WormWars

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COLLABORATORS

	TITLE : WormWars		
ACTION	NAME	DATE	SIGNATURE
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

WormWars

1.1   Worm Wars V3.0

```
                    ==============================
     |     W O R M   W A R S      |\
     |for the Commodore/Escom Amiga||
     |         Version 3.0         ||
     |        Thu 18 Jan 1996       ||
     |                             ||
     |   by Jaemol Software, Inc.  ||
     ==============================\|
       \---------------------------\
```

Overview

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Field Editor

1.2   Overview

Worm Wars is a game reminiscent of Tron/Snake type games but has advanced
features. It is an attempt to combine the simple playability of the basic
concept with interesting objects and opponents, for more diverse and
strategic gameplay.
  One to four worms travel around a rectangular maze leaving a
deadly trail behind them. Each must attempt to outscore and outlast the
others and also Amiga-controlled creatures.
  The Field Editor allows you to load, edit and save your
own fields to play on, for greater lasting attraction.
  It is enjoyable either for the one player, where your objective

is to survive and amass huge scores, or for competitive multiplayer games.
Computer controlled worms are also available for demo games with zero
humans; to provide practise against a single human; and for greater
challenge and opportunities for cooperation when playing with two or
three humans. Doubled keyboard play, one joystick and mouse are supported.
MED files can be loaded as theme music, and also an individual tune for
each field.
   The game is an example of an Intuition-friendly game, with menus,
gadgets and so on, and of course it fully multitasks. And it is free.

1.3 Usage

                         System Requirements

                         Archive Contents

                         Installation

                         Startup Behaviour

                         CLI Arguments

1.4 System Requirements

Hardware...

Required: 256K free RAM
Recommended: PAL capability   a PAL 640*256 screen is used.
    Joystick   for blue worm
    Mouse   for yellow worm and for Field Editor

Firmware...

Required: Kickstart R2.04+

Software...

Required: asl.library
Recommended: medplayer.library for music support
    MultiView   to view this file

1.5 Archive Contents

  WormWars/WormWars   WormWars/Default
  WormWars/WormWars.info   WormWars/Default.MED
  WormWars/WormWars.guide   WormWars/Australia
  WormWars/WormWars.guide.info WormWars/Australia.MED
  WormWars/Source/WormWars.c WormWars/Death
  WormWars/Source/WormWars.h WormWars/Original

```
WormWars/WormWars.MED    WormWars/Maze
medplayer.library
```

1.6 Installation

```
Move the medplayer.library to your LIBS: directory if you need it.
Everything else can go anywhere, but it should all be on the
same directory level (we suggest inside the WormWars directory).

The game expects the following files:

     Default     default board
     Default.MED   in-game music
     WormWars.MED    theme music
LIBS:     asl.library    required
LIBS:     medplayer.library music support


If the joyport cannot be allocated on startup, the blue worm cannot be
selected as human.
   If the audio cannot be set up properly then it is disabled.
   MED files must be in MED, as opposed to OctaMED, format.
```

1.7 Startup Behaviour

```
If the joyport cannot be allocated on startup, the blue worm cannot be
selected as human.
   If the audio cannot be set up properly then it is disabled.

// Worm Wars pseudocode for file initialization.

// Open field

If CLI argument is found Then
  Attempt to OpenField("<filename>")
  If opened Then
    Attempt to LoadModule("filename.MED") for game music
  Else
    Attempt to OpenField("Default")
    If no field opened successfully Then
      Use a blank field
    End If
    Attempt to LoadModule("Default.MED) for game music
  End If
Else
  Attempt to OpenField("Default")
  If no field opened successfully Then
    Use a blank field
  Attempt to LoadModule("Default.MED) for game music
  End If
End If
OpenLibrary("MEDPlayer.library")
If opened Then
```

```
  Attempt to LoadModule("WormWars.MED") for theme music
  If not opened
  And game music already loaded Then
    Use game music also as theme music
  End If
End If
```

1.8 CLI Arguments

```
Format:   WormWars [<filename>]
Template: WormWars "FILENAME/F"
```

`<filename>` is the the field you wish to open on startup. Music will be loaded as `<filename>.MED`.
   The ? argument will of course give the template.

