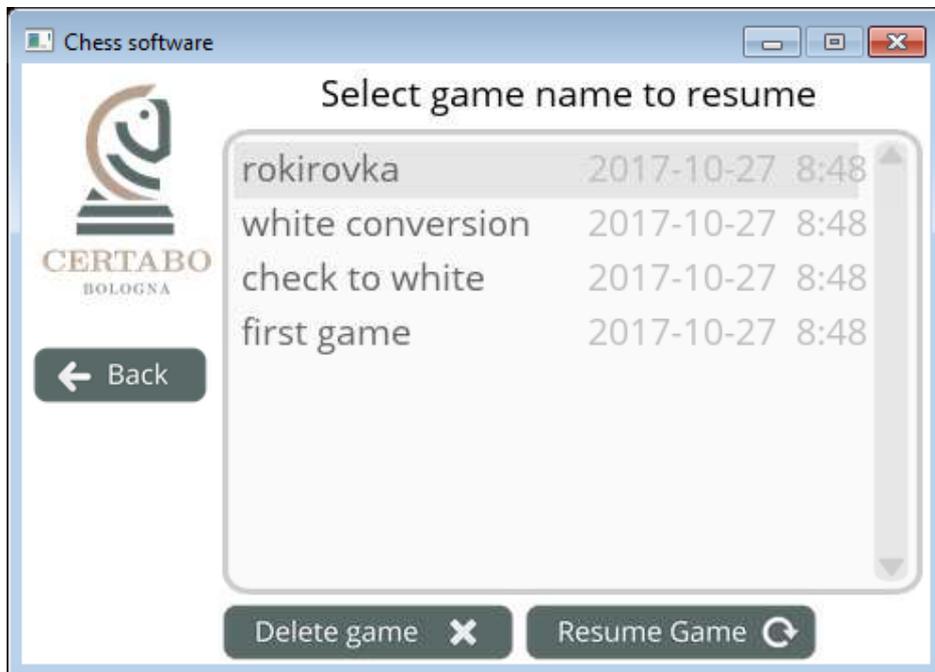


Fig. 10

**Tip:** All the games are saved in the universal .pgn format under **My Document/Certabo Saved Games** and from there you can copy and open with any .pgn viewer, at same time you can load any .pgn just copying it in the same directory and resuming from Certabo Chess Software interface.

## FOR RASPBERRY PI USER

All the above feature are available in PI version of Certabo Chess Software too and more than 50 chess engine are already included. In order to properly shut down the Raspberry PI, please do a long press (3 sec) on Certabo® logo (fig. 11) this will turn off the device and will cut the power supply to the chessboard. After shutdown you can safely disconnect the PI power supply. A not correct shutting down of the PI may result in corruption of some files on micro sd card and may require a new burning of the image file on the micro sd card. Clicking on logo on windows version software will close the windows and shutdown the game.



Fig.11

## PC USER NOTE

After launching the PC software a secondary window will be opened in background. This secondary window (fig.12) is a monitor which reports game logs, the actual FEN string, and various messages in text format, the closing of this window will shut down the game, we suggest to keep it minimized during the game.

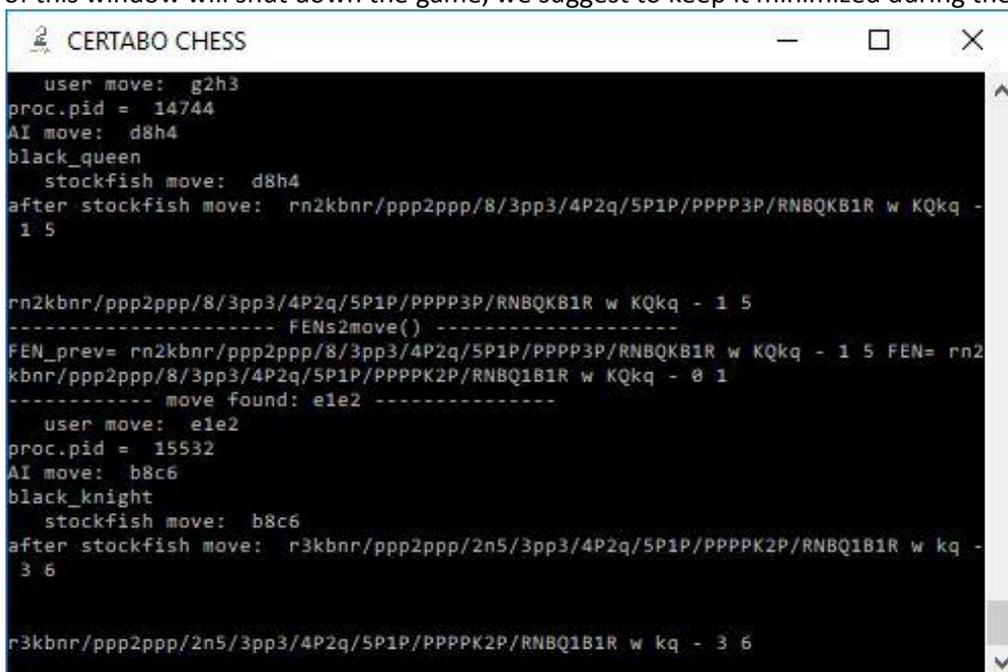


Fig.12

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## DEVELOPER SECTION

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### IMPORTANT NOTES

- **Also if the CERTABO® software is provided under GPL v.3.0 version, Certabo® logo is registered trademark of INVENTHIO Srl. You cannot at any time use, reproduce, distribute logo, related brand and graphical elements.**
- **As supplement of current GPL v3.0 License Section: 7(e)"Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks of Certabo® " Recipient must remove Logo and graphical part from the software and distribute his own copy without any part covered by trademarks.**
- **The official versions of Certabo® software are only available on Certabo® website.**

Source codes are available for distribution upon written request. To require source codes please write us we will send a link to them.

**JOIN CERTABO® COMMUNITY !  
BRING CERTABO® EXPERIENCE ON YOURS  
PREFERRED HARDWARE PLATFORM !!**

To receive information about interfacing protocols to Certabo® chessboards please write us.

# EU DECLARATION OF CONFORMITY

Radio equipment:  
**CERTABO VITTORIA; IDA; CURZIO**



Manufacturer:  
**Inventhio s.r.l.**  
Via A. Pacinotti, 43  
40141 Bologna  
Italy

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Object of the declaration:  
**Electronic Chessboard**  
**Brand: CERTABO**  
**Model name: VITTORIA, IDA**

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

**2014/53/EU RE** relating to the making available on the market of radio equipment  
**2014/30/EU EMC** relating to electromagnetic compatibility  
**2014/35/EU LVD** relating to electrical equipment for use within certain low voltage limits  
**1999/519/EC** on the limitation of exposure of the general public to electromagnetic fields  
References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:  
**EN 300 330 V2.2.1** Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz.  
**EN 301 489-1 V1.9.2** Electromagnetic Compatibility standard for radio equipment and services.  
**EN 301 489-3 V1.6.1** EMC Specific for Short-Range Devices (SRD)  
**EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013** Information technology equipment. Safety. General requirements.  
**EN 50364:2010** Limitation of human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 300 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications.

Signed for and on behalf of: **Inventhio s.r.l.**

*Bologna, 15-May-2018*

Pietro Mandurino CEO



# CERTABO

## BOLOGNA

Revision 2.0 Feb-2019

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