



**EXCALIBUR
ELECTRONICS**



King Arthur

OPERATING MANUAL

English p. 2

Congratulations! You now own King Arthur, not just a terrific chess player, but your own personal chess trainer. You'll be amazed at his strong, insightful play and delighted by his many unique features, those that make playing chess and improving fun! One of these innovative features is the LCD that automatically shows you the current board position, and lots of other information, at all times!

Take a moment to notice that every square on King Arthur's chess board has a unique "address," a letter and number that corresponds to the file and rank of the square. This is the same system used by chess masters the world over. King Arthur uses these square designations to communicate with you about the game. Of course, he shows you the moves on his unique display as well.



The legendary King Arthur brandished a magic sword, Excalibur, from which we take our company name. With this unique weapon in his hands, he could not be vanquished. Although Excalibur Electronics can't claim the magical secrets of Merlin, King Arthur's court wizard, sometimes our patented technology may make it seem as if we could. King Arthur chess is another unmatched innovation of Excalibur Electronics.

We make you think.

KING ARTHUR

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KING ARTHUR

CHAPTER 1: QUICK START & BASICS

Be sure to read this section. It contains information not duplicated in the rest of this manual. Chapter 1 will show you the basics of getting started. If you're impatient for the fun to begin, you'll be able to play a game of chess with King Arthur after only the few minutes reading this short chapter will take. But we recommend that you soon go on to read the entire operating manual, so that you'll get the full benefit of King Arthur's amazing features.

1.1

Installing the batteries

Turn King Arthur over carefully with his chessboard face-down, so that the small compartment lid is at the top right. This lid covers the battery compartment. Place your thumb below

the pressure-catch at the bottom of the lid. Push up and then pull out. The lid will detach. Insert three (3) fresh, alkaline AA batteries in the battery holder. Note the arrangement of the batteries called for by the diagram in the holder. Make sure that the positive tip of each battery matches up with the + sign in the battery compartment so that polarity will be correct. When the batteries are properly installed, you'll hear a series of tones as King Arthur automatically turns himself on and lets you know he's ready for action. Replace the battery compartment panel by first fitting the two small tabs at the top of the lid into their receptacles. Then place your thumb under the pressure catch, pushing up and in until the lid snaps into place. Leave King Arthur face down.

1.2

Finding the pieces

The larger compartment lid on the left conveniently stores your chess pieces when they're not in use. Although one of King Arthur's breakthrough features permits you to play without using these pieces, let's start by using them. Open the larger lid in the same method you used in Step 1. Remove the pieces and set them to the side. Then replace the lid. Now you can turn King Arthur right side up, with the Excalibur Knight on the bottom left.

1.3

Setting up the pieces

Whichever side (color) you play in chess, a light-colored square must always be located on your right—chess players say “Light on right.” (You'll have fun noticing television and magazine ads, movies and even

some products that show an ignorance of this basic rule!) You'll see that King Arthur's board is of course designed correctly.

Place the chess pieces in their initial starting position, as shown in the LCD display at the bottom of the chessboard, with the White pieces closest to you. (If you choose to play Black, go to the Section 3.2 “Playing the Black pieces from the start of the game.”)

1.4

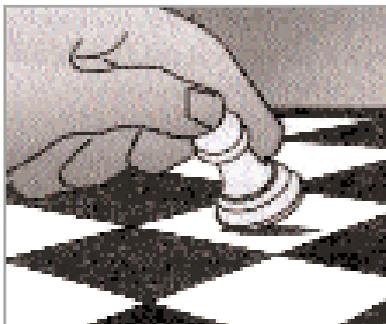
Making your move

Besides deciding on a good move, you have to move the piece in a way that King Arthur will recognize what's been played. He will automatically sense your move if you follow a simple routine. Think of communicating your move as a two-step process—registering the FROM square and then registering the TO square.

King Arthur “times out” after not being used for a few minutes. If this happens, just press the ON/CLEAR button on the bottom row of keys.

If you make an illegal move, King Arthur will sound a lower tone and display the TO and FROM squares necessary to move the piece back to its previous square. When this happens, you must follow the standard procedure of pushing on the FROM and TO squares to get the piece back in its previous position. Then make a legal move.

Lift the piece or pawn you want to move. (Moving the pawn in front of either your king or queen ahead two squares forward is a great first move for White.) Press the edge of the piece's base down gently on the center of its FROM square. You'll hear a beep, and King Arthur will display the FROM square—for example "E2." Then press the edge of the piece down gently on the square you want to move it to—for example, "E4." King Arthur will beep again, confirming that he has



registered your move. Place the piece gently on its new square. (Some players like to push the squares with their forefinger while holding the piece in the rest of the fingers of the same hand.)

1.5 ***Moving King Arthur's piece—you've got a game going!***

You'll notice that King Arthur almost immediately displays his response to your move. King Arthur decides on his own move, of course, and lets you know what it is by displaying it at the top of the LCD board. For example, if you play 1. E2-E4, he may respond E7-E5. But you *To register your move properly, press the side of the piece's base gently down on the center of the FROM square, and then on the center of the TO square.*

In between moves, King Arthur will display the time taken for each move and the number of the move.

need to move the piece on the board for him. Follow the same two-step procedure you did while registering your own move—gently pushing on the TO and FROM squares and listening for the confirming tones. You're already playing a game! Enjoy the contest.

1.6 ***Putting a game "on hold"***

Want to stop for a phone call, or even a weekend trip? Any time it's your move and you wish to stop playing for a while, just press the OFF/SAVE key. King Arthur will switch off and go into a sleep mode. He will remember the last position, including the elapsed time, as

long as you do not interrupt the power supply—for example, by removing the batteries. To resume play, just press the ON/CLEAR key. A word of warning—your memory of the game in progress may get a bit vague, but King Arthur will remember the game perfectly! If you've put the pieces safely away in their compartment during your break, or they may have been disturbed, just use the display to help you correctly set the pieces back up. If you do want to clear the current game at any time, just press NEW GAME.

