Synopsis

Yes, Polyominoes, is indeed the one millionth Tetris clone known to man. However, it features unique modes, and for being a homebrew, it is fairly complete.

Polyominoes is created for the Nintendo Gameboy Advance and features several modes of game play, some old, and some new. The game also establishes the notion of shape sets. There are 3 shape sets to be found within the game and most are available for use in most of the modes of play.

Credits

Author: Andrew Best
Email : andrewbest @rogers.com

Full credits can be viewed in game by choosing credits from the main menu.
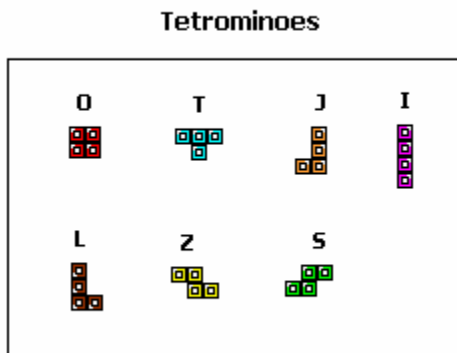
Contents

Shape Sets

In a traditional game of Tetris you play with the 7 shapes everyone is familiar with. These shapes are called tetrominoes. In this game the tetrominoes constitute one of the 3 available shape sets.
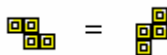
The Tetrominoes Shape Set

Below is the tetrominoes shape set, each tetromino labeled with its unofficial name.
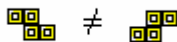

Tetrominoes

In this game the tetrominoes are one-sided. This means that they can rotate clockwise or counter-clockwise but they cannot "flip".
For example, these are two rotational positions of the Z tetromino. They are the same tetromino.
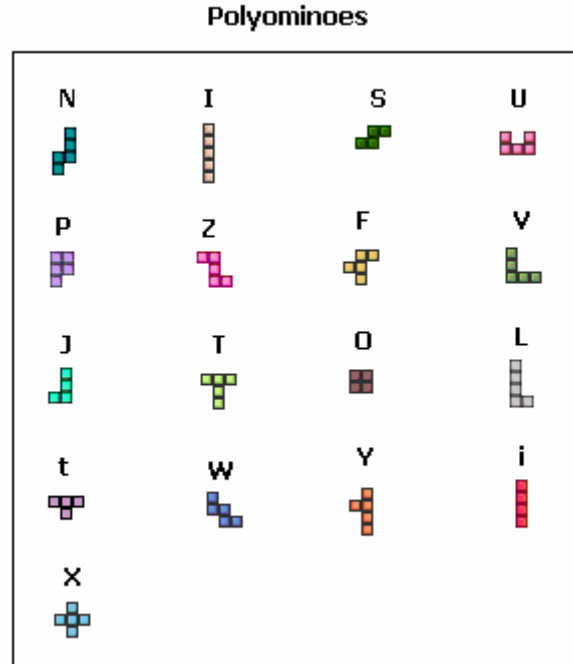

In the game you press the 'A' button to rotate the tetrominoes clockwise and 'B' to rotate counter-clockwise.

When playing with the tetrominoes shape set, the shapes cannot be flipped. This means the following are not equivalent.
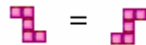
The Polyominoes Shape Set

A polyomino is actually the generalization of a tetromino and moreover the generalization of a domino. In this game, the polyominoes are actually a shape set of their own. This set contains all the free tetrominoes (dimension 4 polyominoes) and free pentominoes (dimension 5 polyminoes). There are 17 in total and are shown below.

Polyominoes

N	I	S	U
P	Z	F	V
J	T	O	L
t	w	Y	i
X			

Like the tetrominoes set, the polyominoes can all be rotated clockwise and counter-clockwise. However, unlike before, these can be flipped! For example the following is true.

=

To flip a polyomino in the game, press the up directional key.

The Morphers Shape Set

The morphers set is very different from the tetromino or polyomino sets. The later two sets can have their shapes manipulated by some types of rotation but their structure (i.e. their block layout) remains essentially the same.

