

WormWars

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	<i>TITLE :</i> WormWars		
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REVISION HISTORY

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Chapter 1

WormWars

1.1 Worm Wars

```

                                     #*=====*#
#|   W O R M   W A R S   |#
#|     for the Amiga     |#
#|     Version 6.4      |#
#|     Sat 7 Oct 2000   |#
#|                       |#
#|   by James R. Jacobs |#
#*=====*#
```

Overview

New Features

Usage

Other Information

Title Screen

Field Editor

How to Play

1.2 Overview

Worm Wars is an arcade game for 0-4 players. It combines the playability of its basic concepts with 32 interesting object types, 10 species of creature, and other enhancements.

1-4 worms travel around a rectangular maze leaving a deadly trail behind them, competing and sometimes cooperating with other creatures, collecting letters to advance to the next level.

The integral field editor allows you to load, edit and save user

fieldsets, for greater lasting attraction. There is support for playing MED and IFF 8SVX files as music and sound effects respectively. Custom fonts and backgrounds are used.

It is enjoyable either for one player, or for competitive multiplayer games, and demo mode is available. Amiga or human control can be specified for any worm. Two keyboard players and two joystick players are supported. It is system-friendly, style compliant and it multitasks.

1.3 New Features

- . There are now guide arrows along the field edges which point to each worm and letter.
- . Project|Delete... menu item.
- . X and Y symmetry functions for field editor.
- . Miscellaneous bugfixes.

1.4 Usage

System Requirements

Startup

1.5 System Requirements

Hardware	Required	PAL/DblPAL capability about 512K free RAM
	Recommended	Colour monitor 68020+ Joystick Mouse about 1Mb free RAM Keyboard with numeric keypad Battery-backed clock Graphics board
Firmware	Required	Kickstart R2.04+ exec.library V36+ dos.library V37+ gadtools.library V37+ intuition.library V37+ icon.library
	Recommended	Kickstart R3.1+
Software	Required	Workbench/CLI R2.04+ asl.library V37+
	Recommended	OS3.5+ amigaguide.library MEDPlayer.library (included)

Worm Wars can run in a 15Hz PAL screen, or, if you have an AGA machine

with VGA/multisync monitor, you can promote it to a DblPAL screen. Apparently in DblPAL mode the sound effects are slightly distorted.

You need at least Installer 42.9 to run the installation script.

We strongly recommend a 68020+, as the turbo rendering routines require a 68020+.

1.6 Startup

Workbench ToolTypes

CLI arguments
Startup

If the joyport cannot be allocated on startup, the blue worm cannot be selected for human control.

The default behaviour is to load the music and sound effects automatically at startup. The `-f` and `-m` CLI arguments prevent loading of the sound effects and/or music respectively, until needed for use.

If `WormWars.font` cannot be loaded at startup, Topaz 8 is used.

If the specified default fieldset cannot be loaded at startup, a blank, five-level fieldset is used instead, with a treasury floored with silver.

1.7 Workbench ToolTypes

The following can be specified in the game's `.info` file. All are optional.

<code>TOOLPRI=<priority></code>	eg. <code>TOOLPRI=5</code>
<code>FILE=<fieldset></code>	eg. <code>FILE=foo.fset</code>
<code>GREEN=HUMAN AMIGA NONE</code>	eg. <code>GREEN=HUMAN</code>
<code>RED=HUMAN AMIGA NONE</code>	
<code>BLUE=HUMAN AMIGA NONE</code>	
<code>YELLOW=HUMAN AMIGA NONE</code>	
<code>NOFX</code>	eg. <code>NOFX</code>
<code>NOMUSIC</code>	
<code>NOICONS</code>	
<code>OVERHEAD</code>	
<code>SHUFFLE</code>	

These are equivalent to the relevant CLI arguments

.

If you double-click on a fieldset file, the game will load with that fieldset. ToolTypes are then, of course, taken from the fieldset's `.info`

file.

1.8 CLI Arguments

Command Information

WormWars

Format: WormWars [-p=<priority>] [-f|nofx] [-m|nomusic]
 [-i|noicons] [-o|overhead] [-s|shuffle]
 [green=HUMAN|AMIGA|NONE] [red=HUMAN|AMIGA|NONE]
 [blue=HUMAN|AMIGA|NONE] [yellow=HUMAN|AMIGA|NONE]
 [[file=]<fieldset>]]

Template: WORMWARS -F=NOFX/S, -M=NOMUSIC/S, -I=NOICONS/S,
 -P=PRI/K/N, -O=OVERHEAD/S, -S=SHUFFLE/S, GREEN/K, RED/K,
 BLUE/K, YELLOW/K, FILE

Purpose: To run the Worm Wars game.

Specification:

-p: the priority that Worm Wars will be run at. Higher priorities can help the game to run closer to full speed. Lower priorities can help the system multitask, by giving less processor time to Worm Wars.

The allowable range is -128 to +5, with the default being 0.

-f: don't bother loading sound effects until asked.

-m: don't bother loading music until asked.

-i: don't create icons when saving.

-o: select overhead viewpoint at startup.

-s: shuffle levels.

colour=HUMAN|AMIGA|NONE:

the initial controls for the worms. For example, GREEN=HUMAN will select human control for the green worm. Unless otherwise specified, RED=HUMAN, YELLOW=AMIGA, GREEN=NONE and BLUE=NONE.

<fieldset>: the pathname of your default fieldset. This is taken exactly as entered; an '.fset' extension is not automatically appended. This is loaded relevant from the current directory. If no argument is given, the default is PROGDIR:WormWars.fset.

?: displays the command line argument format, instead of running the game.

The order of the arguments are interchangeable.

Examples:

```

WormWars /foo.fset          load foo.fset from parent
                           directory, and run at priority level 0

WormWars -f -p-3 bar.fset  load bar.fset from current
                           directory, and run at priority
                           level -3, without loading sound effects

WormWars HD1:foo.fset -m -f -p4 -o load foo.fset from root
                           directory of HD1:, and run at
                           priority level +4, without loading music or
                           sound effects, and set overhead viewpoint

WormWars -p+5 /fsets/bar.fset load bar.fset from fsets/
                           sibling directory, and run at priority
                           level +5

WormWars ?                  display command format

```

1.9 Title Screen

Keys

```

Esc F1 F2 F3 F4 .. .. .. .. ..
.... 1 2 3 4 . . . . . <- ... Hel . . . .
..... Q . . . . . I O . . . Ret . . . .
... .. A S . F . . . . . ur . 4 . . .
Shift . . . . . N M . . ? Shift . . . 1 2 3 E
.. .. ----Spacebar---- Am .. -. . n

```

1-4 or F1-F4 cycles the relevant worm controls through 'None', 'Amiga' and 'Human'. If Shift is held as a qualifier, it cycles backwards. Return or Enter begins the game. M toggles the music on or off. F toggles the sound effects on or off. I toggles the viewpoint between overhead and isometric 3D. S toggles level shuffling on or off.