King Arthur's display will always show the correct position as King Arthur "sees" it. It's a good idea occasionally to compare the position in his "head" to the one on the board.

KING ARTHUR

CHAPTER 2: KEY FUNCTIONS & GENERAL LAYOUT

Physical chess pieces

SETUP Key

Add or remove pieces and enter special positions.

HINT Key

Obtain a hint.

AUTO Key

Watch King Arthur play himself.

LEVEL Key

Change skill levels.

NEW GAME Key

Start a new game.

TAKEBACK Key

Take back a mistake.

MOVE Key

Switch sides or make King Arthur move immediately.

MULTI-MOVE Key

Make moves for both sides to set up favorite openings.

RATING Key

Check your rating.

OPTION Key

Select many features.

Sensory Board

Recognizes your moves.

CONTRAST Key

Adjust display contrast.

WIN Key

Rate a win.

THREAT Key

See the threat!

MODE Key

Access training features.

OFF/SAVE Key

Put King Arthur in sleep mode & save your game.

ON/CLEAR KEY

Turn King Arthur on or clear an entry.

LCD Board Display

Shows piece positions, board and messages.

KING ARTHUR

CHAPTER 3: SPECIAL KEYS & FEATURES

3.1 Starting a new game

If you want to start a new game, simply push the NEW GAME button when it's not King Arthur's move. King Arthur will sound the "charge" for a new game.

3.2 Playing the Black pieces from the start of a game

Since White always moves first, you'll want to practice playing Black as well as White. To play the Black pieces, start a new game by pushing the NEW GAME button. Then press the MOVE button. King Arthur will now automatically make the first move. You'll see that the LCD shows Black at the bottom. If you're using the playing board with the three dimensional pieces, set the Black pieces

up at your end—close to the LCD.

Of course, the labels on the squares can't change. So when playing White, if King Arthur wants to play what normally would be "E2-E4" for White, he'll do this by communicating "E7-E5," which accurately corresponds to your board.

Make all moves and choose all options in the normal fashion.

3.3 Switching sides during a game

After the first move, whenever it's your move you can switch sides, taking over King Arthur's game and color and giving him yours, by pushing the MOVE button. The pieces will remain as they are, meaning you will be playing from the top of the

board. You can switch sides back and forth as often as you like.

3.4 Adjusting the display contrast

To compensate for differences in lighting and battery strength, press the CONTRAST key repeatedly to adjust the display contrast to one of sixteen settings.

3.5 Playing without the physical pieces

You can play without the three-dimensional pieces, viewing only the display. Press the OPTION key until the display shows "TOUCH." Then press the > key. "ON" will be displayed. Now when you play, the display will show you King Arthur's move, signaling the TO and FROM squares several times to make it clear, but you will not have to register his move. In this mode, the large playing board acts as a touch screen so that you can input your moves by pressing TO and

FROM squares with your finger.

3.6 Change your mind? Take your move back!

If you've made a move and then changed your mind, simply press the TAKE BACK key. In fact, by repeatedly pressing the TAKE BACK key, you can take back a whole series of moves. For each move you wish to take back, the display will show the TO and FROM squares necessary to move the piece back to its previous square. You must follow the standard procedure of pushing on each of these squares (when a move was a capture, King Arthur will then signal the capture square, and the LCD will display the proper piece to restore) to get each piece back in its previous position.

If you change your mind back to the original move, you can press the MOVE key to replay the taken-back move or moves.

3.7 Changing levels of play

You can change levels by pressing the LEVEL key to increase the level one at a time. Pressing the > key increases the level by 10. Pressing the < key decreases the level by 10. (See chapter 7 for a full explanation of levels.)

3.8 Display options

You have quite a choice of information that King Arthur will display for you. All of these options are made available by pressing the OPTION key until they are displayed. Then press > to turn these options on or off. Press the CLEAR key to exit OPTION.

Displaying total game time used:

Your King Arthur normally shows the time taken for each move. With the “TotAL” option, you can instead choose to have the total game time displayed.

Displaying the position score:

Your display normally shows

the number of the current move. If instead you want to display the piece-score of your current position to see quickly who’s ahead in material, turn on the “SCORE” option. The score option totals the following values: Pawns—1, Knights—3, Bishops—3, Rooks—5, and Queen—9.

3.9 Forcing King Arthur to move immediately

To interrupt King Arthur while he’s thinking and make him move immediately, press the MOVE key. King Arthur will make the best move he’s found so far. This feature can be very useful on higher levels, when King Arthur may take a while thinking about his moves.

3.3 Getting Hints

If you don’t know which move to make, or you simply want to see what King Arthur would recommend, press HINT, and the display will show you the move King Arthur believes to be best.

To show all legal moves for a selected piece, press the OPTION button until HELP is displayed. Press the MOVE > key to turn on the option. The display will show HELP. Exit OPTION mode by pressing ON/CLEAR.

3.11 Displaying threats

King Arthur will tell you when there is a serious threat by displaying the “!” sign. (See also Section 5.4.) When this happens, you can push the THREAT key, and King Arthur will flash the threatening move.

3.12 Peeking into King Arthur’s brain on higher levels

At levels 6 and above, you can actually see what King Arthur is “thinking.” Press OPTION until “InFO” is displayed. Turn this option on by pressing > or <. Exit OPTION mode by pressing ON/CLEAR.

When turned on, this option will display the score, depth of search (number of moves King Arthur is “thinking ahead”), best

move he is considering, and clock times. These will be displayed while the computer is thinking at its higher levels.

3.13 Replaying a variation

This feature is used best when playing without the physical pieces (See 3.5, above.) When you want to take back a whole series of moves, press AUTO then TAKEBACK. King Arthur will take back all moves in his memory. If you change your mind, you can replay the entire string of moves by immediately pressing MOVE. (When “rPLAY” is no longer shown on the display, the last move of the variation has been reached.)