With the morphers it is possible to transform (morph) the fundamental layout of the shapes. Each morpher has 3 layouts and are depicted in groups below.

Morphers

To morph one of these shapes in game, press the up directional key.

Title Screen

The title screen serves as the game's main menu. From the title screen you can scroll through the game modes, options, and credits by pressing select. To choose a mode press the start button. Upon completing a game mode you will be directed back to this menu.

Controls

The controls and button mappings vary slightly from game mode to game mode but the buttons to perform similar actions always remain the same. Here is a listing of these mappings.

Menu Navigation
up   = previous item
down = next item
select = next item
start   = select highlighted item
A   = select highlighted
B   = return to the previous menu

Controls Common To All Game Modes

A   = rotate current shape clockwise
B   = rotate current shape counter-clockwise
left   = move current shape left
right   = move current shape right
down = move current shape down
start   = pause game
up   = flip shape (if using the polyomino shape set) or morph shape (if using the
              morphers shape set)

Versus Mode Specific Controls

R = use power up
L = convert power up

Dual Board Mode Specific Controls

R = switch to the right board
L = switch to the left board

Options

Some generic options are available by selecting Options from the title screen menu. Most options are specific to the individual game play modes and are available to be changed when the respective mode is chosen from the title screen.

Here is an image of the generic options along with explanations for each one.

Random Music
When a game play mode is started a random song will be chosen and played if yes is selected for this option. If no is selected the song set for the Music option will always be played. You can always change the current song from the pause menu during game play.

Volume
The intensity of the music (not the sound effects).

Music
This is the song that will be played during game play if Random Music is not set to yes. You can listen to all the songs from here simply be scrolling through them.

Erase Data
The Standard and Dual Board Modes keep track your high scores. These scores persist even when the console is powered off. Selecting yes to erase this data will reset all these scores to 0.

Game Modes

Polyominoes features four modes of game play, each selectable from the title screen.

Standard Mode

Overview

The Standard mode is the original Tetris style game play. The goal is to maneuver your shapes as to create lines and score points. The game is only over when your board is over flown. To overflow a board is to have the pile height become so high that the next shape introduced is placed in an occupied cell.

Setup

When you select the Standard mode from the title screen you are presented with a setup configuration screen. If you wish, you can bypass this and jump immediately into the game play by pressing start. Tweaking these options will have various affects on the Standard mode. The available options are detailed next.

Shape Set
Dictates which shape set you will be playing with. All three shape sets are available in Standard mode. No matter which set you choose to play with, the object is always to get as many points as possible.

Auto Drop
If this is on the pieces will fall on their own making the game much harder. Turning this off however, will reduce the number of points you can earn.

Start Speed
If Auto Drop is on then this is the rate that the shapes will begin falling at when the game is first started. The larger the value, the faster the pieces will fall. As you make lines the drop rate continually increases from its starting speed. Why would you want to start with a high drop rate? Because the higher the drop rate, the more points earned per completed line.
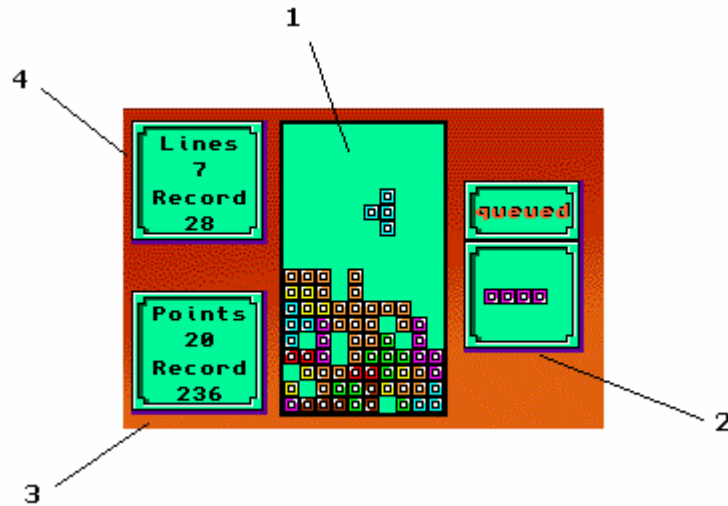
SFX
Set this to see different animations when you complete lines during game play. This can be reconfigured during the game from the pause menu.

