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# **PL\_PIG\_CHESS\_ENGINE Package FAQ**

## **1. What are the different ways to represent a chess position in the PL\_PIG\_CHESS\_ENGINE?**

The package supports several chess position formats:

* **Internal array format:** This is the primary format used by the engine for calculations and move generation.
* **EPD format:** A standard format for representing chess positions, including additional information like game annotations. The STILLING\_TO\_EPD function converts the internal format to EPD.
* **FEN format:** Another standard format for representing chess positions. The FEN\_EPD\_TO\_STR function converts FEN to the POSITIONSTR format.
* **POSITIONSTR format:** A format used by the engine for input and output. The FEN\_EPD\_TO\_STR function converts FEN and EPD to this format, and the still procedure uses it to set up a position.
* **English format:** A human-readable format using algebraic notation (e.g., "e2e4"). The still procedure can translate this to the internal format.

## **2. How can I make a move in the engine?**

The package offers three procedures for making moves:

* **DoMoveOk Function:** This function checks if a move is legal before executing it. It requires the starting and ending squares and returns a boolean indicating the move's legality.
* **DoMoveC Procedure:** This procedure performs a move without checking its legality. It's faster than DoMoveOk and should be used when the move is already validated.
* **DoMove Procedure:** This procedure combines move validation and execution. It takes the starting and ending squares along with the move type and performs the move if legal.

## **3. How do I find legal moves in a position?**

The GetNext procedure iterates through legal moves in a position. It updates the provided parameters with the starting and ending squares of the next legal move.

## **4. How can I search for moves at a specific depth?**

The FindTrk procedure is used to find a move at a given depth in the search tree. It takes the search depth and updates a TRKDATA variable with information about the found move.

## **5. What's the difference between GetMove and GetMoveNr procedures?**

* **GetMove Procedure:** Makes a move based on a given move number. It optionally allows skipping the check for checks, which can be faster.
* **GetMoveNr Procedure:** Returns the move number associated with a given move (specified by starting and ending squares). It also has an option to skip the check for checks.

## **6. Is there a way to mirror the board position?**

Yes, the Mirror procedure swaps the board layout and colors, effectively mirroring the position.

## **7. What is the purpose of the Initialize procedure?**

The Initialize procedure sets up the chess engine, initializing necessary variables and data structures. It's likely called at the beginning of any program using the engine.

## **8. What is the purpose of the STILLING\_TO\_EPD function?**

The STILLING\_TO\_EPD function converts a chess position from the engine's internal array format to the EPD format. This allows the position to be represented in a standard format that can be used by other chess tools or displayed to the user. The function also allows for the addition of EPD operations, which can be used to add annotations or other information to the position.