3.14 Practicing blindfold chess

Very good players sometimes amaze people by playing without looking at the pieces and board. King Arthur gives you a chance to test yourself at this feat. To use this option, clear the large playing board of pieces.

Press the BOARD key. The pieces on the LCD chessboard will disappear—you are now “blindfolded”! Play chess by picturing in your head where the pieces are. Enter your moves as usual, and register King Arthur’s moves normally.

When your memory gets hazy, you can push BOARD to confirm the position. You can then play the game out normally or press BOARD again to continue playing “blindfold.” This exercise may help you learn to visualize better when you play “without a blindfold.”

Note: Do not turn on the TOUCH option (see 3.5 above) while trying blindfold chess, since you must see King Arthur’s move coordinates on the display.

3.15 Turning off the sound

You may now select between three styles of sound effects for King Arthur. Do so by pressing OPTION until “SOUND” is displayed. Select between “2” - All

sound on, “1” - No sound on, or “0” - No sound except for error buzzes. Turn this option off by pressing >. Exit OPTION mode by pressing ON/CLEAR.

Even when the sound option is turned off, King Arthur will continue to announce that he has found a move by making his normal sound. He will also sound an alarm when an illegal move is made, and make the “in check” warning sound.

3.16 King Arthur versus King Arthur—“automatic pilot”

You can choose to have King Arthur play both sides of the game. (This feature can be used from the beginning of the game or at any point in a game.) The feature can also be used after setting up a special position (see Chapter 10).

To choose this feature, press the AUTO key. You’ll notice that the display reads “OPLAYr.” This indicates that no humans will be playing. (If you change

your mind, you can press AUTO again, and you will see the display read “1PLAYr.”) Press MOVE. King Arthur will play himself. King Arthur will become fully automatic, not needing any move-registration help from you. You can see his moves on the display. You can stop auto play by pressing the MOVE key again. All other options remain available to you.

3.17 Human versus human

You can play another human using King Arthur’s board. He’ll monitor the game for you, making sure all moves are legal, and will provide hints and elapsed time. Access these in the normal ways.

To play a friend in this manner, simply press MULTI-MOVE. Notice that the display reads “2PLAYr.” This indicates that two humans will be playing. You and your friend can begin play. (If you change your mind, you can press MULTI-MOVE again, and you will see the display read “1PLAYr.”)

3.18 Automatic shut-off

To save battery power, King Arthur will turn himself off when no key has been pressed for a while. You can decrease or increase the timing of this automatic shut-off or turn it off altogether. Press OPTION until “SLEEP” is displayed. Then press the > key to select a delay from 1 (shortest) to 14 (longest). Or select 0 to eliminate the automatic shut-off.

3.19 Flip option: Playing Black from the LCD Side of the Board

Pressing the OPTION key repeatedly will display all selectable options. To play Black from the LCD-side of the board, press OPTION until “FLIP” is displayed. Use this option to flip the chessboard around.

Chess players who play in official tournaments receive a rating. Similarly, King Arthur will rate your play.

KING ARTHUR

CHAPTER 4: GETTING A RATING AT THE ROUND TABLE

4.1

Viewing your rating

Press the RATING key to view your current rating. But understand that your rating won't change until you "submit" games to the Round Table for rating.

4.2

Submitting a game for rating

Like any official tournament game, to be eligible for rating, your game must be played with no HINTS or TAKE-BACKS. When you finish such a game, King Arthur will confirm that it is eligible for rating by displaying a "0" symbol.

To enter a game for rating, immediately after finishing it,

simply press the RATING key and then press the appropriate key: WIN, DRAW, or LOSS, depending on your result in the game. That's all there is to it. King Arthur will automatically adjust your rating. However, when you checkmate King Arthur, he will display "LOSE." Before updating your rating, you must press the NEW GAME key and then the RATING key to register your win. The "0" symbol will remain on, even when NEW GAME is pressed.

Arthur weighs your first three rated games the most heavily in order to establish a rough estimate of your strength quickly. Winning your first rated game increases your rating by 300 points. Winning your second

game sends your rating up 200 points. You get 100 points for winning your third rated game. After that, rating adjustments are more modest.

On any given level, you cannot improve your rating by more than 400 points. When you notice that your rating does not go up when you submit a game

that you've won, increase your playing level by 10 when you play rated games. King Arthur is telling you that you've improved and you need to move up to a tougher level of play!

King Arthur will send you helpful messages while you play.

KING ARTHUR

CHAPTER 5: SPECIAL MESSAGES FROM CAMELOT

General-information messages

5.1 Check

When you are in check, King Arthur will alert you by displaying a "+" sign.

5.2 Ratable Game

When a game is ratable (see Chapter 4), King Arthur will display a "0."

5.3 Two-player mode

To remind you when you are in two-player (human versus human) mode (see 3.17, above), "=" will be displayed.

5.4 Threat

King Arthur will tell you when there is a serious threat by displaying the "!" sign. (See also Section 3.11.) When this

happens, you can push the THREAT key, and King Arthur will flash the threatening move.

Draw Messages

5.5 Draw

When King Arthur recognizes that a three-fold repetition of the position has occurred, he will display “DRAW.” Additionally, when King Arthur recognizes that 50 moves have been played without exchanges or pawn moves, he will display “DRAW.” In either case, you can accept the draw or ignore it by continuing to play.

5.6 Stalemate

When either opponent has been stalemated, “STALE” will

be displayed. (Stalemate occurs when one of the players has no legal moves but is not in check. Stalemate is one of the ways a game can be drawn.)

Game-ending Messages

5.7 Forced checkmates

King Arthur will announce when he can force a mate-in-two (“MAtE2”) or a mate-in-three (“MAtE3”). He will display “MatE,” along with “+” when executing a checkmate.

5.8 Other checkmates

When you checkmate King Arthur, he will display “LOSE.” When you want to claim a win, draw, or want to resign—press the NEW GAME key.