Menu

Project New	Amiga-N	Creates a blank, 5-level fieldset titled WormWars.fset.
Project Open...	Amiga-O	Loads a fieldset.
Project Revert	Amiga-R	Reloads the current fieldset.
Project Save	Amiga-S	
Project Save As...	Amiga-A	

Project Delete...	Amiga-D	Deletes a fieldset.
Project Quit	Amiga-Q, Esc	Exits to CLI/Workbench.
Settings Create Icons?	Amiga-I	Create icons when saving?
Help Creatures...		List of creatures.
Help Objects...		List of objects.
Help Manual...		Opens this document.
Help About...	Amiga-?, Help	Credits window.

Gadgets

Key	Colour	Human Controls	Letters
-----	--------	----------------	---------

1	Green	Left Keyboard	
---	-------	---------------	--

C and L

2	Red	Right Keyboard	
---	-----	----------------	--

O and E

3	Blue	Joystick 2	
---	------	------------	--

M and T

4	Yellow	Joystick 1	
---	--------	------------	--

P and E

Any combinations of human and Amiga control are acceptable, but at least

one worm must exist.

1.10 Field Editor

The field editor allows you to load, edit and/or save the playfields which the worms compete on.

You are allowed to have up to 40 levels in each fieldset. The bonus level, that is, level 0, is not considered in the count of levels.

The high score table is loaded and saved as part of the fieldset file: there is a separate high score table for each fieldset. Making any modification to the fieldset will clear all the fieldset's high scores.

If you have modified your field since you saved it and want to do something which will lose the changes you will be asked to confirm your intent.

Hints

Keys

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	..
....	1	2	3	4	5	6	7	8	9 Del Hel () . .

```

..... Q . E R . . . I O . . . Ret          7 8 9 .
Ctr .. A S . F . . . . . . . . ur          U    4 5 6 .
Shift . . C . . . N M . . ? Shift        L D R   1 2 3 E
      Al .. -----Spacebar----- Am Al    -0- . n

```

```

F1      gold
F2      silver
F3      empty
F4      wood
F5      stone
F6      metal
F7      teleport '1'
F8      teleport '2'
F9      start

```

M toggles the music on or off.

F toggles the sound effect on or off.

Delete and Help change the current level (lower and higher, respectively). When shifted, they change to level 1 or the final level, respectively.

C centres the cursor in the centre of the field.

X and Y are symmetry functions. The cursor will move to the other side of the field, at the same distance from the other edge as it was originally from the original edge. This is useful for making symmetrical fields.

Numeric . stamps the current brush at the current cursor location.

Numeric 0 toggles 'sticky mode'. This means that the 'brush' is held down: any single-square keyboard cursor movements will alter squares that the cursor passes over to the current brush. Toggling sticky mode 'on' also does a 'stamp' of the current brush at the current cursor location.

F1-F9, when unshifted, change your brush type to the appropriate type, as if the gadget had been clicked. When shifted, the level will be filled (except for start and teleports) with the requested square type, without change to the current brush.

Alphanumeric 1-9 change the square under the cursor to the relevant type, without affecting the current brush.

The cursor keys or numeric keypad move the cursor around the field. The default movement is one square. (If sticky mode is on, copies of the brush are left behind). Holding Alt moves the cursor in increments of five squares. Holding Shift or Ctrl moves the cursor to the relevant edge of the field. (The cursor is shown as a white square, or in sticky mode as a red square.)

Numeric (and) cycle the brush and square under the cursor through the available objects
, lower and higher, respectively.

Menu

Project New	Amiga-N	Clears the fieldset.
Project Open...	Amiga-O	Loads a fieldset.
Project Revert	Amiga-B	Reloads the current fieldset.
Project Save	Amiga-S	Saves current fieldset.
Project Save As...	Amiga-A	Saves with new filename.
Project Delete...	Amiga-D	Deletes a fieldset.
Project Quit	Amiga-Q, Shift-Esc	Exits to CLI/Workbench.
Edit Cut	Amiga-X	
Edit Copy	Amiga-C	
Edit Paste	Amiga-V	
Edit Erase	Amiga-E	Clears this level.
Edit Delete		Deletes this level.
Edit Insert		Inserts blank level here.
Edit Append		Adds blank level to end.
Settings Create Icons?	Amiga-I	Create icons when saving?
Help Creatures...		List of creatures.
Help Objects...		List of objects.
Help Manual...		Opens this document.
Help About...	Amiga-?, Help	Credits window.

Remember that the menus, and their Amiga-key shortcuts, are unavailable whilst the pointer is over the playfield.

Joystick control

A joystick plugged into port '2' can be used in the field editor. Directional controls move the cursor in single square increments. Holding the directional controls continue to move the cursor. The firebutton stamps the current brush at the current location. Holding down the firebutton whilst moving the stick, to produce lines of squares, is not yet supported, though autofire can emulate this behaviour.

You will need to use the keyboard and/or mouse to control other functions of the field editor, such as file operations, changing the brush, etc.

Mouse control

The gadgets to the left of the field will change your current 'brush' to the appropriate type. This brush is assigned to the left mouse button, and the keyboard and joystick. The pointer imagery will be altered to reflect your brush type, for some brush types.

The right mouse button, when over the playfield, will function as 'empty' rather than bringing up the menus.

Clicking on the field will change the current cursor location to the chosen square, and change that square to the current brush (or to 'empty' if the right mouse button is clicked).

You can click on any object in the Help|Objects... requester, and that object will become your current brush.

Teleports:

Two teleports, '1' and '2', may be defined in the field

editor. These

```
teleports
will teleport to each other
```

during gameplay. They are completely independent of any teleports that may be created randomly as the game progresses. It is illegal to have only one teleport as it would lead to nowhere. Therefore, whenever the field is saved or you return to the title screen, any lonely teleport is removed.