Demo
Turn this on to watch the A.I. play the Standard mode.

Game Play Elements

The below Standard mode screenshot depicts the general elements found in this game play mode. Changing the shape set will alter the colour scheme and the position of these objects, but the same elements are always present.

1.

The game board where the shapes are introduced. Maneuver the current shape on this board into complete horizontal line configurations.

2.

The queued panel shows you which shape will be coming next after the current shape has landed on the pile. Use this knowledge to strategically place the current shape.

3.

The points panel shows you how many points you have earned so far. Every time you complete one or more lines with the current shape your points are increased. This increase is calculated as $current\_drop\_speed * lines\_made^2$.

The points record shows the highest points total ever made by a human player in the Standard game play mode. A separate record is kept for each of the 3 shape sets since they each impose a different dynamic on the game play. These records are saved to cartridge.

4.

Like the points panel, the lines panel shows the current lines made and the all time record for lines made in the Standard mode.

Pause, Config, Quit, Resume

During game play, at any time, press the start button to pause the game. From the pause menu you can choose to end the game by selecting Quit or jump back into game play by choosing Resume. The Config option lets you change some settings

1 Player Versus Mode

Overview

This mode challenges you play head to head against the A.I. Both player's boards are shown on the screen, yours being the leftmost. The objective in this mode is to defeat your opponent by being the first to complete some preset number of lines. The other win condition is to cause your opponent to overflow their board. To add to the challenge, Versus mode adds the concept of power ups to the game. Use these power ups to make your opponent's task harder or to save yourself from imminent defeat.
This is a very fast paced mode that requires luck, skill, speed, and focus to win.

Setup

Shape Set
Versus Mode allows any of the three shapes sets to be used during the game.

Difficulty
This setting dictates the skill of the A.I. controlled player.
Choosing easy makes the A.I. slow and not too sharp.
Medium increases its speed and intelligence.
A hard A.I. player will be very fast and use intelligent strategies to win.

Wins Needed
A Versus mode game can be broken down into a series of rounds (between 1 and 4). At the end of each round the winning player is credited and a new round begins with both player's board reset. In order to truly win the game, a player must win the number of rounds indicated by this value.

Power Ups
Turn this on or off to choose whether or not power ups will be used during the game.
Refer to the Powers Ups section of these instructions.

Line Dumps
A line dump is an offensive move found in traditional battle/versus modes of Tetris games. If you complete 2 or more lines simultaneously on your board then your opponent's pile height will be raised by one less row than that number of lines. Use this setting to turn line dumps on or off.

Lines Race
One of the parameters to win a round is to be the first player to complete a set number of lines. This is only true when lines race is set to on. If this is changed to off then to win you must cause your opponent to overflow their board.
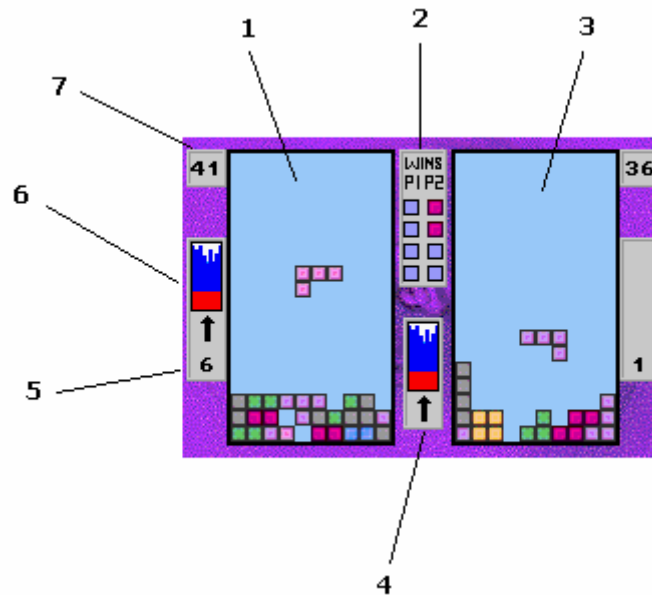
Lines Goal
This is only relevant if lines race is on. This is the number of lines a player must complete to win the round via a lines race.