KING ARTHUR

CHAPTER 6: SOME SPECIAL CHESS MOVES

It’s useful to focus on four chess moves—capturing, castling, promoting pawns, and *en passant*—to make sure you understand how to operate your King Arthur when employing these moves.

6.1 Capturing

To win at chess, you’ve got to know how to take your opponent’s men! Capturing men while playing your King Arthur is really the same process as moving, except, of course, the captured piece has to be removed. To capture one of King Arthur’s pieces, simply lift your piece off its FROM square, pressing the square to properly register the move. Then lift the piece being captured off the TO square, and set your piece down on the TO square, pressing the square. Set

the captured piece aside, off the board.

When King Arthur displays his move and there is one of your pieces on his TO square, he knows he’s capturing that piece. Follow the normal procedure: Lift his piece off the FROM square, pressing the square. Lift your piece from King Arthur’s TO square, and then set King Arthur’s piece down on its TO square, pressing the square. Set the captured piece off the board.

6.2 Castling

Castling is a special and important move in chess. It whisks the king away to safety while getting the rook into the game. Castling while playing King Arthur is just like moving any other piece, except that in castling, you move two pieces,

and you have to move the king first.

Whether you're castling kingside or queenside, first move and press your king down on its FROM square (if castling kingside, E1). Then move and press your king down on its TO square (if castling kingside, G1). King Arthur automatically recognizes castling maneuvers after the king is moved two squares. He then reminds you, by displaying the proper FROM square, to complete castling by moving the rook. Move the rook in the routine manner, pushing on its TO and FROM squares normally. Remember, you must always move the King first when castling!

6.3 Promoting Pawns

When a pawn reaches the other end of the board, official chess rules say that you can promote it to a more valuable piece. To promote a pawn, make your pawn move to the last rank in the normal manner. King Arthur will automatically promote the

pawn to a queen, since this is the best choice in nearly every case.

In the unlikely event you want to promote your pawn to a piece other than a queen, use King Arthur's SET UP feature. (See Chapter 9.)

King Arthur immediately recognizes your new piece, and begins thinking about the position in order to move. When the computer pushes a pawn to your back row or rank, it will always promote to a queen. Remember to change the piece on the board after either side promotes a pawn. When promoting a pawn to a queen and the original queen is still on the board, chess players frequently mark the new queen with an upside-down rook.

6.4 *En Passant* —taking a pawn in passing

For an *en passant* capture, press the FROM and TO squares of the capturing pawn. The square of the pawn being captured will then appear on the display. This is to remind you to

remove the captured pawn. You must press down on the captured

pawn before removing it from the board.

KING ARTHUR

CHAPTER 7:

TOO HARD? TOO EASY?

ALL ABOUT LEVELS

You already know, from Chapter 3, section 3.7, how to select the level King Arthur is playing at. With his 73 levels of play, King Arthur can adjust himself to play you a competitive game, no matter what your level of skill! It's more fun and more educational to select a level that gives both you and King Arthur a reasonable chance of winning. Try to find a level at which you win about half the time. As you get better, simply adjust King Arthur's playing level so he can "improve" as you do!

7.1 *Beginner levels*

The first four levels (1, 2, 3 and 4) are beginner levels and take approximately 4, 8, 12 and 16 seconds per move, respectively.

7.2 *Fixed ply levels*

Level 5 is a fixed 1-ply (one-half move) search.

7.3 *Timed levels*

Levels 6 through 15 take about 1 second per level number, so level 10 will average about 10 seconds per move. Levels 16 through 72 take about 2 seconds per level numbers. The amount of time taken will vary depending on the position,

the stage of the game, and whether or not the FAST level option is on.

7.4 Infinite search

Level 73 is an infinite level. King Arthur will take as long to move as you want him to, or until he finds a mate position in his search. Level 73 is perfect for problem solving (see Chapter 10). You can also play against it. When you are tired of waiting for King Arthur to move, press the MOVE key while the computer is thinking, and the computer will stop thinking and play the best move it's found so far.

7.5 Fast level option

Press LEVEL, then OPTION. The display will indicate options.

First the display will show the "FAST" option. "FAST" uses a more selective search for think-

ing. In this mode, King Arthur will search faster and look more deeply into the position. Press > or < to turn FAST on or off. Press CLEAR to exit options mode.

7.6 Random level option

Press the OPTION key until the display shows "RAND," which stands for "random." "RAND" allows King Arthur to choose between good moves randomly so that you get to practice and play against different responses. Press > or < to turn "RAND" on or off. Press the CLEAR key to exit options mode.

King Arthur offers four major teaching and training programs that provide you unique and enjoyable ways to get to be a very strong chess player. You can access all of them by pressing the MODE key and selecting the training feature you want by using the > key.

KING ARTHUR

CHAPTER 8: TEACHING AND TRAINING FEATURES

8.1 Piece Training Positions

You can practice in eight different training positions. There are five special mini-games and three mating-practice positions.

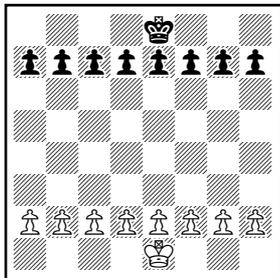
The mini-games

The most famous and successful chess teachers in the world take their beginning students from the simple to the complex by having them play "mini-games" of chess that concentrate on just one or more types of pieces. Even advanced players practice these basics, just as a concert pianist continues to practice the scales so that they

remain second nature. Like any great trainer, your King Arthur will play you these special practice games.

Press MODE until "TrAln" is displayed. Then press >. Look at the LCD to see which of the mini-games are displayed. You'll see that the mini-games always include the king and pawns for both sides. In fact, one mini-game contains just this material. The other four mini-games use kings and pawns, but add a different single piece to the exercise—knight, bishop, rook, and then queen.

Start with the basic king-and-pawns mini-game. Press > until your display looks like the diagram below.