Start:

The starting location for all worms. This is invisible during gameplay. Usually it is best left where it is, in the centre of the field.

```
  -
 / \
  |
  |
  Blue
<--- Green START Red --->
  Yellow
  |
  |
  \ /
```

1.11 Hints

All worms start from the same square. Worms may emerge from it in any orthogonal direction. Leave enough space. Fields should not give an unfair advantage to any particular worms. The easiest way to ensure this is through the use of symmetry.

Mazes one square wide are difficult. 3-5 squares width is usually more appropriate for less skilled players.

Point-squares (ie. silver and gold) should be used with restraint, and generally only as a reward for difficult maneuvering. The average field should give have only about 5% point-square density. Richer fields can be made for experienced players, but they should be as a reward for skill.

Goats only fire when they are on the edge of the stone/wood/metal/tail/slime, but they move quasi-randomly. Therefore, some configurations will be more deadly than others. For example, thin lines provide maximum contact between worms and goats, and thick square areas will quickly generate new goats.

Lightly sprinkle your treasury with objects. Use objects very sparingly or not at all in other levels.

Metal squares which are aligned with each other can be deadly and enjoyable, as fragments can bounce between one and the other endlessly until a collision occurs. Remember also that metal is unjumpable.

1.12 Other Information

Contact Details
Platforms

Development System

Source Code

History

Other Software

1.13 Contact Details

Licence

The licence conditions have been improved. We decided to change Worm Wars for Amiga from shareware to freeware, as a gift to the Amiga community. This means that both our products are now freeware. Thanks to those Amigans who registered Worm Wars; it did contribute to the improvement and enhancement of the game.

There are no plans to cease development of Worm Wars. Users should send in their ideas for incorporation into future version of the game.

This software is freeware. There are no limits on usage, distribution or modification, except that you are not allowed to distribute it, or modified versions of it, for commercial purposes without consent.

Bugs

Amiga development and style guidelines have been adhered to, using the official Amiga Developer CD 2.1 as authoritative reference.

Please contact us immediately if any bugs are found. You can use our utility, Report+, to generate bug reports for Worm Wars, though this is not required.

Submissions

Fieldsets, music (ST/MED format), samples (IFF 8SVX/WAV), backgrounds (2-colour IFF ILBM 640*256) or even modified versions of the game can be submitted and may be distributed with a future release, with acknowledgements to the contributor(s).

Users are invited to contribute suggestions for the future of the game. Special thanks to Jilles Tjoelker for his turbo draw routines, suggestions and bug reports.

Sound effects

The game uses IFF 8SVX files for its sound effects. Full IFF 8SVX support

is not required for the purposes of the game, and therefore the following rules are imposed on the samples:

Must be an IFF 8SVX FORM (ie. not CAT or LIST).

No compression schemes are allowed.

Maximum sample size is 128K.

Must be 'one shot' style rather than 'musical note' style sample.

Only the first (highest, longest) octave is used.

Must be a single channel (ie. monaural) sample.

8SVX.VHDR and 8SVX.BODY chunks are, of course, required.

All other chunks (eg. generic IFF chunk PROP; standard IFF chunks NAME, (C), ANNO, AUTH; proposed IFF chunk END; standard IFF.8SVX chunks ATAK, RLSE; extended IFF.8SVX chunks CHAN, PAN, SEQN, FADE) are ignored.

Sample rate is taken from the 8SVX.VHDR chunk.

The volumes of the samples are set from within the program.

IFF 8SVX or WAV files submitted to Amigan Software as contributions can, if necessary, be converted by us to fit these restrictions.

Future

Amigan Software have demonstrated their commitment to the Amiga for many years. We intend to continue development regardless of the market situation of the Amiga.

Contact details

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1.14 Amiga Development System

Hardware Virtual A1200 (14MHz MC68EC020+FPU on 133MHz Pentium)
 1.2Gb 3.5" SCSI hard disk (compressed to 2.4Gb)
 2Mb chip RAM
 4-8Mb fast RAM
 1Mb RTG RAM
 56Kbps Dynalink (Rockwell) modem
 Quickshot QS-209F Skyhawk joystick
 ESS MF-1868 (SoundBlaster Pro-compatible) sound card
 NEC MultiSync 2A colour monitor running as
 15Hz PAL (640*512)/uaegfx (640*480)
 Battery-backed clock

Firmware Kickstart 3.1

Software WinUAE 0.8.6 R6 and 0.8.14 R1

Fellow 0.3.6
 OS3.5 with Boing Bag 1 and Installer 44.7
 SAS/C 6.58 with SLink and SAS/C Editor and CodeProbe
 Amiga Developer CD-ROM 2.1
 AmigaGuide Writer 1.02
 Amiga Lint 2.0b
 BlowUp
 CheckGuide
 CodeWatcher 1.4
 CygnusEd Professional 4.2
 Deluxe Paint 5
 Gguide2txt
 IFF 2 Source 1.0
 IO_Torture
 KingCon 1.3
 LhA 1.51
 MungWall
 OctaMED 5 and MEDPlayer Programmer's Sources
 PatchWork
 Picasso96 2.0
 PrintA
 Report+
 Sashimi
 SmartCrash
 SoundBox 2.9 beta
 StackCheck
 StackSnoop
 StackWatch
 VirusChecker][2.2 (BF 2.18)

Thanks to all those whose software was used to create Worm Wars.

1.15 Source Code

The Amiga version is written in hybrid C/assembler (SAS/C 6.58), whilst the IBM-PC version is written in hybrid C/C++ (Microfilth Visual C++ 5.0), using Microfilth Foundation Classes.

Both platforms use the same game engine, written in C, with API calls for the relevant OS in other modules.

SAS/C 6.58 source code is provided, with which you may do as you wish for non-commercial purposes.

The Amiga source files are:

system.c	Amiga-specific code, including all AmigaOS calls.
system.o	Object file of system.c.
engine.c	Code common to the Amiga and IBM-PC versions.
engine.o	Object file of engine.c
diff.h	Header file used by both modules. Amiga-specific.
same.h	Header file common to both modules and both platforms.
ww.s	AmigaDOS script to link modules into executable.
SCOPTIONS	SAS/C options we prefer to compile with.
libproto.h	MEDPlayer.library C header.


```

stdafx.h      Required for IBM-PC compatibility. :-(
bkgrnd.ilbm  Backdrop graphics in IFF ILBM format.
wormwars.ilbm Other graphics in IFF ILBM format.
qdraw020.h   Header file for turbo draw routines.
qdraw020.asm Assembler source for turbo draw routines.
qdraw020.o   Object file for turbo draw routines, for overhead view.
qdraw020iso.o Object file for turbo draw routines, for isometric 3D view.
assemble.s   AmigaDOS script to assemble turbo draw routines.

