

SWOS Picture Editor Documentation

v0.9

Karakaš Zlatko <zkz@eunet.yu>

November 2, 2004

Thank you for using SWOS Picture Editor. This program was written to make editing of every graphics in game possible. Because of a sad fact that there will be no new (official, at least) editions of SWOS, this program will help adding graphical refreshment to the old game.

Efforts have been made to make the program interface as close as possible to real SWOS. This has, perhaps, decreased user-friendliness - no windows, mouse, etc., but I hope that SWOS players are experienced computer users by now, and that anyone wishing to use this program to make something useful (SWOS skins perhaps?) would find their way. I will improve user interface in time.

Note: Do not start SWOS while SWPE is active.

1 Program modes

To handle all the functionality, program has been divided into 5 different modes: **SPRITE**, **PICTURE**, **PITCH**, **PATTERN** and **REPLAY**. Each mode has different use and different commands. Press **F1** in any mode to see which keys are valid.

Commands available on all screens are:

F1	– toggle help
F5	– switch to sprites mode
F6	– switch to pictures mode
F7	– switch to pitch mode
F8	– switch to patterns mode
F9	– switch to replay mode
ALT + ENTER	– toggle fullscreen mode
ESCAPE	– end program
A	– about program

Main window can be moved by holding control and dragging it with left mouse button, and control + right click will center it on screen. By double clicking on main window while holding control key you can minimize it. Same effect is achieved by pressing windows + s, which will restore program if it was already minimized.

1.1 Sprite mode

Sprite mode is used for viewing and replacing sprites. There are 1334 sprites in SWOS. Index file is SPRITE.DAT, and data files are CHARSET.DAT, SCORE.DAT, TEAM1.DAT, TEAM2.DAT, TEAM3.DAT, GOAL1.DAT, BENCH.DAT.

Commands:

SPACE/BACKSPACE	
ARROWS RIGHT/LEFT	– next/previous sprite
G	– go directly to sprite
PAGE UP/DOWN	– 10 sprites forward/backward
0..9	– change background color
HOME/END	– first/last sprite
+/-	– zoom/unzoom
F2	– save current sprite to bitmap
SHIFT + F2	– save all sprites
I	– toggle sprite information on/off
INSERT	– replace current sprite with corresponding bitmap
SHIFT + INSERT	– replace all sprites with corresponding bitmaps from current directory
CTRL + R	– revert sprites to saved state
CTRL + T	– switch between team2.dat and team3.dat

Arrow keys and space/backspace are provided for navigation within sprites. Use **G** for quick jump to specific sprite. **F2** saves sprite to disk in bitmap format for easy editing. Insert key will cause replacement of an in-game sprite with external bitmap. Mass save and insert sprite features are provided by holding shift. **SHIFT + F2** will save all sprites to disk, and **SHIFT + INSERT** will read in as many sprites as possible from external files. By default, sprites 644 – 946 are mapped to team2.dat. By pressing **CTRL + T**, sprites 644 – 946 will show graphics from team3.dat, so it too can be edited. Pressing same keys again returns team2.dat.

1.2 Picture mode

Primary purpose of this mode is watching *.256 pictures. It is possible to save them to bitmaps by pressing **F2**.

Commands:

SPACE/BACKSPACE	
ARROWS RIGHT/LEFT	– next/previous picture
F2	– save picture as bitmap
F3	– reload picture
+/-	– brighten/darken picture