Make your first move. Your object, as in regular chess, is to checkmate the king. Normally, this means both sides will try to force a pawn through to the other side of the board safely to promote it to a queen. You'll learn lots of principles, tricks, and traps in this training mode that will win you many full-fledged chess games!

The mating-practice positions

To win at chess, you have to know how to checkmate! Just knowing that you have enough material to mate doesn't earn you the point. King Arthur's

mating-practice exercises will make sure you know the techniques.

After pressing MODE until "TrAln" appears, again press > until you come to positions without pawns and with the Black king in the middle of the board. These are the mate-training positions. The three different mate-training positions give White, besides his king, either two bishops, two rooks, or the queen. These are excellent exercises, used by the greatest chess teachers in the world. In all three positions you can force mate in a number of ways. Work on these mate-training exercises until you can mate Black efficiently.

8.2 Mate-problem training

You can further hone your checkmating skills and have fun at the same time by solving the 32 separate problems available on King Arthur. At the start of a game, press MODE until "MATE" is displayed. Then press > or < to select the prob-

lem you'd like to solve. Problems 1-31 are mate-in-two problems, which means White can force mate in two moves. There may or may not be other ways to win, but you're looking for the two moves that will result in checkmate. Most of the time, the first of these moves is the hardest to find. Problem 32 is a mate-in-three.

If you can't find the solution, make King Arthur show you the correct moves to a problem by setting his level to 73, and then pressing the MOVE key.

8.3 Opening book trainer: learning book openings the easy way, with King Arthur's help

One of the most stunning innovations of King Arthur is his special ability to teach you "book openings." Book openings are the beginning patterns of moves that have been worked out by chess masters over the centuries as the best ways to begin a game. Previously, players had to spend tedious hours searching out lines of play from hard-to-follow columns in books. This practice required a confusing process of looking back and

All of these training modes can be made even more effective by combining them with other teaching features of King Arthur:

Ask for a HINT any time it's your move.

*Get King Arthur's position score.
(See section 3.8.)*

Switch sides when you want to practice from the Black side.

forth between a book and a chessboard. But with your King Arthur's special training feature, you'll find yourself learning the openings extremely quickly, saving yourself many hours—and having fun while you learn! Use this training mode as often as you wish—keep improving your knowledge of opening play!

At the beginning of a game, you may choose to learn one of 34 popular book openings. Press MODE until “OP En” is displayed. Then press > until the number of the opening (see list below) you want to learn or review is displayed in the upper left of the display. (You can use < to “loop” backward in the list. For example, if you want to select opening 30, it's faster to use the < key.)

Now play a move. If your

move is not correct, an error buzz will sound and the move will NOT be made. You can take another guess, or learn the correct move by pressing HINT. When the computer comes back with its move, you will briefly see the word “OP En” on the screen if you have another opening move to make. If “OP En” does not appear, you may continue normal play or go on to another opening. You have completed the training for that opening line.

Below are the numbers and names of openings that you can study with King Arthur's Book Opening Trainer.

1. Ruy Lopez, Exchange Variation
2. Ruy Lopez, Closed Defense
3. Ruy Lopez, Open Defense
4. Ruy Lopez Archangel Defense
5. Giuoco Piano
6. Scotch Game

*After the first move of any opening,
whenever it's your move, you can switch sides
with King Arthur by pressing MOVE.
In this way, you can practice both sides of these
important, standard chess openings.*

books on chess available at bookstores and libraries.

8.4 MULTI-MOVE: setting up your own opening positions

King Arthur also allows you to set up any book opening you want—or even an opening you invent—to practice. Press MULTI-MOVE. Your display will read “PLAYr.” Make sure the number of players is set to 2. Then make moves for both sides until the opening position you want to practice is reached. Then press MULTI-MOVE again to set the number of players to 1. Press CLEAR and play against the computer in this position.

8.5 Great Games

One of the many extra features offered by King Arthur that is both great chess training and a lot of fun is the Great Games. Over the centuries there have been many chess masterpieces that players have recorded, studied, and passed down to following generations. Top chess play-

7. Four Knights
8. Petroff Defense
9. Vienna Game
10. Sicilian, Classical Defense
11. Sicilian, Accelerated Dragon
12. Sicilian, Rossolimo Attack
13. Sicilian, Dragon Variation
14. Sicilian, Scheveningen Variation
15. Sicilian, Najdorf Variation
16. Sicilian, Moscow Variation
17. Caro-Kann Defense
18. Panov-Botvinnik Attack
19. French Defense, Winawer Variation
20. French Defense, Classical Defense
21. French Defense, McCutcheon Variation
22. French Defense, Tarrasch Variation
23. Queen's Gambit Accepted
24. Queen's Gambit Declined
25. Queen's Gambit, Semi-Slav Defense
26. Queen's Gambit, Tarrasch Defense
27. Queen's Gambit, Slav Defense
28. Nimzo-Indian Defense, Rubinstein Variation
29. Nimzo-Indian Defense, Classical Variation
30. Queen's Indian Defense
31. Queen's Indian Defense, Petrosian Variation
32. Bogo-Indian Defense
33. Gruenfeld Defense
34. King's Indian Defense

These openings and the explanations of each move, along with example games by chess masters, are given in many

ers know many such games by heart.

King Arthur gives you 16 such games to enjoy and study. What's more, *you* play the winning side in these masterpieces and try to find the same ingenious moves the great masters did! Don't worry; King Arthur will help you whenever you want. Just push the HINT key to find the next move. (Don't feel bad about pushing the HINT key often—after all, these are among the world's most brilliant games!)

To access this feature, at the beginning of a game, press MODE until "GA ME" is displayed. Then press > until the number of the great game (see list below) you want to see is displayed in the upper left of the display. (You can use < to "loop" backward in the list. For example, if you want to select Great Game 15, it's faster to use the < key.)

Along with the game number, you will see the position of the game after the first two moves were played. King Arthur will

automatically give you the winning side. Make the best move you find!