```

1.16 History

```

6.4      [Amiga 2.04+] [Windows 95/98/NT/2000]. Sat 7 Oct 2000.
6.3a    [Amiga 2.04+] [Windows 95/98/NT/2000]. Fri 18 Aug 2000.
6.3     [Amiga 2.04+] [Windows 95/98/NT/2000]. Tue 8 Aug 2000.
6.2     [Amiga 2.04+] [Windows 95/98/NT/2000]. Thu 22 Jun 2000.
6.1     [Amiga 2.04+]. Thu 15 Jun 2000.
6.0a    [Amiga 2.04+] [Windows 95/98/NT/2000]. Thu 8 Jun 2000.
6.0     [Amiga 2.04+] [Windows 95/98/NT/2000]. Thu 1 Jun 2000.
5.61    [Amiga 2.04+] [Windows 95/98/NT/2000]. Wed 26 Apr 2000.
5.6     [Amiga 2.04+] [Windows 95/98/NT/2000]. Wed 19 Apr 2000.
5.51a   [Amiga 2.04+] [Windows 95/98/NT/2000]. Wed 29 Mar 2000.
5.51    [Amiga 2.04+]. Tue 28 Mar 2000.
5.5     [Amiga 2.04+] [Windows 95/98/NT/2000]. Tue 14 Mar 2000.
5.4     [Amiga 2.04+] [Windows 95/98/NT/2000]. Sun 5 Mar 2000.
5.3     [Amiga 2.04+]. Sun 13 Feb 2000.
5.21    [Amiga 2.04+] [Windows 95/98/NT/2000]. Wed 5 Jan 2000.
5.2     [Amiga 2.04+]. Wed 29 Dec 1999.
5.1a    [Windows 95/98/NT/2000]. Tue 28 Dec 1999.
5.1     [Amiga 2.04+] [Windows 95/98/NT/2000]. Tue 23 Nov 1999.
5.0a    [Windows 95/98/NT/2000]. Tue 2 Nov 1999.
5.0     [Amiga 2.04+] [Windows 95/98/NT/2000]. Mon 1 Nov 1999.
4.4     [Amiga 2.04+] [Windows 95/98/NT/2000]. Wed 22 Sep 1999.
4.3a    [Windows 95/98/NT/2000]. Wed 8 Sep 1999.
4.3     [Amiga 2.04+] [Windows 95/98/NT/2000]. Sun 5 Sep 1999.
4.2     [Amiga 2.04+] [Windows 95/98/NT/2000]. Sat 7 Aug 1999.
4.1     [Amiga 2.04+] [Windows 95/98/NT/2000]. Sun 6 Jun 1999.
4.0     [Amiga 2.04+]. Sun 1 Nov 1998.
3.3     [Amiga 2.04+]. Wed 29 Jul 1998.
3.2     [Amiga 2.04+]. Tue 3 Dec 1996.
3.1     [Amiga 2.04+]. Tue 16 Apr 1996.
3.0     [Amiga 2.04+]. Thu 18 Jan 1996.
2.2     [Amiga 1.2+]. Sun 5 Feb 1995.
2.1     [Amiga 1.2+]. Tue 27 Dec 1994.
2.0     [Amiga 1.2+]. Sat 3 Dec 1994.
1.7     [Amiga 1.2+]. Wed 26 Oct 1994.
1.6     [Amiga 1.2+]. Sun 9 Oct 1994.
1.5a    [Amiga 1.2+]. Thu 25 Aug 1994.
1.5     [Amiga 1.2+]. Sun 10 Jul 1994.
1.4     [MS-DOS]. Wed 9 Mar 1994.
1.3     [MS-DOS]. Fri 11 Feb 1994.
1.2     [MS-DOS]. Thu 4 Nov 1993.
1.1     [MS-DOS]. 1993.
1.0     [MS-DOS]. 1993.

```

1.17 Other Software

Report+ 3.4

Report+ is a freeware ReAction/GadTools-based utility with nine distinct functions:

1. It is an enhanced, reverse-engineered, 100% byte-compatible replacement for the official Commodore bug reporting tool (40.2).
2. It can generate Aminet-style readmes.
3. It can administer the Amiga Certified Software Engineer test.
4. It can generate C-style autodocs.
5. It can access the official manufacturer and product ID registries.
6. It can access the official IFF FORM registry.
7. It can convert between various end-of-line (EOL) formats.
8. It can show directory byte usage for any path.
9. It can edit A3000-type battery-backed memory.

Worm Wars for Windows 95/98/NT/2000

The Amiga version of Worm Wars has long been popular in the Amiga community, acknowledged as the premier snake game for many years. It is also available to the masses of benighted Windows users. This version includes dockable toolbars, a status bar and automatic saving/reloading of configuration information.

The current version, 6.4, of Worm Wars for Windows 95/98/NT/2000 is likely to be the last for that platform. Amiga development will, of course, continue.

1.18 How to Play

Worm Wars is an arcade game for 0-4 human players. Each player controls a worm. They move around a semi-toroidal rectangular (53x39) playfield, leaving their tails behind them. Each worm aims to amass the most points, to complete

the levels and to survive as long as possible. The rightmost column is not actually part of the fieldset but rather indicates the vertical position of the current letter and all worms.

- Worms
- Controls
- Orbs
- Letters
- Goats
- Objects
- Protectors
- Scoring
- Slime
- Strategy
- Drips
- High Scores
- Penguins
- Whirlwinds
- Fragments
- Dogs
- Teleports
- Clouds
- Timebombs

1.19 Controls

In-game keyboard controls

```

Esc . . . . .
. . . . .
..... Q W E . . . . . P . . . . .      7 8 9 .
... .. A S D F . . . . .                U      4 5 6 .
Shift . Z X C . . . M . . . Shift   L D R   1 2 3 E
.. .. -----Spacebar----- .. ..      -0- . n

Green worm                Either      Red worm

```

Esc exits to the
title screen

Shift-Esc exits to CLI/Workbench.
P pauses until P is pressed again.
M toggles the music on and off.
F toggles the sound effects on and off.

