

EXCALIBUR

IVAN II Operating Manual

Model 712

Congratulations on your purchase of Excalibur Electronics' IVAN! You've purchased both your own personal chess trainer and a partner who's always ready for a game—and who can improve as you do! Talking and audio sounds add another dimension to your IVAN computer for increased enjoyment and play value.

Find the Pieces

Turn Ivan over carefully with his chessboard facedown. Find the door marked "PIECE COMPARTMENT DOOR". Open it and remove the chess pieces. Replace the door and set the pieces aside for now.

Install the Batteries

With Ivan facedown, find the door marked "BATTERY DOOR". Open it and insert four (4) 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, Ivan automatically turns himself on and starts talking letting you know he's ready for action. If Ivan does not start talking, use a thin pointed object and press the ACL button. Replace the battery compartment panel, and turn Ivan over.



Play a Game Right Away

After you have installed the batteries, the display will show the chess board with all the pieces on their starting squares. Place the plastic chess pieces on their start squares using the LCD screen as a guide. The dot-matrix display will show 01CHESS. This indicates you are at the first move of the game and ready to play chess.

Unless you instruct it otherwise, IVAN gives you the White pieces—the ones at the bottom of the board. White always moves first. You're ready to play!

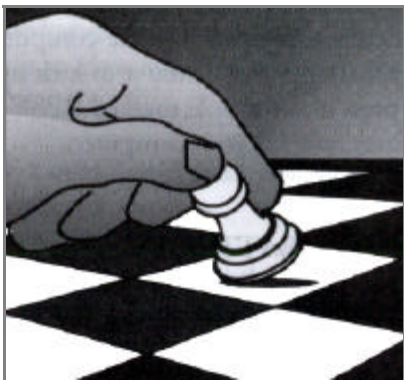
Making your move

Besides deciding on a good move, you have to move the piece in a way that Ivan will recognize what's been played. Think of communicating your move as a two-step process--registering the *FROM* square and then registering the *TO* square.

Lift the piece or pawn you want to move. Press the edge of the piece's base down gently on the center of its *FROM* square. Ivan will say and display the coordinates of the *FROM* square for example "E2."

After pressing a *FROM* square, press the *FROM* square again to select a different *FROM* square.

Then press the edge of the piece down gently on the square you want to move it to—for example, "E4." Ivan will say the *TO* square, 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.)



Moving Ivan's Piece

You'll notice that Ivan almost immediately displays his response to your move. Ivan decides on his own move, of course, and lets you know what it is on the display below the LCD board. For example, if you play 1. E2-E4, he may respond E7-E5. But you 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 *FROM* and *TO* squares. You're already playing a game! Enjoy the contest.

Putting a game "on hold"

Any time it's your move and you wish to

stop playing for a while, just press the OFF/SAVE key. IVAN 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.

Function Keys and Special Features

NEW GAME KEY =====

Use this key to start a new game.

OFF/SAVE KEY =====

This key turns the unit off, automatically saving a game in progress.

NOTE: If it is not "thinking," IVAN will automatically turn off after a period of time, saving your game position. Use the *ON* key to resume the game.

ON/CLEAR KEY =====

If off, this key turns IVAN on. Also use this key to exit any of the special modes like *OPTIONS*, *SETUP*, and *LEVEL*. This key may be used during move entry to clear your *FROM* square.

□/■ KEY (CONTRAST) =====

Press this key then the ◀ or the ▶ key to adjust the display contrast to one of six settings. This allows you to compensate for differences in lighting and viewing position. Also use this key in *SETUP* mode to change the color to move.

HINT KEY =====

Press this key if you want to get hints from IVAN. It displays **Hi nT** and flashes a recommended move on the screen.

If the hint is a book move or a replay move, **OPEN** or **RPLAY** will be shown instead of **HI NT**.

TAKEBACK KEY =====

This key lets you take back a move or moves you've decided against. Press this key repeatedly to continue taking back moves. After you take back a move, you can use the **MOVE** key to replay the taken-back move or moves.