King Arthur will give you points for each correct move that you make. The display will show your total great-game score in two digits (zero at the start) on the left. On the right, the display also shows the amount of points you will win if you play the correct next great-game move.

If you don't play the correct great-game move, an error buzz will sound, the incorrect move will NOT be played, and the points for this move will be divided in half. If the bonus goes to zero, the correct move will automatically flash. Most moves start with 4 bonus points, but some brilliant moves start with 8 points.

These famous games by some of the most brilliant chess masters of all time can be found, along with full explanations of the reasoning behind the brilliant moves, in many books on chess.

The numbers, players, loca-

tions, and dates of the great games are given below, along with a brief explanation of each game by popular chess writer Al Lawrence. (All game explanations are © 2000 by Al Lawrence; all rights reserved.)

1. Adolf Anderssen vs. Lionel Kieseritsky, London, 1851

This marvelous attacking game, a King's Gambit, is widely known as "The Immortal Game." Both players show the 19th-century preference for attack at all costs, and Anderssen was one of the most ingenious attackers of all time. After 18. Bd6, he gives away both of his rooks and his queen! In the final position, his tiny force is deployed in just the right way to bring the complete Black army to its knees.

2. Adolf Anderssen vs. J. Dufresne, Berlin, 1852

Again we see Anderssen bamboozling his opponent. The game starts as an Evan's Gambit, a form of the Giuoco Piano. White's 19th move, Rad1!! is one of the most celebrated in the history of the game. With his reply, ... Qxf3, Black actually wins a knight and threatens mate. You'd think that would be enough! But Anderssen follows with a rook and queen sacrifice that forces checkmate in a shower of brilliant blows. This classic is known as the "Evergreen Game."

3. Paul Morphy vs. Duke Karl & Count Isouard, Paris, 1858

While in Paris at the opera, the brilliant, unofficial world champion from New Orleans plays an offhand game against two noblemen. In this case, we're sure it was over before the fat lady sang! In a Philidor Defense, the team of two played a weak 3. ... Bg5 that left Morphy with superior *develop-*

ment (more of his pieces are deployed) and the *bishop pair* (two bishops against a bishop and knight). These two important advantages were all Morphy needed. After Black wastes even more time with another pawn move, 9. ... b5?, Morphy hits the duo with a series of brilliant sacrifices to mate. Victory of mind over material is the poetry of chess.

4. Wilhelm Steinitz vs. Kurt von Bardeleben, Hastings, 1895

Wilhelm Steinitz, the first official world champion, begins this game as a Giuoco Piano. He maneuvers deftly to keep his opponent from castling into safety. Then he sacrifices his pawn on d5 so that he can make the square available for his knight. But the most brilliant move of the game is 22. Rxe7+. At first glance, it simply looks like a blunder. All of White's pieces are attacked, and if Black wasn't in check, he could play ... Rxc1+ with mate next. But if Black can't take the rook—with either his king or queen—he loses in all variations. And by not taking it, he is eventually mated anyway. If you're interested in these complex lines, you can find a complete explanation of this classic game in many books.

5. Alexander Alekhine vs. O. Tenner, Cologne, 1911

World Champion Alekhine was a chess fanatic (he even named his cat "Chess") and one of the greatest attacking players of all time. Here he plays the unusual Bishop's Opening and seems to be developing quietly. Black even appears to be getting a good game just at the time Alekhine is able to play the swashbuckling 11. Nxe5, allowing Black to capture his queen. Black's king is forced to march to the center of the board, an unhealthy spot for a monarch when so many pieces are still on the board, where he is mated. It's important to understand that such sacrifices don't just happen illogically. White's pieces again had a dominating command of the board, and Black allowed White's pressure on f7, Black's most sensitive defensive square when he hasn't castled, to build into an explosion.

6. Gaudersen vs. Paul, Melbourne, 1928

This "miniature" of only 15 moves, starts off as a French Defense in which White plays the Advance Variation, placing his pawns on d4 and e5. Black's 8th move, castling, was in this case a blunder because his kingside is attacked by many pieces and not effectively defended. White's sparkling 9. Bxh7+ is an example of a bishop sacrifice that's happened so often it has a name—the "Greek Gift." White's 14. Nxe6+ is an example of a *discovered check*, the dive bomber of the chessboard. White's amusing 15th move is a very rare example of checkmate with the *en passant capture*.

7. Edward Lasker vs.**George Thomas, London, 1910**

This masterpiece, a Dutch Defense, features a famous example of the king's walk to mate. Edward, an American distant cousin of the great world champion Emmanuel Lasker, gets his pieces activated against Black's kingside while the English champion Thomas *develops* (gets his pieces off the back rank and into play) too slowly. By 10. Qh5, White is already threatening an all-out blitzkrieg. His brilliant queen sacrifice 11. Qxh7 is followed by a devastating *discovered double check*, 12. Nxf6++. Then Black's king has to walk the plank, all the way across the board to g1, the normal spot for the White king! Here he breathes his last.

8. Wilhelm Steinitz vs. A. Mongredien, London, 1862

This game starts out as a Center Counter (also called Scandinavian Defense). Black loses too much time developing his pieces, while White gets his into play aggressively. Indeed, White's army dominates the all-important center of the board as well as the king's side. This sets the stage for a mating attack. White's two-move maneuver 13. Rf3 and 14. Rh3 is called a *rook lift*, and is a typical attacking strategy. This rook then sacrifices itself on h7 in a way that allows Steinitz to bring his other rook quickly into the fray. White is a rook down, but all of his forces take part in the assault, while the Black

queen's rook and bishop seem to be waiting for the next game. They don't have long to wait.

9. Aaron Nimzovich vs.**S. Alapin, Riga, 1913**

Another French Defense. In this one, the great Latvian player and writer Nimzovich (after whom the Nimzo-Indian Opening is named—see page 6) plays an opponent who wastes time stealing a pawn with 9. ... Qxg2. "Nimzo" plays a punishing 12. O-O-O!, sacrificing his knight. He finishes up with a convincing queen sacrifice that forces checkmate.