Worm control principles

Worm control is an acquired skill and is the single most important factor in playing successfully and enjoyably.

A worm has direction and speed. It is unable to ever stop completely, unless frozen by

ice
, but its speed is adjustable between three settings. Normally, it can turn 90° in any direction and moves orthogonally (north, south, east, west), but a nitro will enable 45° and 135° turns and \leftrightarrow diagonal movement.

The worm can pass through most types of square, though some cause damage. Some squares slow the worm down, halving its speed for every square traversed (to a minimum of 'slow'). Stone, metal, goats and blocked

teleports
will block the worm's motion as well as slow it.

Control of the worms is by keypresses; that is, press and release in a normal keystroke motion. There is no reason to ever hold down any key. Only fresh keystrokes are ever looked at by the program. Also, holding down a key may lock out your input (see below).

For joystick control, it is best to nudge the joystick briefly in the direction you want, and let it return to the central upright position.

Each move, a worm is able to do any one of five things:

- . fire (in the current direction);
- . change direction;
- . change speed (one speed in either direction);
- . jump; or
- . nothing.

The worm will move one square regardless. This means you can:

fire in your current direction	and move in your current direction,
change direction	and move in the new direction,
change speed	and move in your current direction.
jump	leaping 2-4 squares and then landing, in your current direction.
nothing	and move in your current direction.

Speed changes are accomplished using the same keys as for turning.

Pressing the direction you are already travelling increases your speed; pressing against that direction decreases your speed.

Keyboard [green and red]

If only one human is selected for the keyboard, all three sets of keyboard controls are available for that player, whether it is the green or red worm. When only one human is selected for the keyboard, we suggest using the cursor keypad, as it has the best rollover properties (ie. you can press a key whilst another is already held down). However, the cursor keypad obviously does not support diagonal movement.

Two players may use the keyboard, playing at each end. If there are two humans selected for the keyboard, the cursor keypad cannot be used, due to keyboard hardware limitations. The green worm must use the leftmost controls (QWEASDZXC, spacebar) and the red worm must use the rightmost controls (the numeric keypad).

Note that the leftmost and rightmost controls do not rollover properly, due to keyboard hardware limitations. This means that you must release all keys before pressing another one, or the new keystroke is ignored and so is all further input from that player until all keys are released. The other player's keystrokes are completely unaffected by what you do; you can only cause this problem for yourself.

X and C are both down-right for the green worm.
Spacebar is the firebutton for the green worm.

5 and 2 are both down for the red worm.
0 and Enter on the numeric keypad are both firebuttons for the red worm.

Joystick [blue and yellow]

The blue worm can use a joystick plugged into port '2'. If the joystick could not be allocated during initialization then human control will be unavailable.

The yellow worm can use a joystick plugged into port '1'. This uses direct hardware access, rather than using the gameport.device. Therefore allocation can never fail.

1.20 Letters

There will always be one, neither more nor less, letter onscreen ←
at
any given time. When a worm collects it, another, which that worm
needs, will appear.

The main objective of the game is to complete all the levels.
The level will be completed and the next loaded as soon as a worm has all eight letters, which together spell the word COMPLETE. All worms will then lose all their letters. The worm which completed the level receives these points:

100 x old level
 10 x seconds remaining
 1 x tail squares of your colour onscreen

Only worms and their
 protectors
 go on to the next level;
 other creatures perish. Each level is faster than the last, and creatures
 are faster and more frequent.

Only 2:00 (two minutes) are allocated for each level. After that time
 has elapsed, the speed of all current creatures will be doubled, and the
 frequency of all future creatures will be doubled.

1.21 Objects

	Type	Points	Frequency
Affixer			
60	Very rare		
Ammo			
20	Common		
Armour			
20	Common		
Bias			
50	Common		
Bomb			
30	Common		
Bonus			
10	Common		
Clock			
60	Very rare		
Converter			
50	Uncommon		
Cutter			
80	Uncommon		
Cyclone			
90	Uncommon		
Freedom			
30	Rare		
Grower			
50	Uncommon		

Healer	90	Very rare
Ice	60	Very rare
Life	50	Uncommon
Lightning	40	Uncommon
Magnet	80	Rare
Missile	40	Uncommon
Multiplier	50	Rare
Nitro	10	Uncommon
Powerup	30	Uncommon
Protector	50	Rare
Pulse	40	Uncommon
Pusher	50	Uncommon
Remnants	40	Uncommon
Sideshot	30	Rare
Slayer	40	Rare
Slower	40	Rare
Switcher	70	Rare
Tongue	20	Uncommon
Treasure	100	Very rare

Umbrella
100 Very rare

1.22 Affixer

Affixer

This causes your
protectors
to stop rotating and
zigzagging. They are 'fixed' into position at whatever position they
were in at the time. This makes them more useful, as you can more easily
predict where they will be at any given time in advance.

1.23 Ammo

Ammo

Ammo provides 2-6 bullets.

Bullets are fired by pressing your appropriate fire
control

.
If a bullet is available, you will fire. This bullet is instantaneous. If
you have no bullets, you may
jump

.
The width of your bullet depends on
powerups
. Normally,
it is 1 square wide, but it can be up to 7 squares wide. In reality,
up to 7 independent bullets are fired.

A bullet which hits a
teleport
will be teleported and continue on its way.
You will get the teleport
skill bonus
, too. That segment of
the bullet will thereafter leave a trail of gold behind it.

A bullet which goes through the same teleport twice, or is reflected off
metal twice, will be destroyed.

In the absence of obstructions, a bullet continues going until it reaches
the edge of the field.

1.24 Armour

Armour

Armour will protect worms from being hurt by many different causes.
For a list of them,

click

.

Armour is only temporary. Its power counts down at a constant rate, and
can be extended by the acquisition of more armour. It is a

mode

.

While you are in armour

mode

your head-image will be different.

When your armour is nearly gone your head will flash.

1.25 Bias

Bias

Provides these benefits:

missiles

will not chase you.

you can

shoot

through wood.

whenever you

shoot

you will also launch a

missile

,

if possible.

vampirism: whenever you cause a

worm

to take damage,

you gain as many lives as they lost. Whenever you kill an

orb

,

goat

,

penguin

or friendly

drip

, you gain a life.

any bombblast by you will turn squares to silver, not empty.

when you get a switcher, enemy remnants are also switched to your
own colour.

when you do enclosure, squares are changed to gold.