Demo
Watch two A.I. controlled players battle each other.

Game Play Elements

Here is a screen from the Versus mode. The indicated elements are described below.

1.
Player 1's (P1's) board. This is the board you control / play on.

2.
This is the round wins panel. This indicates how many rounds each player has won. This example shows that player 2 has won two rounds and needs to win two more rounds. Player 1 has yet to win a round.

3.
Player 2's (P2's) board. This is the board the A.I. player controls.

4.
The next power up panel. This panel shows the next power up that can be earned by either player. Refers to the Power Ups section for more details about power ups.

5.
Power ups are earned by completing lines. This value indicates how many lines the player still has to make before earning a power up.

6.
This icon shows what (if any) power up the player currently posses. Here player 1 has a power up but player 2 does not.

7.
Lines goal panel. This indicates how many lines the player still has to make in order to win the round via the lines goal

2 Player Versus Mode
(untested)

Overview

In a sense both Versus modes are for two players. Either human vs. A.I, A.I. vs. A.I., or human vs. human. The last one is the 2 player mode we are referring to here. This mode is exactly the same the 1 player version detailed above, but it is for 2 people.

To play 2 Player Versus you need 2 Gameboy advances, 2 cartridges with Polyominoes loaded, and one link communication cable.

To start the 2 player game both consoles must be connected via the link cable and powered on with a game cart inside. Both players must select the 2 Player Versus mode from the title screen. At this point both players will be presented with a set of options for this mode. The player who is connected to the master end of the link cable will be the one whose options will be used when the game is started.

The game will not start until both players have confirmed their options. Upon completion of the game, both consoles will be rebooted.

Dual Board Mode

Overview

Dual Board is a quick and snappy little mode of game play. It is another one player mode where you try to create high scores and beat the previous record. As the name implies you control two boards.

 The object of the game is to build up your score multiplier and achieve high points by alternating back and forth between the two boards. Each time you create a line your multiplier will increment and your score will be calculated as the number of lines you just made times the current value of your multiplier.

The challenge is that next to the top corner of each board is a clock that counts backwards from 10. Each board's clock indicates how long you have left to make a line on that same board. If the clock hits zero, your multiplier is reset. If you do manage to make a line then that board's clock gets set back to 10. The game will then switch your focus to the other board where you will have 10 or less clock ticks to make a line (depending how long it took you to make a line of the previous board).

If your time is about to run out on a board you can attempt to make a last ditch effort to save your multiplier. To do this press 'L' or 'R' (depending on which board you are on) to switch to the other board. If you do this then the board's clock will freeze. You now must complete 2 lines on the other board (the one you switched to) in order to save your multiplier. If you try this board switching technique you may get a little bit of bonus time to help you make the 2 lines you need.

The clocks will read 0 until you have made your first line. They will also reset to 0 if you ever run out of time and will not start again until you make another line.
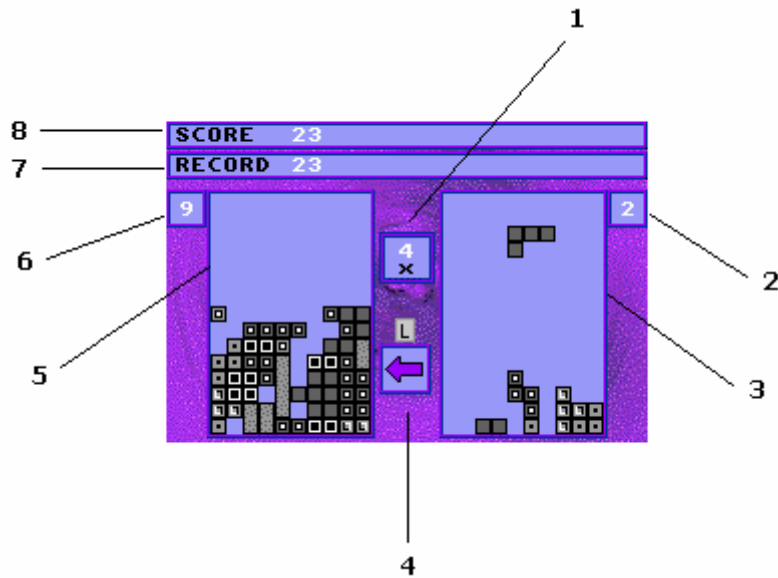
Setup