10. Jose Capablanca vs. Herman Steiner, Los Angeles, 1933

The handsome Cuban World Champion Jose Capablanca had a deceptively simple style. Here we see him playing the old-fashioned Four Knights' game and opening up his opponent's kingside pawn protection by move 11! His first rook sacrifice, 17. Rxf6!, can't be refused and forces Black's king into a deadly crossfire. With 23. Qxb7!, Capa offers a second rook, which can't be taken immediately because of 23. ... Qxf6? 24. Qb4 checkmate. But Black is forced to take the rook a move later and mate follows on the same square.

11. Mikhail Botvinnik vs. Paul Keres, The Hague, 1948

Botvinnik won the world championship a record three times. His opponent here is possibly the strongest 20th-century chess player who did not become world champion. The opening is a Nimzo-Indian. White's *doubled pawns* are potentially a long-term weakness, but in the short term they control a good many all-important central squares. White plays cleverly to keep a grip on the position and breaks through on the queenside with his pawn-push 17. c4-c5. This gives him a chance to bring his queenside rook into action. He swings it against the kingside, sacrificing it on g7 to win. In the final position, Black's king will be mated by the White queen, supported by the bishop on c1. Where did Black go wrong? Take a look at his

"unemployed" queen and rook on a8 and b8!

12. J. Banas vs. P. Lukacs, Trnava, 1986

In a Four Knights' Game, Black gets his king into safety by castling and takes advantage of White's awkward piece placement by sacrificing his knight with 9. ... Nf3+. Then he allows White to take his bishop on c5. But by that time, White's king is surrounded. In the final position, after 13. ... Ng4, White's only effective defender, his knight on e3, is forced from its square, allowing ... Qg2 mate.

13. Anatoly Karpov vs.**Victor Korchnoi, Moscow, 1974**

Twentieth-century chess perfected defense. It is no longer typical to see top-level players playing *only* for the attack. In fact, Korchnoi at the time of this game was one of the best in the world, and his *forte* was defense. Many fine players would attack him ingeniously, only to break up on his rock-like fortifications. Still, World Champion Karpov crushes him in only 27 moves with a mating attack! In a classic manner against Black's Sicilian Dragon defense (so named probably because of the "tail" of control Black's bishop makes from g7 to a1), Karpov plays the St. George attack, castling queenside and prying open the h-file to slay the dragon.

14. Boris Spassky vs. Tigran Petrosian, Moscow, 1969

Spassky won the world championship from Petrosian in the match that produced this game. In this English Opening that becomes a Queen's Gambit, you'll see that once again White gets a *strong center* and quick *development* of his pieces. As early as 13. Rd1, you can sense that Black is in danger. His king has no piece defenders; his forces seem passive while White's are aggressively coordinated. As often happens in such situations, White breaks through with a pawn push in the center, in this case 15. d4-d5!. It clears the board for White's more active forces. Petrosian, one of the best defenders of all time, tries repeatedly to trade queens, but White wisely rebuffs these offers, which would take much of the power off the board. White's d-pawn becomes a star, advancing

all the way to the 7th rank. Because of this queening threat, White is able to sacrifice his queen for one of Black's defending rooks. In the final position, it's hopeless for Black because White will either promote his pawn to a queen or capture whatever Black uses to block on d8.

15. Robert Fischer vs. Reuben Fine, New York, 1963

Nine years before winning the world championship, Bobby Fischer played this Evan's Gambit (a variation of the Giuoco Piano) against his famous elder. Bobby sacrifices two pawns in order to get his pieces out quickly. Then he plays 14. h2-h4!, sacrificing another pawn to force the Black queen away from the g7-square. After that, Black's king will be stuck in the center and in danger of the h4-d8 diagonal. Bobby's final move, 17. Qg3!, forces Fine to resign, because he must move his queen from the critical black diagonal h4-d8. Even on 17. ... Qxg3, White ignores the capture of his own queen and plays 18. Bf6 mate!

16. Lajos Portisch vs. Johannessen, Havana, 1966

During the first half of this game, a Queen's Gambit Slav, the great Hungarian grandmaster Lajos Portisch locks up the center with a d4-e5 structure by move 14. This gives him a "beachhead" on e5 and makes it hard for Black to counterattack in the center, which is the standard antidote for an attack on the wing. The next stage starts with 16. h4. Portisch announces his intention to attack on the kingside. He refrains from castling his own king into safety because he knows it's safe enough in the center, at least for the time it will take him to break through with his attack. When Black tries to trade off pieces with 17. ... Bxf3, Portisch sacrifices a knight for an unstoppable attack with 18. Bxh6 and then calmly moves his king to the second rank to bring his other rook into the game. His Rxh4 was another brilliant sacrifice that crushes any hope of defense. In the final position, Black resigns because White will simply play 26. Rxh6+, winning the Black

queen. If 26. ... Qxh6, then White plays 27. Qxh6+ and will mate on h7.

At any time during a game when it is your move, you may change the position on the board by adding a piece or pieces, removing one or more pieces, or even changing any of the

KING ARTHUR

CHAPTER 9: SETTING UP SPECIAL POSITIONS

Using the SETUP key, you can also set up a problem you want King Arthur to solve or a position you want to practice with King Arthur. Your LCD board display makes it easy to see the position and verify it as you're setting it up. The whole process takes only a minute.

9.1 Removing a piece

Press the SETUP key. Then, on the large, sensory board, press the square the piece is on until the square on your display is empty. Press CLEAR to con-

pieces—for example, from a knight to a queen. Obviously, this feature lets you strengthen your side of the game or the computer's, resurrect lost pieces, or even move your king out of an imminent checkmate threat.

tinue the game.

9.2 Changing the color of a piece

Press the SETUP key. Press the key that shows the same type of piece as the one that you want to change the color of. (The piece keys are located to the left of the display.) On the sensory board, then press the square of the piece until it appears the right color on your display. Press CLEAR to continue.