Bias counts down at a constant rate. It can be extended by the

acquisition of more bias. You can use bias in conjunction with one of the

modes

.

1.26 Bomb

Bomb

As soon as you go over one of these the bomb will go off, clearing the area around you. The blast radius is random, but is always constrained by the field edges.

1.27 Bonus

Bonus

You will be given a random

letter

. It may be one you already

have. You do not receive

skill points

for

letter

collection,

only your points for collecting this

object

.

1.28 Clock

Clock

If there is still any time remaining, the amount of time remaining is increased.

1.29 Converter

Converter

This will instantly convert all currently active

fragments

into

friendly

missiles

.

1.30 Cutter

Cutter

This allows you to 'cut' or 'tunnel' your way through such things as tail. Every move, the squares in front of you, the two to your side and the two diagonally in front behave as though affected by a

bombblast

except that objects are not destroyed.

```
...
.#.
|
|
```

One thing to keep in mind is that whilst you have cutter you cannot make enclosures. Cutter counts down at a constant rate.

1.31 Cyclone

Cyclone

When you get this, a
whirlwind
will be created somewhere on the
playfield. It is just as dangerous to you as to everything else.

1.32 Freedom

Freedom

Whilst this object is operating, you will leave remnants behind your head instead of tail. Your amount of freedom counts down, and getting freedom will of course add to the amount remaining.

1.33 Grower

Grower

Grower will cause all gold and silver onscreen to 'grow', expanding into their neighbouring squares if those neighbouring squares are empty.

1.34 Healer

Healer

If you have less than your starting lives (100), boosts you back to 100.
If you have 100 or more, boosts you to 200.

1.35 Ice

Ice

Ice will freeze all
orbs
,
goats
,
drips
,
fragments
,
missiles
,
penguins
, timebombs,
whirlwinds
and enemy
worms
for a short period of time.

There is no defence against ice. Additional ice will be added onto your amount remaining.

1.36 Life

Life

Life provides 2-6 lives.

1.37 Lightning

Lightning

When you get lightning, most squares adjacent to your tail flash momentarily. This will harm:

unarmoured enemy worm heads	
unarmoured orbs	replaced by bonus
goats	replaced by bonus
slime	replaced by empty
fragments	replaced by empty

drips	replaced by empty
objects	replaced by empty
penguin	replaced by empty
enemy missiles	reaplced by empty

The things that are not flashed are:

- stone
- metal
- wood
- letters
- skulls

1.38 Magnet

Magnet

This causes some or all objects to travel towards you in a guided fashion. Apart from the fact that these objects are now 'magnetized' (ie. moving) they remain normal objects in every other respect. Objects which are magnetized may not be remagnetized by other worms.

1.39 Missile

Missile

Missiles are automatically guided. They hunt the following things:

- worms
- enemy missiles
- orbs
- goats

The missile hunts whatever is nearest, and recalculates its target every move.

Missiles will not cross field edges.

If you collect a missile whilst there is nothing for it to chase, you will receive only points; no missile will be generated.

1.40 Multiplier

Multiplier

Each time you get a multiplier, your scoring will be doubled. If you get more than one, it is doubled again each time. You can collect up to three (3) multipliers.

Your object points for actually getting the multiplier are

affected by the new multiplier itself.

Multipliers	Scoring
0	*1
1	*2
2	*4
3	*8

At the end of each level, your multiplier will be reduced by one (ie. half).

1.41 Nitro

Nitro

You will be able to move diagonally, and will be able to use the 'very slow' speed. Nitro cannot be lost.

1.42 Powerup

Powerup

This is power for your
bullets
. Each bullet you fire becomes wider,
requiring less aiming accuracy and causing more general devastation.

Symbol	Meaning
<number>	bullet number
:	worm head, facing up (north)
:	worm head, facing up-right (northeast)
#	worm tail

1	213	42135	6421357
1	213	42135	6421357
1	213	42135	6421357
1	213	42135	6421357
:	:	:	:
#	#	#	#
#	#	#	#

Single (no powerups)	Triple (one powerup)	Quintuple (two powerups)	Septuple (three or more)
1	312	53124	7531246
1	312	53124	7531246
1	312	53124	7531246
1	312	3124	31246
:	:2	:24	:246
#	#	#	# 6

#

1.43 Protector

Protector

Acquisition of this item will give you a companion who stays near you, collecting

objects

for you exactly as if you had moved

over them yourself, and defending you from some forms of damage.

You can have up to three protectors. The first two orbit around your head. The third will be a 'nose', suspended three squares in front of your head, which zigzags. The rate of orbiting/zigzagging is the same as the worm's speed; that is, they move when the head moves.

Protectors are invisible over friendly tail, friendly remnants and teleports.

An

affixer

will stop the protectors from rotating and

zigzagging.

1.44 Pulse

Pulse

7 fragments are fired outwards when a pulse is collected, similar to an orb exploding. If another worm's pulse fragments are still onscreen, less than 7 fragments will be generated.

1.45 Pusher

Pusher

This enables you to push stone, goats, metal and tail. You will push the square in whatever direction you are facing. Pushing is similar to the pushing of

timebombs

. You can push things off the field if

you so desire. You are not allowed to push more than one square at a time. You can push over objects and empty/silver/gold.

1.46 Remnants

Remnants

This enables your bullets to leave their remnants behind them as they travel.

These images of the bullet do no harm to the worm that fired it, nor to any other creature except enemy unarmoured worms. Remnants are kept only until the end of the level.

1.47 Sideshot

Sideshot

This means that whenever you fire, in addition to any forward bullets you will also fire a bullet to each side.

1.48 Slayer

Slayer

Slayers are used instantly. They will destroy all
goats
,
slime
,
drips
,
orbs
(by explosion),

penguins
and enemy
missiles
, and cause damage to all
unarmoured
enemy worms.

1.49 Slower

Slower

Slower will slow all fragments, orbs, goats, drips and penguins to half their previous speed. The speed of these is reset at the start of each level.

1.50 Switcher

Switcher

All tail onscreen is instantly changed to your own colour. The main benefit of this is that you take much less damage over your tail than over an enemy tail, and also that you will receive more points at the end of the level.

1.51 Tongue

Tongue

Tongue allows you to go through wood and worms (heads or tails) without taking damage.

Whenever a worm with tongue goes over a tail square it receives:

5 points	if it eats friendly tail. Tail turns to silver.
10 points	if it eats enemy tail. Tail turns to gold.

