VIDEO CHECKERS™

GAME PROGRAM™ INSTRUCTIONS
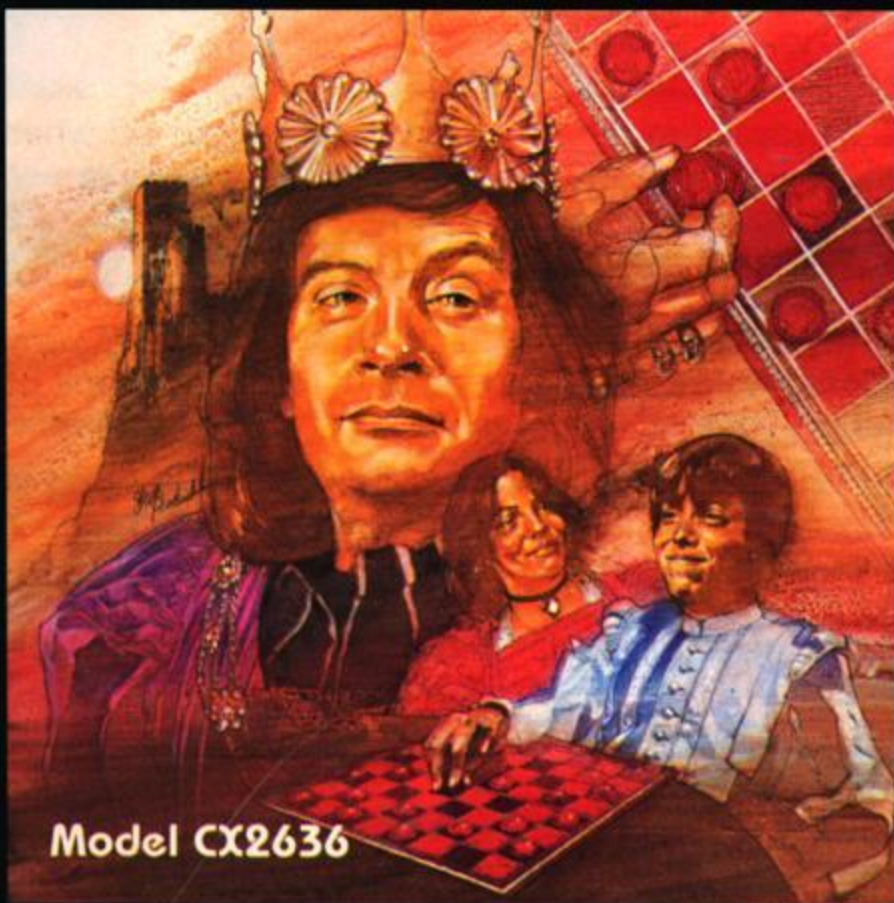
Model CX2636

ATARI®

Use your Joystick Controllers with this ATARI® Game Program™. Be sure the controllers are firmly plugged into the **LEFT** and **RIGHT CON-TROLLER** jacks at the rear of your ATARI Video Computer System™. Hold the Joystick with the red button to your upper left toward the television screen.

For one-player games, use the controller plugged into the **LEFT CONTROLLER** jack. *See Section 3 of your Video Computer System Owner's Manual for further details.*

NOTE: Always turn the console **power** switch **off** when inserting or removing a Game Program. This will protect the electronic components and prolong the life of your ATARI Video Computer System.

THE BASIC RULES OF CHECKERS: A condensed version of the " Basic Rules" of the game is listed at the back of this instruction booklet.

HOW TO PLAY

The computer plays by the stardard rules of checkers. The most important rules are:
1. A player must jump when able.
2. A piece which jumps into the king row and is promoted to a king cannot continue jumping on the same turn.
3. The game ends when one player cannot move. This could occur because the player is blocked, or because the player has no pieces left.

