# ** APOLLO CHESS v2 **

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APOLLO CHESS v2 for the MZ-700 is intended for players in differing ability from beginner to moderate. The program not only plays chess against you, but can also act as a chess board while two people play, validating moves and providing indication of check. Also, the program can be set to play itself. It has 14 "Inteligence" levels; which range from IQ1, which simply makes the first valid move it examines, to IQ14, which can take many hours to find a good move - performing a deep and thorough search.

In these printed instructions, the notation <CR> means "press the key marked CR".

## Loading CHESS

Switch on the computer (If you are in BASIC, type BOOT<CR>). Insert the APOLLO CHESS v2 cassette. Type L<CR>, and press the PLAY key on the cassette drive. The program will load from tape.

## Using APOLLO CHESS

Once CHESS has loaded, it will ask "Do you want instructions?", and you may enter YES<CR> or NO<CR> or abbreviations: Y<CR> and N<CR>. The instructions given are a brief summary of these, and so it is not necessary to request them if you are reading these printed instructions. They are provided as a guide for when you do not have the printed instructions to hand. The computer will then beep, and enter COMMAND MODE. It is from command mode that you can request CHESS to do things, (e.g. play a game of chess).

## COMMAND MODE

The program will display the word OPTION followed by a list of letters. Each of these represents a function that APOLLO CHESS v2 can perform. To play a game type: G<CR>. (See PLAYING A NEW GAME).

The options available are:

G - Play a new Game of Chess.
P - Play from current position (set by S or last game).
S - Set up board.
H - Help, display the instructions!
A - Adjourn game. (Save on tape)
L - Load a game previously adjourned and saved on tape.
M - Reset to Monitor, like BOOT in BASIC.

All of these commands, except H and M, are explained below.

## Playing a new game: G<CR>

This is the most useful command that command mode provides. The other commands are to allow a great deal of flexibility. The G command also provides a great flexibility. Each side, Black and White, can be independantly selected for the program to play on any level, or for external input by a player. In the latter case it allows the player to enter his/her name. This allows the program to play itself on different levels, or two people to play (with different names, the program checking all moves for validity), or one person to challenge the program.

You will have to answer a number of questions before you can play:

**Will you play White?**
if Y: **Name?** Enter your name here.
if N: **IQ=** Enter a number between 1 and 14.
**Will you play Black?**
if Y: **Name?** Enter your name here.
if N: **IQ=** Enter a number between 1 and 14.
**Sound?** Do you want a beep on each move?
**Hardcopy?** Do you want a hardcopy (Printout)?

The HARDCOPY facility will, if selected, print out a list of the moves made in the same form as they appear on the right of the display. You must have a suitable printer connected to the machine - or have the Printer/Plotter device.

The IQ levels are summarised in a table below (See IQ levels). To start with, Try IQ6. This level, while demonstrating many facilities of the program, only takes a few seconds for each move.

Once the questions have all been answered, APOLLO CHESS will draw the board and set up the pieces on the video display screen. Two little panels at the right of the screen are reserved for the moves to be displayed in chess notation. The game begins.

## IQ levels

There are 14 IQ levels, which are listed below with a brief summary of their action. Approximate timings are given against each level. The longer the program takes, the more possible moves it can examine, and so better moves will usually result from higher IQ levels which take longer.

Some levels listed have a star, *, by them. This indicates that they use the "Opening move library" to find good "Book" opening moves. There are 12 major openings in this library, but clearly this is a far cry from the hundreds printed in contemporary books of opening moves. The openings do not exceed 10 moves in depth, and so the program will be playing on its own initiative after that.

| IQ level | Depth | Average time | Comment |
|---|---|---|---|
| IQ1 | 1 ply | <1 second | Plays the first valid move it finds. |
| IQ2 | 2 ply | 2 secs | Elementary, Poor endgame. |
| IQ3 | 2.5 ply | 3 secs | Poor endgame. |
| IQ4 | 2 ply | 2 secs | |
| IQ5 | 2.5 ply | 3 secs | |
| IQ6 * | 2.5 ply | 3 secs | Plays reasonably & fast. |
| IQ7 | 3 ply | 30 secs | ) Over optimistic, |
| IQ8 * | 3 ply | 30 secs | ) can blunder! |
| IQ9 | 3.5 ply | 3 min | |
| IQ10 * | 3.5 ply | 3 min | |
| IQ11 | 4 ply | 15 min | ) Quite cautious play |
| IQ12 * | 4 ply | 15 min | ) |
| IQ13 * | 4.5 ply | 1 hour | |
| IQ14 * | 5 ply | 12 hours | For postal chess, etc. |

## How to Enter Moves

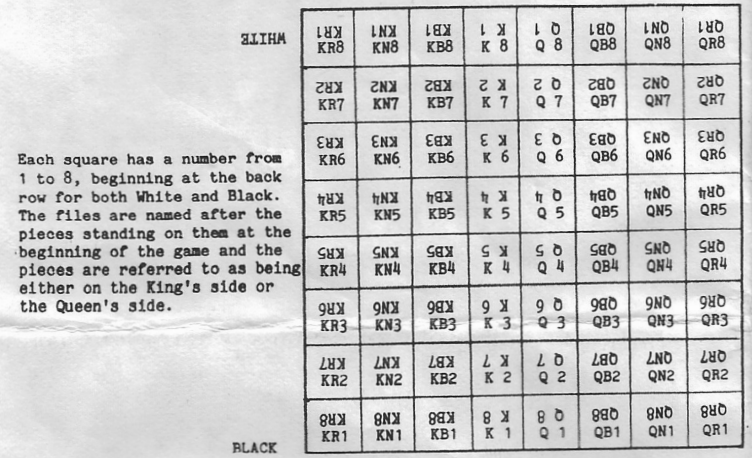
Most moves may be entered in descriptive notation, e.g. P-K4<CR> or O*O<CR>. The program will check the move for validity and ambiguity. If it is ambiguous, then you will have to state the initial square the piece stands on, and the one it is moving to, e.g. P/K2-K4<CR> or R/KR1-KR5<CR>. The computer will respond in this "Full Form". Note that the full form always contains the simple descriptive notation. Prefixing the piece with a descriptor, e.g. KR-KR5, is ignored by the program - mainly because of the difficulty in determining which is the KR or QR.