MOVE KEY =====

When it is your move, press this key to switch sides (colors) with IVAN. While IVAN is thinking, press the **MOVE** key to force IVAN to stop thinking. Also use **MOVE** to replay moves in the takeback move mode (see "**TAKEBACK**," above).

SETUP KEY =====

Press this key to set up special positions (see page 9.) You can also use this key to promote a pawn that reaches your opponent's back rank to a piece other than a queen. (The promotion to a queen is the most common, so it is automatic.)

LEVEL KEY =====

Press this key to check the level of play. Use the ◀ or the ▶ key to change the level. Repeatedly press the **LEVEL** key to change the level type (for more information, see "*Levels of Play*," page 5).

MULTI-MOVE KEY =====

Press this key to toggle between **2PLAYR** and **1PLAYR**. While in 2 player mode the symbol "=" will be displayed. Use 2 player mode to play another person, or to enter a favorite opening (see page 7).

AUTO KEY =====

Press this key to toggle between **OPLAYR** and **1PLAYR**. While in 0 player mode the symbol "#" will be displayed. When in 0 player mode, have IVAN finish a game for you automatical-

ly by pressing the **MOVE** key (also turn **TOUCH** option on, see page 4). You may press **AUTO** to stop auto play.

REPEAT KEY =====

If you didn't see where IVAN moved, use this key (before any other) to hear the move announcement. Also this key usually repeats the last phrase said.

RATING KEY =====

IVAN rates your play! Use this key to view your current rating. You must turn the **RATE** Option On, and play a Tournament or Sudden Death level to have your rating change.

◀/NO KEY =====

Use this key to decrease a setting or to answer a question like "Are you **SURE**?"

▶/YES KEY =====

Use this key to increase a setting or to answer a question like "Are you **SURE**?"

OPTIONS KEY =====

Pressing the **OPTIONS** key displays the last changed option. To select or change an option, use the ◀ or the ▶ key. To view a different option, repeatedly press the **OPTIONS** or the **RATING** key.

Options Before the Game Starts

OPEN: Select one of 32 book opening lines of play (See page 7.)

TRAIN: Select one of eight training positions. Positions with the Black king in the middle give you practice in checkmating the Black king (See page 8.)

Options Before and During the Game

SCORE: Your display normally shows the number of the current move. If instead you want to see the piece-score of

your current position, turn this option on. The scoring totals the following values: Pawns—1, Knights—3, Bishops—3, Rooks—5, and Queen—9.

HELP: When turned on, all legal moves for the *FROM* square piece will be shown at one time.

I NFO: When turned on, this option will display the score, depth of search (number of moves IVAN is "thinking ahead"), and best move it is considering playing. These will be displayed while the computer is thinking at its higher levels.

RATE: Turning this option ON will enable your rating to be updated if you select a tournament or a sudden death type level to play against. Turn this option off, when you want to practice on those levels. During a rated game the 'O' symbol will appear as a reminder. When the 'O' symbol is on, you will hear an "ARE YOU SURE" warning if you try to TAKEBACK mistakes, adding pieces in Setup mode, ask for a Hint, or try to start a NEW GAME before the game is completed. If the score is greater than 9.0, you can claim a victory with the *NEW GAME* key.

CLRBR: Use this option to clear the chess board for easier problem setup. Pressing the *SETUP* key now, will enter setup mode with the chess board cleared of all pieces. You must place a White king and a Black king on the board to exit setup mode.

I VAN: Use this option to turn most of the speech off. Some warnings such as Check and Are You Sure, will still be heard however.

SNDEF: Use this option to turn the sound effects off.

ANNC: Use this option to turn the move announcements off.

COACH: Turn this option on to hear a warning message if one of your pieces is under attack. The threat warning '!' will be enabled when COACH option is On.

SOUND: Use this option to turn the sound ON or off.

SLEEP: Adjust the automatic shut off time with this option. Setting it to 'O' will disable auto shut-off altogether.