The checkers are usually referred to as "black" and "white", regardless of their actual colors. In **ATARI VIDEO CHECKERS**, the pieces are red (or dark grey/black) and white. In the amateur games (levels **1** through **4**) the board has black and red squares. In the pro games (levels **5** through **9**) the official tournament colors of green and buff are used. (See diagrams on the next page.)
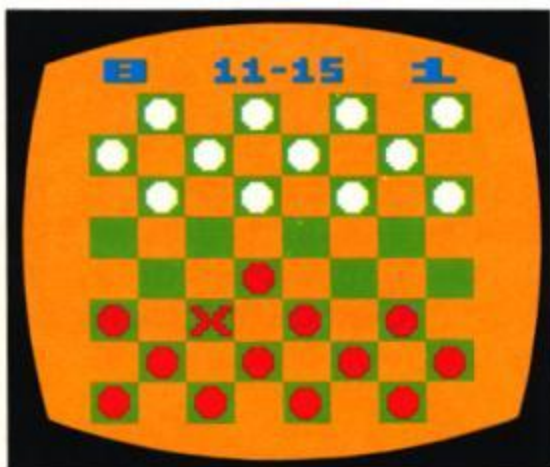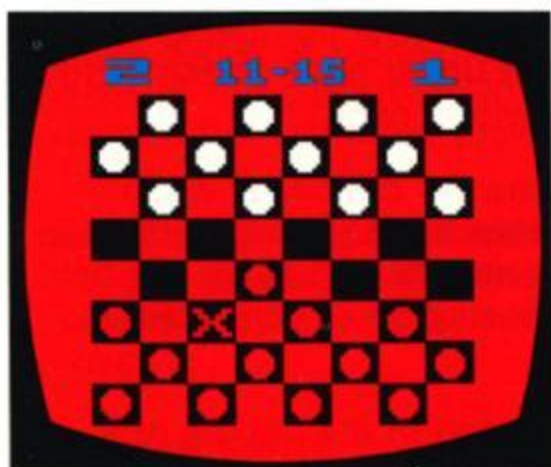
TO BEGIN PLAY

Console Controls

game select switch

Use the **game select** switch to change the game and the game number (displayed at the upper left corner of the screen as shown in the diagram). If the game number is white, then the human player (or the left player) controls the white pieces on the board. If the game number is blue (or black on black-and-white television sets) then the human is red (grey). The different game variations are explained in the **GAME VARIATIONS** section of this instruction booklet.

GAME NO.   NO. OF PLAYERS

CURSOR
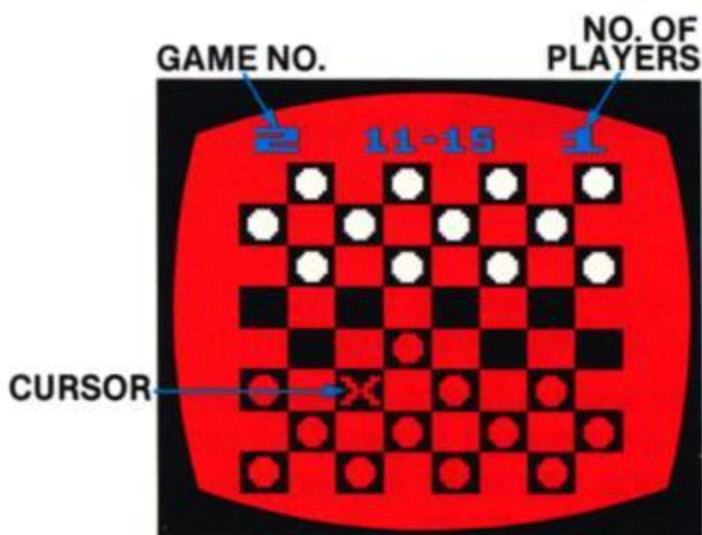
In **Games 1-9,** the computer plays regular checkers. The computer's skill level increases as the game number increases. **Game 10** is for two players. The number of players for each game is displayed at the upper right corner of the screen. (See diagram on the previous page.)

Games 11-19 are losing or "giveaway" checkers. As in **Games 1-9,** the skill level increases as the game number increases. The object of giveaway checkers is to be the first player to be unable to move by losing all of your pieces or by being blocked.

The **game select** switch may be used in the middle of a game and the computer will continue play using the new game difficulty level or variation. When the computer is computing its next move, the **game select** switch has no effect.

game reset switch

Use this switch to set up the checkers on the board for a new game, or to reset a game at any time. If the computer starts the game (see **left** and **right difficulty** switches), it will pick its first move at random. To clear all the pieces off the board, depress the **game reset** switch with the **left difficulty** switch in the **a** position (set up mode). Use the **game reset** switch at any time, even while the computer is computing its next move.

left difficulty switch

Use the **b** position for normal game play. Use the **a** position to set up the board. In the set up mode, use the left Joystick to place pieces on the board wherever you want. Move the cursor to the square in which you wish to place a piece. It does not matter if the square is empty or occupied. Press the button on the Joystick and the pieces of each color will flash in that square., When the piece you want is flashing in the square, release the button. To continue game play return the **left difficulty** switch to the **b** position.