1.9 Known Bugs

A few bugs have recently come to light:

  a) it is unstable under Workbench. I recommend it be run under
     CLI.
  b) it loses 176 bytes per exit.
  c) it can lose heaps of memory per exit if using the MED tunes.
  d) you can't run multiple instances of it simultaneously.

These should all be fixed by V3.1, but I do not intend to fix them
for this release, as it would delay it even further. We hope they do
not hinder your enjoyment of the game.

1.10 How to Play

               Worm Wars is an arcade game for one to four players. Each player
controls a worm. The worms move around a rectangular playfield,
leaving their tails behind them. Each worm begins with 50 lives
and aims to amass the most possible points and to stay alive longer
than the other worms.

```
            Worms

            Protectors

            Orbs

            Killers

            Title Screen

            The Playfield
```

```
                    Status Display

                    Controls

                    Objects

                    Scoring

                    Strategy
```

1.11   Title Screen

```
                Esc F1 F2 F3 F4
       1 2 3 4 . . . . . . . . .
        . . . . . . . . . . . . Ret           . . .
        . . . . . . . . . . . . ur     .      4 . .
Shift . . . . . M . . . . Shift    . . .      1 2 3 E
        -----Spacebar----                    -.- . n
```

The keys 1-4, or F1-F4, will toggle the worm controls through NONE, HUMAN
and AMIGA. They will do likewise when shifted but in the other direction.
  Esc will exit to Workbench immediately.
  RETURN (or ENTER on the numeric keypad) will begin the game.
  The spacebar will enter the
                Field Editor
                .

Project|Open: Amiga-O   Opens a field (and its music).
Project|Quit: Amiga-Q   As Esc.
Module|Field Editor: As spacebar.

There are four worms to choose from:

    Colour   Human Controls   Status Info   Toggle Key

             Green   Left Keyboard   Top left   1

             Red   Right Keyboard   Top right   2

             Blue   Joystick   Bottom left   3

             Yellow   Mouse   Bottom right   4
         Any combinations of human and Amiga control are acceptable, but at ←
                least
one worm must exist. Each worm can be:

Human: Select the worm which supports your desired
                controls
                .

Amiga: The worm will be controlled by the Amiga, but in every other
respect is a normal worm.
```

None: The worm will not be used.

## 1.12   The Playfield

The playing field measures 50*39 squares.
  The edges of the field are mostly toroidal. Worms, orbs and
protectors can cross sides. Killers, bullets, missiles and bombs will
respect the field edges.

Wall: These are indestructable, except when killers die on them.

Brick:  These are roughly equivalent to worms' tails, except that they
  cannot be destroyed by bombblasts.

Empty:  1 point.

Silver: 100 points.

Gold: 500 points.

## 1.13   Status Display

                In the text area will be a timer reporting the total time for this
game so far (including paused time).

Near the edges of the field will be a square showing your most recent
cause of damage.

Score:    Highlighted if you have any multipliers.
Lives:    Highlighted if above original (50).
Bias:   Your current
                bias
                level.

Ammo:   Remaining
                ammo
                .
Power:    Your current  power . 'Quint.' and 'Sept.' are for
   quintuple (5x) and septuple (7x) power.

Armour:
                Armour
                strength.
Tongue:
                Tongue
                strength.
Eater:
                Eater
                strength.

Speed:    Current speed. Capitalized if you have a
                nitro

```
                              .
Diagonal: 'On' if you have it, 'Off' otherwise.
```

1.14 Controls

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

         Player 1                         Player 2
```

Esc will exit to the main menu. Shift-Esc exits to Workbench immediately.
  P will pause until it is pressed again.

Keyboard [Red and Green]:

2 players may use the keyboard, playing at each end.
  X and C are both down-right for the green worm.
  5 and 2 are both down for the red worm.
  Spacebar fires for the green worm; 0 on the keypad fires for the
red worm.
  If only one human is on the keyboard, both sets of keyboard controls
are available for that player, whether it is the green or red worm.