TOUCH: Use this option to play without the plastic pieces, viewing only the display. When you play with this option ON, the display will show you IVAN's move, signaling the *FROM* and *TO* 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 *FROM* and *TO* squares with your finger.

SPEED: Adjust the dot-matrix scroll speed with this option. Setting it to 'O' will disable scrolling altogether.

Special Displays

Draw Messages

During the game, IVAN will display the word **DRAW** if a three-time repetition of position occurs, or if there has been no pawn moved and no exchanges for 50 moves. When either of these situation takes place, the rules of chess state that a player can claim a draw. If you wish, you can ignore the message and continue the game. When a stalemate is reached, the display will read **STALE**.

Game-ending Messages

IVAN will announce mate in two (**MATE2**) and mate in three (**MATE3**). It will also display **+MATE** when executing a checkmate or when you checkmate IVAN. When you want to claim a win, draw, or want to resign—press the **NEW GAME** key.

Screen Symbols

When a '+' appears on the screen, it is a reminder that you are in check. When an 'O' appears on the screen, the game you are playing can be rated. When an '=' appears, it indicates you are in two human player mode. When an '#' appears, it indicates you are in zero human player mode. And lastly when an '!' appears on the screen, you are being warned that one of your pieces is threatened with capture. (This is similar to the friendly "en garde" warning sometimes used by human players when they are attacking an opponent's queen.)

Special Situations

Starting Play with the Black Pieces

When you want to play the Black pieces (to let IVAN move first) press the **MOVE** key before you make your first move as White. You'll see the White and Black pieces switch places immediately! If you're using the playing board with the plastic pieces, set the Black pieces up at your end, close to the LCD.

Castling

Remember, you must always move the King first when castling! First press your king down on its *FROM* square (if castling, E1). Then move and press your king down on its *TO* square (if castling kingside, G1). IVAN recognizes castling

maneuvers after the king is moved two squares. He then reminds you to complete castling by moving the rook. Move the rook in the routine manner, pushing on its *FROM* and *TO* squares normally.

Promoting Pawns

When your pawn reaches the other end of the board, IVAN 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, take-back IVAN's move, next use IVAN's SET UP feature, then press **MOVE**.

When IVAN pushes a pawn to your back row, it will always promote to a queen. Remember to change the piece on the board after either side promotes a pawn.

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.

Taking Back a Capture

After you take back a capture, the square of the captured piece will then appear on the display. This is to remind you to put back the captured piece. You must press on the square of the captured piece. Use the LCD chessboard, to see what was captured.

Levels of Play

IVAN has six level types. Two of the level types (PLY and MATE) are for analysis. The other four level types are

for play.

Press **LEVEL** to see the current level.

Press **LEVEL** repeatedly to change to a different level type.

Press **CLEAR** to return to normal play.

Level types Beginner, Fixed, Sudden, and Tournament can be adjusted for three different strengths. While viewing the level, use the **OPTIONS** key to select 'E' for Easy, 'A' for Average, and 'H' for Hard.

Beginner Level Type =====

Press the ◀ or the ▶ key to select 1, 2, 3, 4, 5, 7, 10, or 15 seconds per move.

BE001 BE002 BE003 BE004

BE005 BE007 BE010 BE015

BA001 BA002 BA003 BA004

BA005 BA007 BA010 BA015

BH001 BH002 BH003 BH004

BH005 BH007 BH010 BH015

Fixed Time Level Type =====

Press the ◀ or the ▶ key to select 1, 2, 3, 5, 10, 15, 20, 30, 45 seconds, and 1:00, 1:30, 2:00, 2:30, 3:00, 5:00 minutes per move. Fixed Time Level "inf" is infinite time, and IVAN will only stop thinking when the **MOVE** key is pressed, or a mate is found.

