

## INTEGRATION TO MANUAL RELEASE 2.1 18-OCT.-2018

This document reports additional notes regarding the Certabo Chess version 2.1.

This latest version in addition to Stockfish, is now supporting Houdini 6, Fire 7.1, and the very latest Leela Chess Zero the AI chess software based on neural network.

### GENERAL NOTES:

Both 64bit and 32bit software versions are available. The 64 bit version can support both 32 and 64 bit engine versions.

On very old PC which runs on 32 bit you need to install the 32bit version of PC Chess software and also engine must be 32 bit (the 64 bits are not supported) LCO may not run on 32 bit versions.

### NOTES: LCO

LCO especially adds interesting features as it's an engine which does only know the basics of chess and, like a kid, can learn day by day in a way similar to human neural connections do collecting thousands of games and getting experience from different games. Unlike standard engines which anyhow follow kind of mathematical model or use libraries, neural network weight packages used by LCO are generated from different sets and number of games so the gaming experience will be different and depend on set of games used in neural network package.

It's like bringing the memory and experience of those games into artificial shape, so the connections between artificial neurons will be weighted according to the games used to teach the engine and those connections will be used as starting point for all future games. After that learning the engine will generate the response to new games in kind of "human" way activating or not connections between artificial neurons. The activation of artificial neuron connections depend on the weights, coming from learning, and that logic is generated in a kind of not properly "forecastable" way.

Changing the neural network package it will be like changing brain and experience of the engine so different style of playing, which can be very different, will arise.

Tens of neural network packages are released every day and can be downloaded from [here](#). You just need to unzip and copy in **Certabo Chess/engines** directory.

### NOTES: STOCKFISH

Stockfish version has been updated to latest 9.0 and by default there is 64 bit version (32 bit one in the 32 bit PC Chess software). You can download other windows version of Stockfish, also older ones, from [here](#) if you want to use a different version simply rename it as *stockfish.exe* and replace in **Certabo Chess/engines** directory

**NOTES: HOUDINI 6.0**

Houdini is commercial software and the engine is not included you have to own it. You need first purchase and activate on the PC following their instructions at this [link](#). After activation you can just copy chess engine to **Certabo Chess/engines** and rename it simply *Houdini.exe*.

You can also use an older version of Houdini 1.5, kindly made available from their developer, and download [here](#)

Selecting Houdini as chess engine before putting it into the **Certabo Chess/engines** will result in PC Certabo Software closing down

**NOTES: FIRE 7.1**

Fire is freely available but neither it's not included, in Certabo package you can download all latest versions [here](#). After unzipping just select the desired version, rename simply into *fire.exe* and copy it to **Certabo Chess/engines**

**Parameter setup**

In **Certabo Chess/engines**, there is a file for setting parameters of all engines. Parameters are set on default values while the depth is, instead, settable on graphical software of the software. If you want to change the default engine parameters like strength, number of cores, etc. edit the set file using a simple .txt editor and setting them as preferred following instruction of chess engine provider.

**NOTES: HUMAN**

This option allows playing between human and the board just monitors and eventually save the game into .pgn format at anytime

**PGN Export**

All games can be saved at any time, the games are saved in **My documents/Certabo Saved Games** for each game you will find two extension the standard .pgn and a .sav which is used by the PC software and store also other info about game like selection of the engine used, depth etc.

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## BOLOGNA

**Addendum SW 2.1 Oct.-2018**

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