Joystick [Blue]:

The blue worm can use a joystick plugged into port 2. If the joystick
could not be set up during initialization then the Human option will not
be available.

Mouse [Yellow]:

The yellow worm can use a mouse plugged into port 1.
  Using the mouse is slightly different from the other controls:

Turning is relative rather than absolute. Use the left button to turn
left from your current heading, and the right to turn right from it.
This is done when the cursor is within the playfield.

Firing is accomplished by pressing either button with the cursor over
the green or red worm areas.

Speed changes are done in the blue or yellow areas. The left button
will speed you up and the right button will slow you down.

```
...................--------------------------------...................
.                .|                                |.                .
.   Click any    .|  Click LEFT in playfield       |.     Click any   .
.  button here   .|       to turn left             |.    button here  .
.    to fire     .|                                |.      to fire    .
.                .|                                |.                .
...................|                                |...................
```

```
@                       @|                                  |@                      @
@    Click LEFT    @|                                  |@    Click LEFT    @
@                       @|  Click RIGHT in playfield  |@                      @
@    Click RIGHT   @|       to turn right            |@    Click RIGHT   @
```

1.15 Worms

Worms are obviously the primary focus of Worm Wars and can be controlled by humans or the Amiga.

A worm consists of a head, 1 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.

The head's appearance indicates the 'mode' the worm is in, and also the direction it is currently travelling. It will flash when the current mode is at low power.

Worms begin with 50 lives. 1 life is lost every time the worm takes damage, which can be by various calamities.
Lives
will
increase your lives by 1-5. Whenever you are taking damage your head will change to a skull *temporarily*. When 0 lives is reached, the worm is dead and the skull is permanent.
  Any
orb
, worm,
protector
or
worm bullet
which hits the
skull of a dead worm will receive 1000 points.
  The cool part is that if a worm's head or protector hits it, as well as the 1000 points you will get everything the worm had at the time of death (
multi
,
bias
, power ,
ammo
,
armour
,
tongue
,
eater
,
nitro
,
diagonal
), in addition to what you already had.
  The skull will absorb any
missiles

                    ,
                     killer bullets
                     or

                     fragments
                     which collide with it. It is immune to
                     bombblasts
                     .

Collision with any part of a worm by the head results in the
loss of a life, unless a
                     tongue
                     or
                     eater
                  is in use.

A worm with no
                     ammo
                     can jump instead. If the
destination is a wall or killer you will not jump. The distance varies
according to speed, and is shown below.

                     Eaters
                     will also temporarily prevent more tail
from being created. Instead, empty spaces are left behind, except when
passing over tails, in which case points are received and silver or gold
is created.

Worms can move in the 4 orthagonal directions; diagonal movement is also
allowed if a
                     diagonal
                     is collected. There are normally
3 available, although this may be increased to 5 with a
                     nitro
                     .

Tongue, armour and eater are 'modes' and only 1 at a time can be used.
The current selection will be whatever was most recently collected. When
the power of one of these runs out you will instantly switch to another
type, if possible.

Each time you cause another worm to lose a life, it is worth 1000 points for
you.

If you are the last worm remaining (in a multiplayer game) you will get a
grand prize of 5000 points. Despite this is still possible, of course,
to lose even if you were last remaining, as the other worms could have been
very successful points-wise except took too much damage.

Speeds available are:

        * Very Slow   quarter speed   1 square
        . Slow   half speed   3
        . Normal   normal   5
        . Fast   double speed   7
        * Very Fast   quadruple speed 10

* The speeds 'Very Slow' and 'Very Fast' are only available to worms
with
                  nitros
                  .

If you press a direction you are already going in, you will double your
speed. You can also slow down by pressing against your direction.