The **left difficulty** switch is not "checked" while the computer is working on its next move. This means that moving the switch when the computer is computing a move has no immediate effect on the move.

right difficulty switch

In the **b** position, the left player in a two-player game, or a single player in a one-player game is "black" and starts the game. In the **a** position, the right player in a two-player game or the computer player in a one-player game is "black" and starts.

Switching the **right difficulty** switch when it is your turn to play will cause you to trade sides with the computer. The computer will take over your pieces and make the next move.

color/b-w switch

In addition to its usual function of changing the television display from color to black-and-white, this switch determines the board numbering scheme to be used. The purpose of this latter function is to allow the **ATARI VIDEO CHECKERS** game to play against computer games which use standard checkers numbering to enter and display moves. This function also makes it possible to play out examples from checkers books.

The squares are numbered from 1 to 32 (only the dark squares are numbered), as shown in the diagram. The square numbers are shown at the top, middle of the screen between the game number and the number of players (see diagram). The first number is the starting square. The second number is the destination square for the move. The two numbers are separated by a dash.

SQUARE NOS.
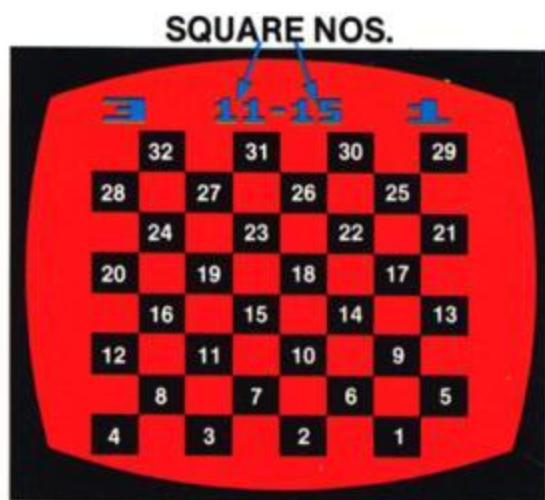
When the **color/b-w** switch is in the color position, the "black" pieces always start on squares 1-12. When the switch is in the b-w position, the white pieces always start on squares 1-12. This makes it possible to play computers or machines that always put their opponents on squares 1-12, regardless of color.

When playing against another computer game of checkers, you would start by having one computer make a move. The person handling the other computer would then manually enter the first move and then have his own computer make its corresponding move.
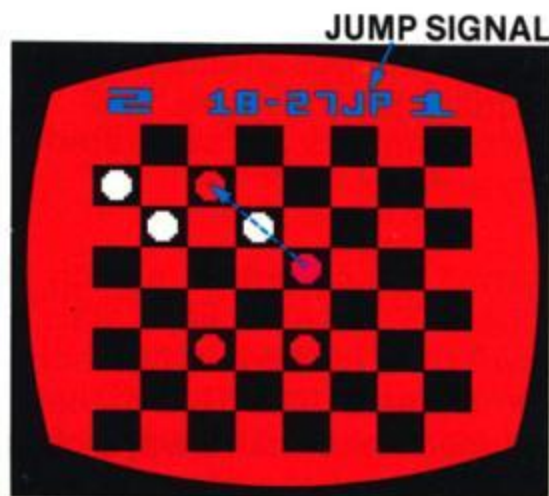
USING THE CONTROLLER

The Joystick is used to move the cursor and/or the checkers around the board. The cursor is a red or white **X** (dark grey or white on a black-and-white television). The color of the cursor indicates whose turn it is. The cursor can only be moved diagonally on the black squares.

To move one of your checkers, push the red controller button when the cursor is in the same square as the piece you wish to move. This "picks up" the piece. Then move the checker to the square you wish to occupy. To complete the move, push the controller button again. This "drops" the piece. Before you have dropped the piece, the computer will allow you to return it to the square it came from and move a different piece. After you have made your move, the computer will make its move. You can use the set up mode to take back moves or rearrange the board while it is your move.

To make a jump, pick up the piece to be moved, as described. Then move the piece over the piece being jumped to the next empty square and push the controller button. For a multiple jump, continue jumping by moving to the appropriate square and pushing the button again.

JUMP SIGNAL

The computer will not allow you to pick up a piece which cannot make a legal move or to move a piece to the wrong square. Instead it will make a buzzing or "razzing" sound. If you must jump, the letters "**JP**" for **JUMP** will flash at the top of the screen, as shown in the diagram.

When the **left difficulty** switch is in the **a** position (set up mode), the left controller button is used to select the piece to be placed in each square. First move the cursor to the desired square. Then hold the controller button down or press it several times until the desired piece appears.

Note that the computer will automatically convert a piece to a king when it is placed in the appropriate king row.