Shape Set:
Only tetrominoes shape sets can be selected for the Dual Board mode.

Game Play Elements

Below is an image of the on screen elements found in the Dual Board mode.

1.
The score multiplier.

2.
The right board clock

3.
The right board

4.
The switch board indicator. This arrow points towards the board that is legal to switch to. In this example the right board is active and the switch indicator shows that it is legal to switch to the left board. In this case it would be a good idea to make the switch because the right board's clock is about to run out.

5.
The left board

6.
The left board's clock

7.
The record panel. Shows the highest score ever achieved in Dual Board mode.

8.
The score panel. Shows the score of the current game.

Power Ups

Power ups are used in the Versus game modes and affect game play a great deal. They can have serious adverse or helpful consequences, so strategizing to earn them and preventing your opponent from earning them can be the key to victory.
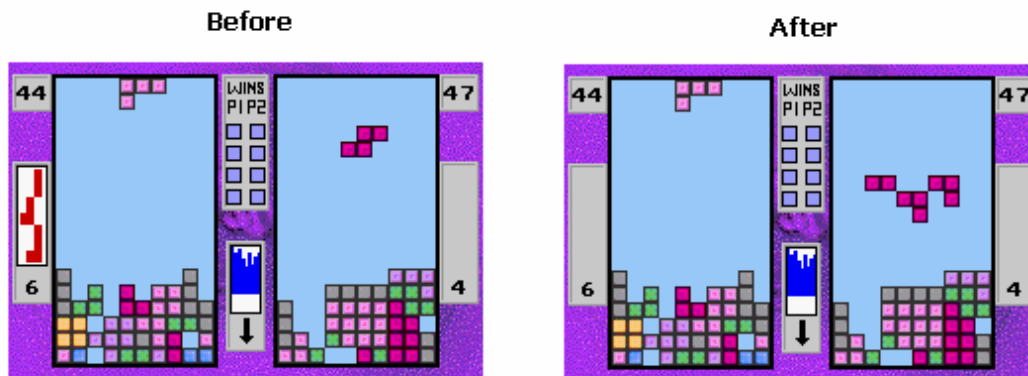
There is only one way to earn a power up; complete the number of lines indicated at the bottom of your power up panel before you opponent does. Think of it as a mini lines race. When a player completes their power up lines quota they will be given the power up that is indicated in the next power up panel. If the player already had a power up but had not yet used it, it will be replaced with the new one, so be sure to use your old one before it is too late.

The player that earns the power up will have his/her lines quota reset to 6 meaning they must complete 6 more lines before earning another power up. The player who failed to earn the power up will have his/her power up lines quota set to 4. This is done to give the player who missed out on the last one a fighting chance to earn the next one. Remember, having an offensive power up used against you makes it temporarily very difficult to complete lines.