FE001 FE002 FE003 FE005

FE010 FE015 FE020 FE030

FE045 FE100 FE130 FE200

FE230 FE300 FE500 FEinF

FA001 FA002 FA003 FA005

FA010 FA015 FA020 FA030

FA045 FA100 FA130 FA200

FA230 FA300 FA500 FAinF

FH001 FH002 FH003 FH005

FH010 FH015 FH020 FH030

FH045 FH100 FH130 FH200

FH230 FH300 FH500 FHinF

Sudden Death Level Type =====

Press the ◀ or the ▶ key to select the amount of time in minutes for the entire game. If you run out of time you lose or forfeit, **FORFT** will be shown on the display.

SE 05 SE 10 SE 15 SE 20

SE 30 SE 45 SE 60 SE 90

SA 05 SA 10 SA 15 SA 20

SA 30 SA 45 SA 60 SA 90

SH 05 SH 10 SH 15 SH 20

SH 30 SH 45 SH 60 SH 90

Tournament Level Type =====

Press the ◀ or the ▶ key to select the the amount of time in HOURS MINUTES format to play the number of moves shown on the left side of the display. If you run out of time before you play the indicated number of moves, you lose or forfeit, **FORFT** will be shown on the display.

40 TE030 45 TE045 40 TE100 40 TE130

35 TE130 45 TE155 40 TE200 45 TE225

40 TA030 45 TA045 40 TA100 40 TA130

35 TA130 45 TA155 40 TA200 45 TA225

40 TH030 45 TH045 40 TH100 40 TH130

35 TH130 45 TH155 40 TH200 45 TH225

Ply Level Type =====

Press the ◀ or the ▶ key to select the depth of search from 1 to 8 ply. A ply is one half move.

PLY 1 PLY 2 PLY 3 PLY 4

PLY 5 PLY 6 PLY 7 PLY 8

MAtE Solver Level Type =====

Press the ◀ or the ▶ key to select the

number of moves to mate the program will search. **NONE** will appear if no mate is found.

**MATE 1 MATE 2 MATE 3 MATE 4
MATE 5 MATE 6 MATE 7 MATE 8**

Note: You can only change the level while it is your turn to play.

Computers can sometimes "lockup" due to static discharge or other electrical disturbances. If this should happen, use a slim, pointed object to press the button marked "ACL."

Book Opening Trainer

IVAN makes it easy for you to learn the same openings that world chess champions play! At the beginning of a game, you may choose to learn one of 32 popular book openings—ways to begin the game—used by chess masters. Press **OPTIONS** repeatedly to display **OPEN**, and then press the ◀ or the ▶ key to select the number of the opening you want to learn. (See list on right.) Press the **CLEAR** key to return to normal play.

Now play a move. Ivan will tell you if your move is not the correct opening move. To learn the correct move press **CLEAR** and then press **HINT**. When the computer comes back with its move, you will briefly see the word **OPEN** on the screen if you have another opening move to make. If the word **OPEN** does not appear, you may continue normal play. You have completed the training for that opening line.

The names of the openings are:

1. Ruy Lopez, Open Defense
2. Ruy Lopez, Zaitsev Defense
3. Ruy Lopez, Exchange
4. Scotch Game
5. Scotch Four Knights
6. Giuoco Piano
7. Two Knights Defense
8. Four Knights
9. Petroff's Defense
10. Sicilian Alapin Variation
11. Sicilian, Najdorf Variation
12. Sicilian, Dragon Variation
13. Sicilian, Keres Attack
14. Caro-Kann Defense
15. Panov-Botvinnik Attack
16. Caro-Kann Exchange Variation
17. Queen's Gambit Declined
18. Lasker Defense, Queen Gambit Declined
19. Queen Gambit Declined Exchange Var.
20. Slav Defense
21. Queen's Gambit Accepted
22. Nimzo-Indian Defense, Classical Var.
23. Nimzo-Indian Defense, Rubinstein Var.
24. Semi-Slav Defense
25. Queen's Indian Defense
26. Queen's Indian Defense, Petrosian Var.
27. Bogolubow Indian Defense
28. Catalan
29. Gruenfeld Defense
30. King's Indian Defense
31. Modern Benoni Defense
32. Benko Gambit

The moves and explanations of these famous openings are given in many books on chess.

