

**e-Pawns
Talking Chess
User's Manual
Version 1.1**

Warsaw 2022

WHAT'S INSIDE THE BOX

- * Tactile, Braille Chessboard with build-in computer,
- * Set of Staunton 6 pieces (16 basic pieces x 2 + 4 spare pieces for replacement),
- * Power supply AC 5V,
- * User's manual in Braille and print,

DEVICE DESCRIPTION

- * The device fits into a flat chessboard about 3 cm thick with sides, 53 cm by 44 cm. The computer controlling its operation is located inside the board.
- * The power socket is located on the right side of

the board.

- * Square A1 of the chessboard is located in the lower left corner and square H8 in the upper right corner.

- * Black squares of the board are 3 millimeters raised over white ones.

- * At the corner near the H1 square is the move confirmation button for white, and the move confirmation button for black is at the corner near the A8 square.

- * At the center of the right edge of the chessboard, adjacent to the power slot, are the navigation buttons: "up", "down", "left" and "right" and the "OK" key, as well as two chess clock displays.

- * On the right side of the chessboard is the power socket and the USB port that

lets update the software.

- * The "down" button is closest to line 1.

- * Pieces are stabilized on the chessboard by strong magnets, so before lifting a piece it should be tilted, for example at a 45 degree angle, to avoid damaging the piece by ungluing the magnet base from it.

DEVICE OPERATION

In order to control the operation of the device, we use navigation buttons.

Voice messages can be heard through the built-in loudspeaker.

When you connect power to the device, after several seconds, you will hear the message "Chess started". You will then be in the main menu of the system navigat-

ing through the menu is possible with the use of the navigation buttons "down" / "up", and confirming the selection with the "OK" button.

THE MAIN MENU OF THE SYSTEM

The Main menu contains the following options:

- * Start new game (2 players)
- * Start new game against computer
- * Load saved game
- * Settings
- * device description
- * Keys and pieces help
- * Software update
- * Turn of the device

THE PLAY FOR TWO PLAYERS

After selecting this op-

tion the chess computer will check if pieces on the board are in their initial position. If yes, the computer will proceed to the game. If arrangement of pieces differs from the initial position, a menu will appear where the players can choose whether to start the game from the initial position or from the current arrangement.

During the game the computer announces each move. If a player knocks down an opponent's piece, the computer also announces the name of the knocked down piece.

If one of the players makes an incorrect move, the computer protests, informing the players and giving instructions on how to restore the correct arrangement of pieces.

During the game there is a

menu with the following options:

- * Game Status - informs which player should make the next move and the last move made. To hear the status information at any time during the game, just press the "OK" button.

- * Undo last move.

- * Save the game.

- * End the game.

PLAYING AGAINST COMPUTER

After selecting this option the chess computer will check if pieces on the board are in their initial position. If yes, the computer will move on. If arrangement of pieces is different from the initial position, a menu will appear where the player decides if he/she wants to

start the game from the initial position or from the current arrangement.

Using menu, the computer will ask which color the player chooses. Once the color is selected, the game will begin.

When it is the computer's turn to move, the program will analyze the situation on the chessboard and announce its move. Depending on the situation on the board and the set difficulty of the game, this may take from a split second up to several minutes. The player has to move the computer's pieces in accordance with the computer's decision.

If the player makes an incorrect move, the computer informs about it and gives instructions how to restore the correct arrangement on

the chessboard.

LOADING AND SAVING GAME FROM COMPUTER'S MEMORY

When choosing two players option and play against computer option¹ at any time, you can save the game to continue playing from the saved arrangement later.

To save the state of the game you need to do the following:

- * Select "Save game" from the menu available during the game.

- * In the next menu, choose the number of one of the ten available memory positions to which the game will be saved.

If you choose a memory location that has already been used to save the game, the computer will inform you by

reading out the information about the saved game. You can then press "OK" to override the previous game with the new one or use the navigation buttons to select another system memory item from the menu.

To load a previously saved game you need to do the following:

- * In the main menu select "Load saved game".

- * In the next menu, select the memory location where you have previously saved the game you want to continue.

As you move through the saved games menu, the computer will read the information about the type of game, the number of moves and the color of the player who is to make the next move.

When you select a previously saved game, the comput-

er will check if the position of pieces on the board corresponds to the current arrangement from the saved game. If not, you will hear an instruction that will help you to restore the correct arrangement of pieces.

SETTINGS

To change device settings, select "Settings" from the main menu.

You can change the settings using a special menu, in which you can navigate through the available options using the navigation buttons: "down"/"up". The values of the settings are changed using the navigation buttons: "right"/"left". To save the changes in settings and return to the main menu, select the "Back to main menu" op-

tion and press "OK".

The following options are available in Settings:

- * Voice (you can select Polish Female Voice, Polish Male Voice or English Male voice,

- * volume level (from one to ten on the scale),

- * difficulty level when playing against computer (there are levels from 1 – the easiest to 5 – the most difficult),

- * game length for one player- this option controls the chess clock; selecting "unlimited" disables the clock; you can also select one of the available time intervals, from 5 to 120 minutes.

- * Hints - if you enable this option, the computer will speak additional hints on how to navigate the menu and use the device; enabling

this option is recommended for novice users.

* use buttons to confirm move - when this option is turned off, the device automatically detects the move during play and moves on to the next one; when this option is turned on, each move must be confirmed with the move confirmation button (see description of the device).

KEYS AND PIECES HELP

The help mode allows to check how the pieces are detected on the chessboard. In this mode there is also information about what the buttons of the device are used for. To enable the help mode, select "Button and race help" from the main menu.

In help mode:

- * When any button is pressed, the computer will read its function.

- * When a piece is lifted from any field, you will hear the designation of that field and the word "empty".

- * When you place a piece on a field, you will hear the designation of that field and the color and name of the piece placed there.

- * Pressing any button 3 times quickly will exit the help mode and return you to the main menu.

SOFTWARE UPDATE

The device software can be updated. This allows you to add new features to the software or fix any bugs.

To update the device software, you should:

- * Download the update file and place it on a flash drive (in its root directory).

- * Plug this pendrive with the update to the device.

- * Select the "Update software" option from the main menu.

- * If update is successful, the device will restart.

ADDITIONAL INFORMATION

Computer program called Stockfish allows you to, among other things:

- * Pick up incorrect moves and command you to correct them.

- * Interlace beats.

- * Castle kings and rooks.

- * Exchange pawns for valuable pieces after reaching the last line on the opponent's side.

- * Perform several games

thanks to the function of saving the interrupted game and the possibility of returning to it.

- * Adjust the parameters according to the player's wishes.

- * Use synthesizers for languages other than Polish and English.

- * Transport at any distance thanks to safe packaging.

INFORMATION ON CREATORS OF THE E-PAWNS GAME

- * Marek Kalbarczyk – author of the idea of the talking Braille chess

- * Altix LTD – producer

- * Michał Bałamut – author of the selfvoicing

- * AMBA Aleksander Mroczek – electronics and manufacturing

* Janusz Mirowski – the project manager.

Table of contents

WHAT'S INSIDE THE BOX-----	1
DEVICE DESCRIPTION-----	1
DEVICE OPERATION-----	3
THE MAIN MENU OF THE SYSTEM-----	4
THE PLAY FOR TWO PLAY- ERS-----	4
PLAYING AGAINST COM- PUTER-----	6
LOADING AND SAVING GAME FROM COMPUTER'S MEMORY-----	8
SETTINGS-----	10
KEYS AND PIECES HELP-----	12
SOFTWARE UPDATE -----	13
ADDITIONAL INFORMA- TION-----	14