Figure 1: Sprite mode

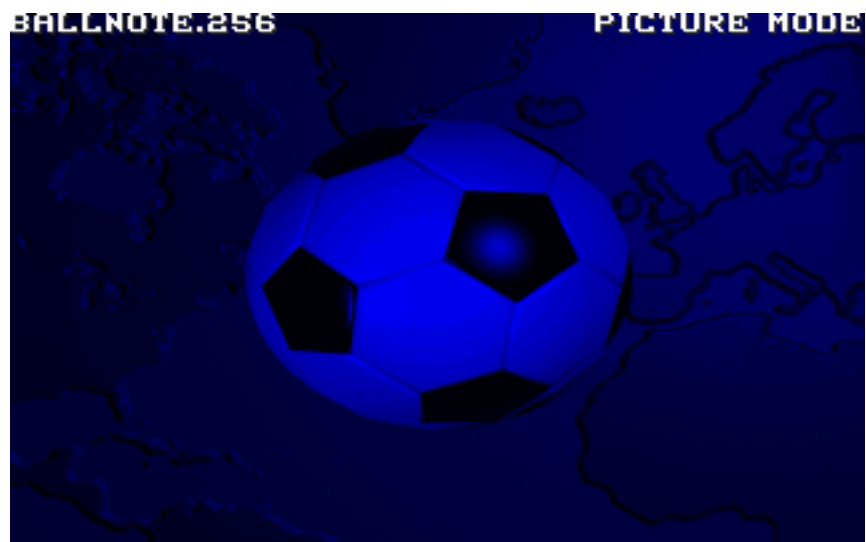


Figure 2: Picture mode



Figure 3: Pitch mode

1.3 Pitch mode

This mode enables user to scroll through the whole pitch, and also to edit it. Pitch is composed from 42 x 53 patterns, dimensions 16 x 16. By pressing **CTRL + E**, edit mode is activated, and flashing cursor is shown. By selecting some pattern and pressing **CTRL + UP/DOWN**, it is possible to change pattern index of the field.

Commands:

ARROWS	– scroll pitch
+/-	– change pitch type (frozen, muddy etc.)
CTRL + N	– show/hide pattern numbers
CTRL + E	– toggle edit mode
SPACE/BACKSPACE	– go to next/previous pitch
PAGE UP/DOWN	– scroll up/down by about half of screen
HOME/END	– go to up-left/down-right corner of pitch
F2	– save pitch to bitmap
INSERT	– read pitch from corresponding bitmap
In edit mode:	
CTRL + ARROWS UP/DOWN	– change pattern number plus/minus one

1.4 Pattern mode

This mode is for viewing and replacing individual patterns.

Commands:

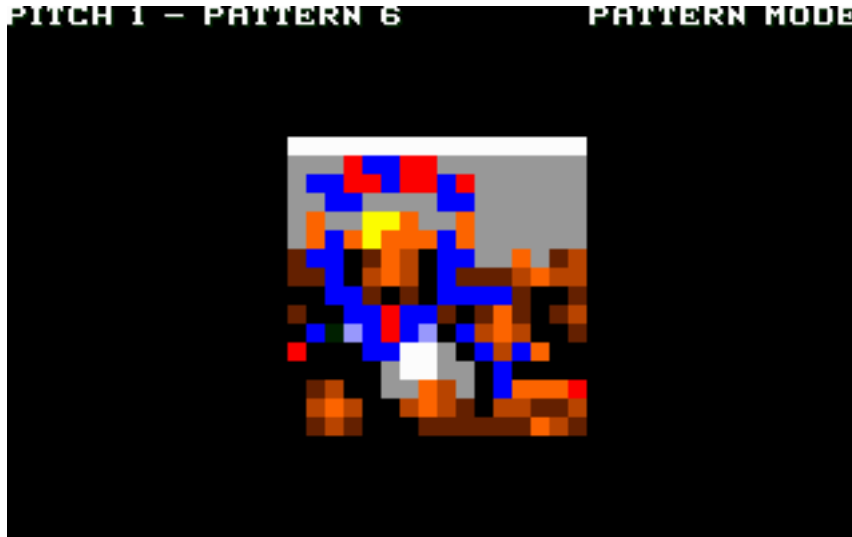


Figure 4: Pattern mode

ARROWS RIGHT/LEFT	– next/previous pitch
ARROWS UP/DOWN	– next/previous pattern
HOME/END	– first/last pattern
PAGE UP/DOWN	– 10 patterns forward/backward
SPACE/BACKSPACE	– change pitch type
F2	– save pattern to bitmap
G	– go to pattern
C	– change pattern number
DELETE	– delete current pattern
INSERT	– replace current pattern with corresponding bitmap

There is no undo command for deleting patterns, so use it with care.

1.5 Replay mode

This mode is in fact external replayer for SWOS replay and highlight files. In main menu you choose between highlight and replay files. If there are files of selected kind in directory, you will be presented with a menu with names of files. Bring cursor to file you wish to watch and press enter. Hopefully, program will start replaying file.

Shortcut keys available in menus, apart from arrows, are:

BACKSPACE	– return to previous menu (if any)
HOME	– go to first menu entry
END	– go to last menu entry

While replaying, use following commands:



Figure 5: Replay mode

- | | | |
|---------------|---|-------------------------------|
| ESCAPE | – | stop replaying |
| F | – | toggle frame rate display |
| +/- | – | speed up/slow down replay |
| P | – | pause replay |
| N | – | (while paused) step one frame |

Please note that the replayer is not completely finished at the moment. There are still a few things missing such as sound, sliding advertisements, animated fans and their colors.