Generally the notataion falls into 3 catagories:

Piece - Position e.g. P-K4
Piece * Piece e.g. P*P
Piece / Position - Position e.g. P/K2-K4

Where: "Piece" is one of P, B, N, R, Q, K
for Pawn, Bishop, kNight, Rook, Queen, King

"Position" is as in descriptive notation, see diagram.




**Each square has a number from 1 to 8, beginning at the back row for both White and Black. The files are named after the pieces standing on them at the beginning of the game and the pieces are referred to as being either on the King's side or the Queen's side.**

The first and third forms may be used for capture, too. If so, then the computer will add a "* Piece" on the display. e.g. R/KR1-KR8*Q Rook moves from KR1 to KR8 and takes a Queen.
To Castle on the Kings side enter OO<CR>
To Castle on the Queens side enter OOO<CR>
To resign, enter RESIGN<CR>
If you believe you are stalemated, enter STALEMATE<CR>, the program will either confirm this, or make an alternative, valid move for you.

## The Play command: P<CR>

This command is similar to the command G, to play a new game, only it continues the game from the current position. You may, however, select different players - different IQ levels, swapping sides with the computer, etc. and so the questions asked are the same as in G.

## Adjourning a game: A<CR>

Insert a suitable blank tape, or position a tape at a blank position. If you are not in command mode, the get into it by typing SHIFT.BREAK. Type A<CR>. The computer will ask for a filename, so enter the name which you wish to call the game. e.g. IQ13 v ME<CR> Press RECORD.PLAY when requested. (a full description of how to save is in the BASIC manual). When the data has been saved, the tape will be verified. You can load the tape using the L command, whenever you wish.

## Loading a game: L<CR>

Enter the cassette with the game saved on it, and wind it to the correct position (e.g. if you saved it at the beginning then rewind it to the beginning.). Type: L<CR> and enter the filename, followed by a <CR>. If you simply enter <CR> instead of a filename, then it will load the first game it finds. It will load the game, and then return to command mode. Type P<CR> to continue playing from where you left off.

## Setting up the board: S<CR>

Sometimes it is necessary, or convienient to set up the board to a given position. This need is reduced by the ability to save games on tape, and load them later; but it is still very useful for such things as:

a) Correcting a wrongly entered move.
b) Playing endgames from a newspaper or book.
c) Continuing a game not started on the computer.

The program will display the current board on the screen. You may alter the board with the following sub-commands:

space - Deletes the piece on the current square.
S - Sets up the normal starting position.
Z - "Zeros" the board, deletes all pieces.
. - Changes the colour of the piece.
P - Sets up a pawn on the current square.
B - Sets up a bishop on the current square.
N - Sets up a knight on the current square.
R - Sets up a rook on the current square.
Q - Sets up a queen on the current square.
K - Sets up a king on the current square.
X - eXits to command mode.

Cursor keys move the large flashing cursor.

After entering X, a number of questions will be posed. These are mainly about castling. If castling is still possible, i.e. neither the king nor the rook has moved, then answer YES<CR>, (even if castling is not yet possible). The program will also ask who plays first. If all these facts are the same, i.e. unchanged by the setting, then SHIFT.BREAK will exit straight to command mode. (i.e. Type SHIFT.BREAK instead of X).

**NOTES**

When a game is halted by typing SHIFT.BREAK, (or due to a checkmate, draw, resign or stalemate), it may be restarted by using the P command. In order to preserve continuity, the move number is retained, and the "Previous move" table, used for Draw-by-repetition and 50-move-Draw testing, is also retained.

The use of the Setboard facility also leaves these unaltered, unless a Z or S sub-command is used, which erases both.

Complications like this are unlikely to give trouble if the following rules are observed:

1) In making a small modification to the board, e.g. correcting an incorrectly entered move, (or cheating!), then simply make the alteration without using either S or Z.
2) If setting up a new game, then use either Z or S first, to clear move number etc.

Rule (1) is simply common sense, and rule (2) is usually quite clear too.

Note that Adjourn & Load save all move numbers, draw tables etc.

## Miscellaneous

Typing SHIFT.BREAK at any time will return you to command mode.

En Passant - the rule that a pawn can take another, if the other advances two squares, by capturing as if it had only advanced one; is NOT allowed.

When pawns reach the 8th rank they are automatically promoted to Queens.

The 3 ply and 5 ply searches, IQ7, IQ8, IQ14, have an inherent weakness: Due to the depth of search (an odd number) they are always over optimistic, and, although this can cause them to play well in some circumstances, it can lead to disaster!

If you enter monitor for any reason, e.g. by typing M, or pressing the reset button on the back of the machine, then CHESS may be restarted by J1200 which initiallizes the board (as S sub-command in SetBoard). Alternatively J1245 restarts without initiallization, preserving the board, move count, Draw tables, etc.

Goodluck!

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