GAME VARIATIONS
(Information About The Computer)

As noted before, **Games 1-9** are regular checkers; **Game 10** is for two players; and **Games 11-19** are giveaway checkers in which the object is to be the first player to lose all your pieces, or to be blocked and unable to move.

Computer Move

The length of time the computer takes to move depends on the difficulty level and the number of possible moves. The times given in the **GAME MATRIX** are approximate. The actual time for a move varies, depending on the current situation.

While the next move is being computed, the board will disappear from the television screen and different colors will flash on the screen (different shades of grey on black-and-white televisions). This is done to speed up the computer play since it takes time for the computer to do the display. Also, the design of the ATARI Video Computer System makes it difficult to do extensive computations and display the board at the same time. When the computer completes its move, the board reappears. The computer's move is indicated by a blinking **X** of the computer's color and a blinking computer piece. The jumped pieces, if any, will also blink. Your cursor will appear in your color. As soon as you move your Joystick or press your controller button, the computer's piece will stop blinking and the jumped pieces will disappear.

Computer Method

When computing its next move, the computer does what is called a "tree search" using "alpha-beta" pruning. What this

means is that the computer picks a move, then picks a countermove by its opponent. Depending on the difficulty level, the computer continues making moves and counter-moves. At some point, it evaluates the board to see how many pieces each side has, and what sort of position the pieces are in. The computer does this for various combinations of moves and picks the move which will be most advantageous to itself, assuming that its opponent will do the same. Alpha-beta pruning is a technique which is used to reduce the number of moves which must be examined.

The game number determines how many "plies" deep the computer goes in the tree (see **GAME MATRIX**). One "ply" is a move by one player. Technically, a "move" is considered to be two-ply (one move by each player). For example, in **Game 1** the computer only looks one ply deep. However, if there is a jump, the computer keeps searching until there are no further jumps, regardless of the game number.

The computer becomes progressively more intelligent as the difficulty level is increased. At level **1 (Game 1)**, the computer does no positional checking. It simply counts the number of pieces on the board, giving extra weight to kings. At level **4** and above, all of the positional checking is brought into play, including king row protection, and center and double corner control.

STRATEGY

Here are some important points to remember when playing:

1. Try to control the center of the board.

2. Protect your king by keeping pieces in squares 1 & 3 or 30 & 32, as shown in the diagram.

3. Try to obtain the first king and then make good use of it.

4. Set up series of jumps that leave you one or two men ahead (called 2-for-1 shots, 3-for-2 shots, etc.).
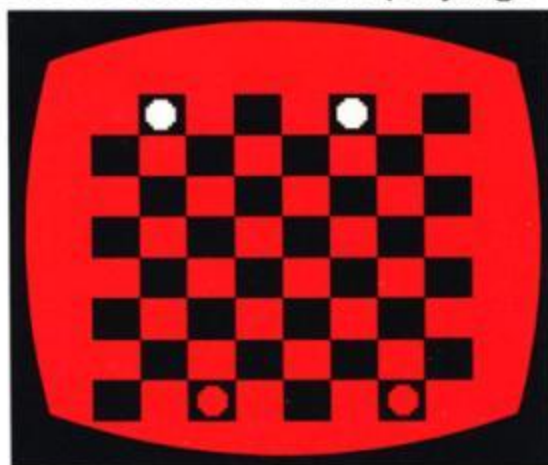
5. When you are ahead, trade down, since two kings can win against one. When you are behind, avoid even trades.

BASIC RULES OF CHECKERS

1. The checkerboard is composed of 64 squares, alternately light and dark, arranged in a square array of 8 rows and 8 columns.

2. The official checkerboard of the American Checker Federation (ACF), consists of green and buff colors for the dark and light squares.

3. The checkerboard is set up for play so that a green (or black) corner square is to the left of each player. These squares are called the "single corners". The green square to the far right and the green square diagonally upward to the right of it (for each player) are called the "double corners." (See diagram.)

DOUBLE CORNERS

SINGLE CORNER

SINGLE CORNER

DOUBLE CORNERS
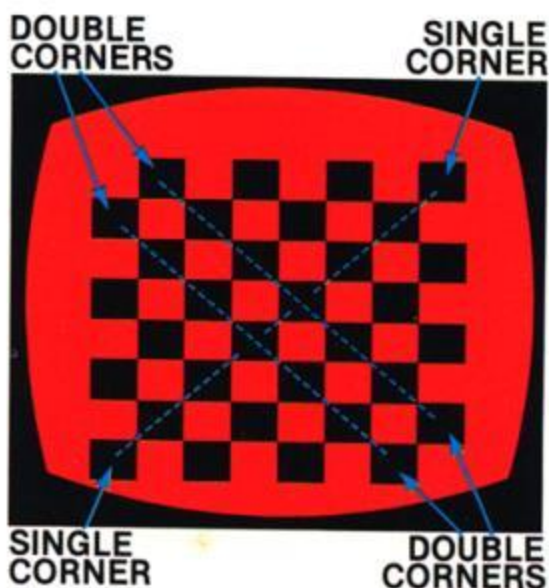
4. At the beginning of the game, each player has 12 pieces. The pieces are set up on squares 1 through 12, and squares 21 through 32.