2 Replacing sprites

When inserting sprite, bitmap with name `sprnnnn.bmp` is searched, where `nnnn` is number of current sprite. Bitmap must be 8-bit 256 color, without compression. Dimensions must be: $0 \leq \text{width} < 320$, $0 \leq \text{height} < 200$.

Recommended way of altering sprites is:

1. Find sprite you wish to change (you should see it in front of you)
2. Note its number (shown in the upper left corner)
3. Press '**F2**' - now the sprite is saved on your disk as a bitmap
4. Find the bitmap, which is in the same directory, and begins with "spr", followed by four digit number of sprite
5. Load bitmap into some graphics editing program and make your changes
6. Now start the SWOS Picture Editor, find the same sprite again, and press '**INSERT**' on your keyboard

7. Press **‘ESCAPE’**, press **‘Y’** when asked wheter to save changes
8. Start SWOS and enjoy your new graphics . . .

Be careful with resizing sprites - this could have unpredictable results, especially when enlarging. I have tried it out, and with some sprites everything went okay, but with others SWOS tended to crash at random times.

When editing sprite bitmap in graphics editor there are couple things that you should be aware of. Transparent color will be color number 17 in palette. If you'd like to add some transparent areas to sprite, just draw with that color. You can also "delete" sprite by making it 100% transparent. Transparent color will be background color in the moment of saving, so you should pick some color not used in the sprite.

Also note that colors will be converted according to skin color of player and dress color of teams that are playing:

- 0 – no change
- 1 – no change
- 2 – no change
- 3 – no change
- 4 – skin color (light shade)
- 5 – skin color (normal shade)
- 6 – skin color (dark shade)
- 7 – turned to zero
- 8 – no change
- 9 – hair color (normal shade)
- 10 – shirt basic color
- 11 – shirt stripes color (swapped with 10 when vertical stripes)
- 12 – hair color (dark shade)
- 13 – hair color (light shade)
- 14 – shorts color
- 15 – socks color

3 Replacing patterns

Process of replacing patterns is similar to replacing sprites. Here only allowed bitmap dimension is 16 x 16. Bitmap data are simply copied into corresponding place in the pitch file. Also index of the pattern can be changed in pitch mode.

When editing pattern in graphics editor, note that colors 10 and 11 will be converted. Color no. 10 will be shorts color if team is using one color shirt, or shirt basic color if not, and color 11 will always be primary shirt color. Only 42 patterns have this color converting property, and those are mostly crowd patterns. Those colors are red and blue, and you can see in **PITCH** mode that fans are mostly covered with it.

Pitch types are achieved by palette modification. Palette entries: 0, 7, 9, 78, 79, 80, 81, 106 and 107 are changed depending on pitch type accomplishing visual changes according to conditions.

Patterns 1 to 24 have special properties - they are animated crowd. Patterns 1..12 are upper crowd, and patterns 13..24 are lower crowd. Odd indices are pictures when not moving, and even indices are pictures when animated (jumping, chearing, etc.). Pattern 0 is usually empty pattern (except in training pitch).

You can replace individual patterns without any special considerations, but inserting whole pitch from bitmaps needs some attention. Following does not hold for training pitch, which does not have crowd, and therefore animated patterns. When some pitch with crowd is inserted, pattern zero will be set to empty pattern (filled with zeros), and patterns from 1 to 24 will be set: 1 = 2, 3 = 4, etc., every odd and following even number will hold the same pattern. By default, this will turn animation off. To re-enable it, use change pattern number feature and set patterns that will be animated into odd patterns 1..24. Even patterns must be inserted manually.

Important thing to know when inserting bitmaps is that maximum allowed number of unique patterns on pitch is 296. SWOS uses only 75776 bytes of memory for patterns, and if that limit is exceeded each pattern with index greater than 295 will be overwritten.

4 Known bugs/limitations

Currently there are no known bugs with the program itself. Only limitations come from the fact that I am not 100% sure how SWOS handles some data files. There exist some sprites and patterns with special properties, and I haven't had enough time to test SWOS behaviour with all possible combinations.

In the highly unlikely event of program crash, please find file named errlog.txt in the same directory, and send it to me by e-mail, together with detailed error description, so I can fix it in next versions.