Entering Your Own Opening

IVAN also allows you to set up any book opening you want—or even an opening you invent—to practice. Press **MULTI-MOVE**, then make moves for both sides until the opening position you want to practice is reached. Now press **MULTI-MOVE** again. Press **CLEAR** and play against the computer in this position.

Piece Training

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

Mini-game positions

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, IVAN will play you these special practice games.

First make sure you are at the start of a game by pressing **NEW GAME**. Now press **OPTIONS** until **TRAI N** is displayed. Then press the ► key. 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.

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!

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

After pressing **OPTIONS** until **TRAI N** appears, again press the ► key 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.

Ratings

To view your rating, press the **RATING** key. Your current rating appears on the display.

To have your rating change, you must complete a rated game on a tournament or sudden death level.

When you are ready to play a rated game, select the **RATE** option.

1. Press the **OPTIONS** key repeatedly until you see **RATE** appear.
2. Press the ◀ or the ► key to turn the option On.
3. Press **CLEAR**.

Finally select the Tournament Level or Sudden Death Level you wish to play against.

When an 'O' appears on the display, the game you are playing can be rated. Since the game you are playing is rated, you cannot ask for a HINT, nor TAKEBACK a bad move, nor use SETUP to improve your position. You also cannot use the **NEW GAME** key to start over during a rated game.

These conditions attempt to allow you to experience what it is like to play a game against an opponent in a rated tournament. In rated tournaments a chess clock is always used, so that you play your moves within agreed upon time limits. IVAN has the chess clock built in to it.

If you attempt to use the **HINT**, **SETUP**, **TAKEBACK**, or **NEW GAME** keys during your rated game, IVAN will ask "ARE YOU SURE", and say what result (draw, win, or loss) will be scored if you press the **YES** key.

During a rated game if you are winning by 9.0 or more points and want LCD Chess to resign, press **MODE** then **NEW GAME**. IVAN will say "ARE YOU SURE I LOSE". IVAN will then wait for you to press **YES**.

Using Setup Mode

At any time during a game when it is your move, you may change the position on the board by adding a piece, removing a piece, or changing any of the pieces—for example, from a queen to a knight.

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 continue the game.

Adding or Changing a Piece

Press the **SETUP** key. Next press the key that indicates the type of piece you want to place on the board. Then on the large sensory board, 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.

Setting Up Special Positions

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 IVAN to look at, perhaps using the Infinite Search level.

Normally, it is easier to start from an empty board to set up such problems. So first, press the **OPTIONS** key repeatedly until **CLRBR** (clear board) is displayed. Now press the **SETUP** key. You'll see that your display board is automatically cleared.

On the large sensory board, press the square the White king is on. Next press the square the Black king is on once to place a White king there, and then again to change the White king to a Black king.

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 repeatedly 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 IVAN knows which color is to move. You may change the color of

the side to move by pressing the □/■ key.

Finally, press **CLEAR** to play or to have IVAN analyze the position.

Remarks about IVAN

IVAN says things based on a number of factors. Some factors are time, a winning or losing score, a training position, or level setting to name a few. Try removing IVAN's queen from the chess board by using the procedure on page 9 for *Removing A Piece* as an example.

If IVAN gives you a hard time when you ask for a hint or try to change sides, press the key again, and IVAN will comply.

If you can't wait to experience his comments in across the board play, IVAN can be coerced into letting you hear a number of them. The method to enter his special DEMO mode is to first press the **LEVEL** key. Now press the **TAKEBACK** key, and IVAN will display **DEMO**, and say a phrase. Finally press the **OPTIONS** key to hear IVAN at his talkative best. Press **CLEAR** when you have tired of his endless chatter.

Don't forget you can always turn IVAN's character mode off by using the **OPTIONS** key. However if you do, be prepared for one last word from IVAN.