What follows is a description of the 4 different power ups that can be earned in the game, highlighted by the before and after effects of their use.
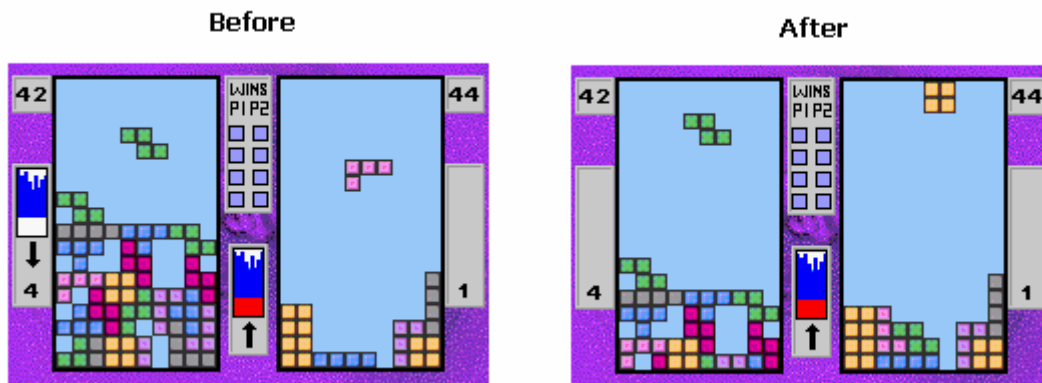
Power Up #1: Chaotic Shape
The chaotic shape is an offensive type power up. When used by a player, their opponent's current polyomino is forcibly changed to the chaotic shape. In the before picture player 1 holds the chaotic shape power up. In the after picture player 1 has used the power up and player 2 is now forced to maneuver the chaotic shape. This power up is especially potent and will likely cause your opponent a lot of work before they can return their board to a stable state after receiving it.
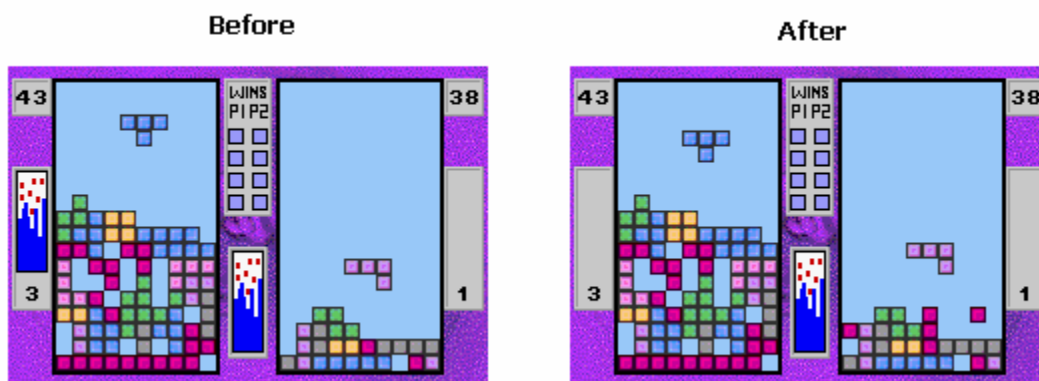
Power Up #2: Push Down

The push down power up is a defensive power up. When a player uses this power up the pile height of their own board will be reduced by 4 rows. The picture below shows player 1's board before and after he used the push down power up. This is a good power up to use when you are in danger of over flowing your board or are trying to recover from an offensive power up used against your previously. It is generally not a good idea to use the push down power up when you board's pile height is low or is in a stable and well organized state. Remember that you do need to have occupied blocks on your board in order to make lines in the first place.

The push down power up has a special property that none of the other four have. This property is that any power up can be converted to the push down power up. That is to say that if a player has earned some other power up they can trade it in for the push down power up. This is done by pressing the 'L' button. Once you convert your power up you cannot change it back. The reason this conversion is allowed is so that a player with a pile height that is dangerously high can bring themselves back from the verge of defeat if they can somehow earn a power up of any variety.

Power Up #3: Rain Garbage

This is another offensive power up. When it is used a few empty cells on you opponent's board near the top of their pile will be randomly selected and then occupied. The new red blocks in the after picture are the result of the rain garbage power up. The player on the receiving end will find it very difficult to place their shapes after this has been used against them. This power up becomes more nasty the higher your opponent's pile height is when used.

16.

Power Up #4: Push Up

This is very much the opposite of the push down power up. When you use it your opponent's board is raised by 3 rows of blocks. See the before and after pictures. If used at a very opportune time, the push up power up can guarantee victory for the player who possesses it. You must be careful about using this power up however, because the far right column of the rows pushed up will remain empty. This can potentially make it very easy for your opponent to make several lines at once.