Your

protectors will not eat any tails while you are in tongue mode, to help you maximize your score.

Tongue is only temporary. Its power counts down at a constant rate, but can be extended by the acquisition of more tongue. It is a mode.

While you are in tongue mode

your head-image will be different. When your tongue is nearly gone your head will flash.

1.52 Treasure

Treasure

The worms will enter a bonus level for a limited amount of time. At the conclusion, the next level is reached. The full time bonus (2:00, which is 1200 points) is given at the end of the treasury.

There are three types of bonus level: treasury, drips and penguins.

1.53 Umbrella

Umbrella

This skips 2-3 levels.

1.54 Strategy

Goats prefer to be near free space (empty, gold or silver), so that they can shoot.

Faster speeds are useful for:

- racing another creature for a letter or object;
- hunting another creature when you have tongue or armour;
- evading missiles and fragments;
- laying tails to trap other creatures;
- creating gold/silver with tongue;
- amassing more square-points by moving;
- amassing more square-points at level completion;
- making large jumps;
- causing protectors to rotate faster.

Slower speeds are useful for:

- making small jumps;
- waiting in a certain region of the screen;
- not filling the playfield;
- enclosure;
- easier control.

You will get more points by shooting something than killing it by other methods, and more from collecting real letters than getting bonuses.

Remember that bullets, bombs, missiles, fragments and drips will not wrap around playfield edges. If you do, they cannot follow.

Certain objects work well together. Eg.:

- bullets, powerups and bias;
- multipliers and armour;
- tongue and grower;
- treasure and ice;
- protectors and affixer.

To avoid a missile, get a worm, orb, enemy missile or goat, or a solid barrier such as stone or metal, between you and it.

Going quickly between teleports yields many points. It is easier when done using tongue.

When you shoot an orb, it will explode, so it is better to be some distance away when doing so.

Shooting an orb (which will explode) or timebomb (which will detonate) can be a useful way of harming, or putting pressure on, an enemy

creature which is at the opposite end of the field. However, note that you can be harmed by this. If you have at least triple shot, you can safely shoot an orb if you are not directly lined up with it (and you do not move into the path of the fragments). For shooting timebombs, it is best to be as far away from it as possible.

A good way to handle slime is to encapsulate it with your tail, so it cannot spread.

When you have armour, it is good to go over wood as that is an easy way to destroy it.

1.55 High Scores

High scores are part of the .fset file. To save them, save the fieldset. Any changes to the fieldset will automatically clear the high scores.

The Amiga worms have names which honour the four original Amiga designers. Even on the IBM-PC version. :-D

1.56 Worms

Worms can be controlled by humans or the Amiga. For information on how to control them,
click
.

A worm consists of a head, one square in size, and a tail, which is formed in the wake of the head's passing. As the worm moves, the tail stretches out behind its head. Collision with any part of a worm by the head normally results in damage (to the head).

Worms can move in the four cardinal orthogonal directions and at three speeds; getting a
nitro
allows diagonal movement and another
speed (very slow).

Worms begin with 100 lives. Whenever you are taking damage your head will flash as a skull. When 0 lives is reached, the worm is dead and the skull is permanent. Every 1,000 points you will be awarded an extra life.

Modes

Armour
and
tongue
are mutually exclusive 'modes'.

You can only have one in use (and therefore counting down in strength) at a time, and it will be whatever was most recently collected. The head's

appearance indicates whether it is in a 'mode', and also the direction it is currently travelling. It will flash when the current mode is at low strength. When the strength reaches zero, the other mode is automatically engaged, if above zero.

Skulls

If a worm or

protector

collects the skull of a dead worm,

the collecting worm will get everything the dead worm had, in addition of course to what it already had itself:

- . multiplier
- . bias
- . powerups
- . ammo
- . armour
- . tongue
- . nitro
- . affixer
- . remnant
- . sideshot
- . pusher

Skulls absorb any

bullets

,

missiles

,

drips

or

fragments

,

and are immune to

bombblasts

.

Jumping

A worm with no

ammo

can jump instead. If the destination

is stone, metal, a

goat

or a blocked

teleport

you will not

jump, and metal cannot even be jumped over. The distance varies according to your speed, and is shown below.

Name	Speed	Jump distance
* Very slow	quarter speed	1
. Slow	half speed	2
. Normal	normal	3
. Fast	double speed	4

* Very slow speed is only available if you have
nitro
.

Pain

Method	Damage	Notes
enemy drip	5 lives	unless biased
whirlwind	5	
blocked teleport	5	worm motion is stopped
metal	3	worm motion is stopped
goat	2	worm motion is stopped
stone	1	worm motion is stopped

'Worm motion is stopped': Every move in which the worm takes damage from that cause, its speed is halved (to a minimum of 'slow'). The worm is unable to actually enter the square.

Unarmoured

worms can also die by the following methods:

remnant	5	worm is slowed
worm bullet	5	
enemy missile	5	
enemy protector	5	
orb	5	
dog	5	
fragment	3	if armoured, fragment is reflected
bombblast	3	
lightning	3	
enemy slayer	2	
slime	2	
wood	1	worm is slowed

Untongued

worms can also die by the following methods:

worm head	5	
worm tail	1	worm is slowed

Enclosure

If your tail forms an exact square which measures 4x4-9x9 including the tail (2x2-7x7 of interior area, respectively), this is known as enclosure. Any squares within the closed area which are empty, silver, gold or enemy tail are converted to your tail. You receive 10 points for each enclosed square which is thus converted. The right of enclosure is one which is shared by all worms; it is a basic ability.

Note that enclosure is only checked for when the worm's head is at a corner of the square. And remember also that the enclosure must be square: the same size in both x and y dimensions. This is the skill of enclosure.

Symbol	Meaning	
:	worm head	
#	worm tail	
.	enclosed area	
3x3 interior	4x4 interior	5x5 interior
#####	#####	#####
#...#	#...#	#...#
#...#	#...#	#...#
#...#	#...#	#...#
####:	####:	####:
	####:	####:
		####:

1.57 Orbs

Orbs are controlled by the Amiga. They move diagonally and bounce ← whenever they hit a tail, metal, stone, wood or goat, so their motion is be predictable. Orbs have their own scores, which are added to the scores of those that kill them.