5. Players take turns making a move with their pieces.

6. Pieces are moved on the green (black) squares only. An ordinary move would be from one green square to another vacant green square. This must be carried out in a forward direction only, and to a diagonally adjacent square. Such a move may only be made one square at a time, diagonally forward, left or right.

7. A capturing move or a jump is the transfer of a piece from one green square over another green square (diagonally forward), occupied by a piece (or king) of

the opposite color. The destination square in the capturing move must be vacant. The captured or jumped piece is removed from the board.

8. When a player is presented with the opportunity to jump, he must jump. If he refuses to jump he forfeits the game. When there are two or more ways to jump, a player may select any jump; he is not required to take the jump capturing the most pieces.

9. A multiple capture or jump must be made when the opportunity is available. (See diagram.) Any jump which creates a multiple jump opportunity must be completed; there is no option to stop during any part of the jumps.
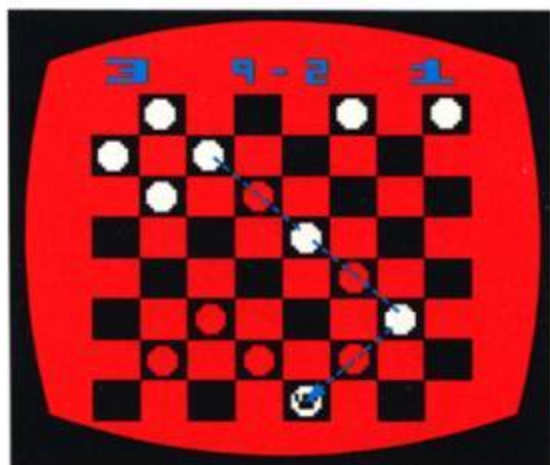
10. Upon reaching the farthest forward row of the board by either an ordinary move or a capture, a piece becomes a "king."

11. The ordinary move of the king includes the power to move backward. A king may move diagonally forward or backward, left or right, one vacant square at a time.

12. The capturing move of a king includes the power of backward captures. The other rules regarding how kings carry out captures or jumps are identical to those of the piece, except that a king is not required to pause at the king row, but may jump in and out on the same turn.

13. The game is won by the player who can make the last move. That is, no move is available to his opponent either because the opponent has no more pieces or kings, or because all of the opponent's pieces or kings are blocked and unable to move.

14. A game is drawn when both players agree to terminate play with a drawn ("tie") result.

When one player proposes a drawn game, and the other does not agree, the first player may request a

"40-move" count. The count starts with the attacking player's first move after the request and counts only the moves of the attacking side. The attacking side must demonstrate a strengthened position (in these 40 moves) to the satisfaction of an impartial third person, or concede the draw.

The 40-move count is restarted any time when:

1. The player claiming the draw concedes that there has been some strengthening of the attacker's position.

2. Any uncrowned piece of either side makes any advance towards the king row, or —

3. Any capture is made.

After the 40-move count is completed showing a strengthened position, the attacker must still complete the win. Other 40-move counts may still be requested later by the player claiming the draw.

15. When the same position (identical as to move, pieces, kings, and colors) occurs two or more times, a "see-saw" draw may be beginning. It is customary for the side desiring the draw to point out these repeated positions and suggest a draw. The other side is then expected to start a new attack or concede the draw.

NOTE: These rules were taken from the ARTICLES of the official rules of Checkers, written by the American Checker Federation.

American Checker Federation
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VIDEO CHECKERS™

GAME MATRIX

Game No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
No. of Players	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1
No. of Piles of Computer Lookahead	1	2	3	4	5	6	7	8	9	-	1	2	3	4	5	6	7	8	9
Approx. Time for Move	1½ sec.	2 sec.	3 sec.	5 sec.	10 sec.	30 sec.	1 min.	4 min.	15 min.	-	1½ sec.	2 sec.	3 sec.	4 sec.	6 sec.	14 sec.	30 sec.	2 min.	8 min.