General Rules of Chess

1. The two players must alternate in making one move at a time. The player with the white pieces moves first to start the game.
2. With the exception of castling (see below), a move is the transfer of a piece

- from one square to another square which is vacant or occupied by an enemy piece.
3. No piece, except the Knight may cross a square occupied by another piece.
4. A piece moved to a square occupied by an enemy piece captures it as part of the same move. The captured piece must be immediately removed from the chess-board by the player making the capture.
5. When one player moves into a position whereby he can attack the King, the King is in "Check". His opponent must either
 - a) move the King
 - b) block the path of the attacking piece with another piece, or
 - c) capture the attacking piece.
6. The game is over when there is no escape for the King from an attacking piece. This is known as "Checkmate".
7. The game is over when the king of the player whose turn it is to move is not in check and the player cannot make any legal moves. This is known as "Stalemate" and is considered a drawn game.

Individual Moves

Turn on the **HELP** feature (see page 4.) All legal moves for each selected piece will be shown at one time. You will quickly "learn by doing" the movements of all pieces.

1. The Queen can move to any square along the same row, column, or diagonals on which it stands, but cannot pass over an enemy piece.
2. The Rook can move to any square along the same row or column on which it stands, but cannot pass over an enemy piece. See also Castling (on right.)
3. The Bishop can move to any square along the diagonals on which it stands, but cannot pass over an enemy piece.

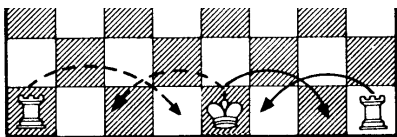
4. The Knight move is in the shape of an “L”, moving two squares up or down, and then one square over. Or it can be one square up or down, and then two over.

5. The Pawn can move one square forward. On it’s first move it may move two squares forward. When capturing, it moves diagonally (forward) one square. See also *en passant* (below.)

6. The King can move one square in any direction, as long as it is not attacked by an enemy piece. See also Castling (below)

Special Moves

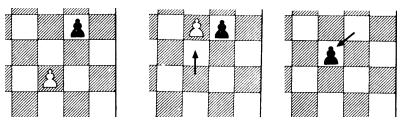
1. Castling is a move of both the King and either Rook which counts as a single move (of the King) and is executed as diagrammed below:



Castling cannot occur if:

- a) the King has already been moved.
- b) the Rook has already been moved.
- c) there is any piece between the King and the Rook.
- d) the King’s original square, or the square which the King must cross, or the one which it is to occupy is attacked by an enemy piece.

2. A Pawn may make an *en passant* capture if it is a reply move to a double pawn move, and it is a Pawn which is side-by-side with the Pawn which made the double pawn move. The capture of a white Pawn is diagrammed below:



3. A Pawn can be promoted if it advances all the way to the far side of the board. It is immediately promoted, as part of the same move, into a Queen, Rook, Bishop, or Knight, whichever its owner chooses. Since a Queen is the most powerful piece, it is nearly always chosen as the promotion piece. Through the promotion process, there may be more than one Queen on the board at the same time.

AC Operation (Optional)

We recommend using a DC adapter with a voltage between 6-8 VDC and 50 - 100 milliamps. The inside tip of the connector MUST be positive. If you have difficulty locating an adapter contact Excalibur. A phone number and web site are printed on the back cover of this manual.

Special Care

- Avoid rough handling such as bumping or dropping.
- Avoid moisture and extreme temperatures. For best results, use between the temperatures of 39°F and 100°F (4°C and 38°C).
- Clean using only a slightly damp cloth. Do not use cleaners with chemical agents.

Battery Information

- Your IVAN uses 4 “AA” batteries.
- Do not mix old and new batteries.
- Do not mix alkaline & standard or rechargeable batteries.
- Install batteries so that the polarity (+ and -) matches the diagrams in the battery compartment.
- Use only batteries of the same type and equivalency.
- Remove exhausted batteries from the unit.
- Do not short circuit battery terminals.

Excalibur Electronics reserves the right to make technical changes without notice in the interest of progress.

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 at right.

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.

Any applicable implied warranties, including warranties of merchantability and fitness, are hereby limited to ONE YEAR 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.

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



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