Objects

Objects can be used by orbs, as follows:

Affixer	This will remove any affixer from any worms.
Ammo	The orb will explode, unless it is armoured.
Armour	Same as worm.
Bias	This will remove all bias from all worms.
Bomb	Same as worm.
Bonus	The orb will split.
Clock	The time remaining is reduced.
Cyclone	Doubles the orb's speed.
Freedom	All remnants onscreen will change to empty.
Grower	All wood onscreen will 'grow', expanding into their squares if those neighbouring squares are empty.
Healer	The orb will split.
Ice	The orb will split.
Life	The orb will split.
Lightning	The orb will explode, if unarmoured.
Magnet	Any magnetized objects become demagnetized.
Missiles	All missiles will be destroyed.
Multiplier	Same as worm.
Nitro	Doubles the orb's speed.
Powerup	Doubles the orb's speed.
Protector	This will slay all protectors.
Pulse	The orb will explode, if unarmoured.
Pusher	This will remove any pusher from all worms.
Remnants	This will remove any remnants from all worms.
Sideshot	This will remove any sideshot from all worms.

Slayer	The orb will explode, if unarmoured.
Slower	Double's the orb's speed.
Switcher	All tail onscreen is instantly changed to wood.
Tongue	This will allow the orb to pass through wood and tails instead of bouncing off them.
Treasure	The orb will split.
Umbrella	The orb will split.

Splitting

The orb will split into up to four orbs, depending on the number of orbs already in play.

Each orb will be an exact clone of the original in all attributes, except starting direction but including score. Once born, they are completely independent, of course.

Modes

Armour
and
tongue
are mutually exclusive 'modes'.

An orb can only have one in use (and therefore counting down in strength) at a time, and it will be whatever was most recently collected. When the strength of it reaches zero, the other mode is automatically engaged, if above zero. The orb's colour indicates the 'mode' the orb is in:

Colour	Mode
Yellow	None
Blue	Tongue
Red	Armour

Collisions

An orb with tongue passes through and destroys
slime

An orb with armour bounces off slime. An orb with neither dies.

All orbs can be slain in these ways:

Notes	Cause
*	Any worm gets a slayer . All orbs explode
#	Becoming trapped (unable to move).
#	Collision with another orb.
#	Collision with worm tail
.	Collision with an

	armoured
	worm.
.	Collision with a protector
	.
.	Collision with a whirlwind
	.
	Unarmoured
	orbs can also be slain in these ways:
*	Worm bullets
	.
*	Fragments
	.
*	The orb collects ammo
	or
	slayer
	.
*	Drips
	.
#	Bombblasts
	.
#	Missiles
	.
#	Lightning
	.
.	Collision with an unarmoured worm.
.	Collision with slime
	.
Symbol	Explanation
*:	The orb explodes
	.
#:	A bonus is left at the site of death.

1.58 Goats

Goats walk along the top of stone, metal, wood, tails and slime, ←
firing

fragments

randomly when they are at an edge (next to
somewhere they can't go). Goats prefer to be at an edge and tend to move
towards and stay at one. When not at an edge, they cannot fire.

Goats can be slain in these ways:

Worm bullet

Fragment

Slayer

Orb
bouncing off it

Bombblast

Missile

Drip

Lightning

Whirlwind

Dog
Dead goats turn into
bonuses
.

1.59 Slime

Slime may be randomly created at during play. This slime can 'grow' into
some adjacent squares over time. It never moves, only grows.

1.60 Drips

Drips appear near the top of the field, and fall downwards. They can be any
of the four colours (green, red, blue and yellow).

Drips of your own colour are worth points. Drips of the wrong colour hurt
you. In either case, the drip is destroyed.

1.61 Fragments

Fragments are generated by:

orb
explosions.

pulse
explosions.

goats
firing.

Fragments travel until they are absorbed or reach the field edges.

1.62 Penguin

Penguins are randomly created, independent creatures which move randomly. They are not aggressive but will harm things that collide with them. They only ever move onto empty (or silver/gold) squares.

1.63 Whirlwind

These are created when a worm collects the
cyclone
object.

They move very quickly in a random fashion, though they tend to drift slightly upwards over time. They are one of the more dangerous types of creature.

They destroy protectors, orbs, goats, penguins, missiles, slime, drips, fragments, metal, stone, wood and tail. They destroy timebombs without detonating them. They are immune to lightning, bullets, bombblasts, fragments. They are affected by slayer and teleports. They harm worms, whether armoured or not, without being themselves destroyed. If they leave the playfield they are destroyed.

1.64 Dog

These appear randomly. They wait patiently until a worm passes over them. Then they begin to awaken and soon they chase the worm along its tail. They cannot cross field edges.

1.65 Cloud

These appear randomly. They only ever move horizontally, left and right, changing direction at each end of the playfield. Occasionally they will shoot out a pair of fragments: one up and one down.

1.66 Teleport

These always come in pairs. Going through one will teleport you to ↔ the other, and bestow points also.

If a teleport is blocked (there is stone, metal or a goat next to its partner on the side where you would emerge) then the teleport cannot be used and is dangerous. You will slow down from hitting it and not be able to use it. It is obviously possible for a teleport to be blocked to some approaches and unblocked to others.

Protectors
are invisible over teleports.

Two teleports may be defined in the field editor
; another
two may appear randomly during play. These two sets are completely independent of one another.

1.67 Timebomb

This ticks from 9 down to 0 before detonating. During ticking, it ↔ can be pushed around by worm heads. If pushed off the field edges, 100 points are given and the timebomb is destroyed without detonation. If pushed against anything, or shot, or hit by most things, it will detonate immediately, with harmful consequences to anything within its radius. Points are never awarded for timebomb blasts. The explosion is the same as a normal

bomb
.

1.68 Scoring

Square points

All

1	Empty
10	Silver
20	Gold
100	Skull
100	Letter

Objects
are worth various amounts of points.

Worms and orbs

20 Teleport

Worms and protectors

100 Drip of your colour

Skill points

All

50 Kill a penguin.

50 Kill a goat.

100 Hurt an enemy worm, without hurting yourself.

Orbs are worth their scores to anything that kills them.

Worms

5 For each square you turn to silver with tongue.

10 For each square you turn to gold with tongue.

10 For each enclosed square which is converted.

50 You hurt something (worm, orb, goat or penguin) by shooting.

100 You push a timebomb off the field edges.

There are also

level
completion bonuses.

All points are multiplied by the number of worms selected for human and Amiga control, and of course by any multipliers

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