9.3 Adding a piece or changing the type of a piece

To add or change a piece, press SETUP, then press the key that indicates the type of piece you want to place on the board. Then press the square on the sensory board until the piece appears as the correct color on your display board. Press CLEAR to continue the game.

9.4 Setting up special positions & problems

Using the three techniques above, you can easily relocate a piece by choosing its square, making it blank, and then choosing another square and setting up the piece once again.

This is another terrific feature that allows you to solve problems that you see in magazines or newspapers, or that you make

up yourself. It also allows you to enter game positions you want to play, or that you want King Arthur to look at, perhaps using his Infinite Search level (see Chapter 7).

Normally, it is easier to start from an empty board to set up such problems. So first, press OPTION until "CLr Br" (clear board) is displayed. Then press the SETUP key. You'll see that your display board is automatically cleared. The word "nOnE" will appear.

You're ready to set up the kings in the new position. (Notice that the SETUP key is also the king key.) Press the sensory board square on which one of the kings should stand. Push the square until the king is the proper color on your display. Then press the square on which the other king should stand;

Using the above three techniques, you can easily relocate a piece by choosing its square, making it blank, and then choosing another square and setting up the piece once again.

press it until the king is the correct color. (You won't be permitted to leave the SETUP mode until both the White and Black king are placed.)

Next, pick out another piece in the problem or position you want to set up, and press the appropriate piece key to the left of the display. Then press the square on the sensory board where this piece should stand. Press the square until the piece

appears in the right color on your display.

Follow this procedure until all the pieces in the problem or position are completely set up. Make sure that King Arthur knows which color is to move—press CONTRAST (□/■) to change the side to move. Finally, press CLEAR to play or to have King Arthur analyze the position.

Nearly all operational problems are caused by incorrectly registering moves! King Arthur can't see your moves, he has to "feel" them. Remember—always follow the simple two-step

procedure:

1. *Push the FROM square; listen for the confirming, high-pitched beep.*
2. *Push the TO square; listen for the confirming, high-pitched beep.*

If a low-pitched beep sounds, look carefully at the LCD and follow the directions displayed to replace the illegally moved piece. Then make a legal move.

KING ARTHUR

CHAPTER 10: IMPORTANT TECHNICAL DETAILS

10.1 The ACL button

King Arthur may occasionally "freeze up" or refuse to function properly because of static electric discharge. If this happens, press the ALL CLEAR (ACL) button.

To do this, turn King Arthur upside-down so the battery compartment is on the upper right. The ALL CLEAR button is recessed. You'll see a "dimple" toward the bottom right. It has a small hole in it. Gently push a ballpoint pen or a straightened paper clip into the hole and then release. You'll again hear King Arthur's ready tones.

SPECIAL NOTE: After you push the ACL button, King Arthur will have forgotten any game positions that may have been in his memory.

10.2 Special Care

- ◆ Avoid rough handling such as bumping or dropping.
- ◆ Avoid moisture and extreme temperatures. Store away from windows and other direct sources of heat and cold, such as heating, air vents or direct sunlight. For best results, use between the temperatures of 39° and 100° Fahrenheit (4° and 38° Celsius).
- ◆ Clean using only a slightly damp cloth. Do not use cleaners with chemical agents.

10.3 Battery Information

- ◆ CAUTION: BATTERIES SHOULD BE REMOVED AND REPLACED BY ADULTS ONLY.
- ◆ King Arthur uses 3 AA batteries, not included.
- ◆ Do not mix old and new batteries.
- ◆ Do not mix alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium) batteries.
- ◆ Do not use rechargeable batteries.
- ◆ To avoid explosion or leakage, do not dispose of batteries in a fire or attempt to recharge standard or alkaline batteries.
- ◆ Be sure to insert batteries with the correct polarities and always follow the toy and battery manufacturers' instructions.
- ◆ Remove batteries and store them in a cool, dry place when not in use.
- ◆ Always remove old and dead batteries from the product.
- ◆ The supply terminals are not to be short-circuited.

10.4 Limited One-Year Warranty

EXCALIBUR ELECTRONICS, INC., warrants to the original consumer that its products are free from any electrical or mechanical defects for a period of ONE YEAR from the date of purchase. If any such defect is discovered within the warranty period, EXCALIBUR ELECTRONICS, INC., will repair or replace the unit free of charge upon receipt of the unit, shipped postage prepaid and insured to the factory address shown on the back page of this operating manual.

The warranty covers normal consumer use and does not cover damage that occurs in shipment or failure that results from alterations, accident, misuse, abuse, neglect, wear and tear, inadequate maintenance, commercial use, or unreasonable use of the unit. Removal of the top panel voids all warranties. This warranty does not cover cost of repairs made or attempted outside of the factory.

(Warranty information is continued on following page.)

LIMITED ONE-YEAR WARRANTY

Any applicable implied warranties, including warranties of merchantability and fitness, are hereby limited to 90 DAYS from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded. Some states do not allow limitations on the duration of implied warranties and do not allow exclusion of incidental or consequential damages, so the above limitations and exclusions in these instances may not apply. The only authorized service center in the United States is:

Excalibur Electronics, Inc.
13755 SW 119th Ave
Miami, Florida 33186 U.S.A.

Phone: 305.477.8080
Fax: 305.477.9516

www.ExcaliburElectronics.com

Ship the unit carefully packed, preferably in the original carton, and send it prepaid, and adequately insured. Include a letter, detailing the complaint and including your daytime telephone number, inside the shipping carton.

If your warranty has expired and you want an estimated fee for service, write to the above address, specifying the model and the problem.

PLEASE DO NOT SEND YOUR UNIT WITHOUT RECEIVING AN ESTIMATE FOR SERVICING. WE CANNOT STORE YOUR UNIT!

**We make
you think.**



Excalibur Electronics, Inc.
13755 SW 119th Avenue,
Miami, Florida 33186 U.S.A.

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