Worm can die by collision with:

```
  wall        always
  killer      always
  brick       except with tongue or eater
  worm head   except with tongue or eater
  worm tail   except with tongue or eater
  orb fragment    except with armour
  worm bullet    except with armour
  killer bullet   except with armour
  enemy missile   except with armour
  enemy protector   except with armour
```

1.16 Orbs

                 Orbs are controlled by the computer. They bounce whenever they hit ←
                  a
solid object, so their motion can be predicted by the skilled player.
  There can be up to 9 orbs at a time. Normally, they are yellow,
although their colour can change according to their 'mode'.
  Orbs have their own points. Each begins with 200 (so that
even a new orb is worth something) and racks them up similarly to how a
worm would. Their points are always yielded to those that kill them.

Orbs can be slain in these ways:

 1. *   Orb collects
                  ammo
                  or
                  slayer
                  , when

                  unarmoured
                  .
 2. *   Worm gets a
                  slayer
                  . All points of the orbs go to
      the worm responsible.
 3. *
                  Fragment
                  of an
                  exploding
                  orb,
  when
                  unarmoured
                  .

```
 4. #     Becoming trapped (ie. unable to move).
 5. #     Collision with an unarmoured orb, unless
                   armoured
                   .
 6.
                   Bomb
                   , when not
                   armoured
                   . All
          points of the orb go to the worm or orb responsible.
 7.       Collision with a
                   protector
                   .
 8.       Collision with an
                   armoured
                   worm.
 9.       Getting hit by a
                   missile
                   when not
                   armoured
                   .
10.       Being
                   shot
                   by a worm, when not
                   armoured
                   .
11.       Collision with an armoured orb.

* will cause the orb to  explode .
# will leave a
                   bonus
                   at the site of death.
```

1.17 Fragments

```
              8 fragments will be generated by each explosion. They travel  ←
                 outwards at a
uniform speed.
  Fragments will not harm those with
                   armour
                   .
```

1.18 Killers

```
              Killers walk along the top of walls, bricks and tails, firing at  ←
                 worms.
Unlike shots fired by worms, killer bullets travel at a finite rate;
therefore, they can be evaded. You will die if you hit a killer.
  Up to 9 killers can exist. Each killer can only have one bullet
onscreen at a time.

Killers can be slain in 3 ways:
```

1.
        Worm bullet
            .
2.
        Slayer
            .
3. Orb
            fragment
            .

Dead killers turn into
        bonuses
        . This is the only way
to destroy walls.

1.19 Objects

        Ammo

        Armour

        Bias

        Bomb

        Bonus

        Diagonal

        Eater

        Ice

        Life

        Missile

        Multiplier

        Nitro

        Powerup

        Protector

        Slayer

        Tongue

1.20 Ammo

```
               Frequency:      Common
Points Value:    200
```

                              * WORMS *

This will provide 1-6 bullets. If you have
                  powerups
                ,
you will fire a wider shot, but this will still only cost you one bullet,
of course.

Bullets are fired by pressing your appropriate fire
                  control
                .
If a bullet is available, you will fire. This bullet is virtually
instantaneous. If you have no bullets, you may
                  jump
                .

Bullets can freely pass through, without destroying:

  your own protectors

Bullets can freely pass through and destroy:

  worm tails
  bricks

                  objects

                  unarmoured

                  orbs
                    chasers

                  unarmoured
                  worm heads

They will destroy, but be stopped by:

                  killers
                They cannot destroy, and will be stopped by:

  other worms' protectors
  walls
  armoured worm heads
  armoured orbs

A bullet which hits a teleport will be teleported and continue on its way,
without harm to the teleport. You will get the teleport bonus, too.
  Any silver, gold, objects or skulls destroyed by your bullet's
journey will be credited to your score.

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

```
                                    * ORBS *

The orb will
                explode
                , unless it is
                armoured
                .
```

1.21 Armour

```
                Frequency:       Common
Points Value:   200


                                * WORMS *

Armour will protect worms from getting killed by:

1.      Bullets of any type, whether from
                worms
                or
                killers
                .
2.
                bombs
                .
3.
                fragments
                .
4.
                missiles
                . In fact, the missile will not even
  hunt the worm.
5.
                protectors
                .
6.  collisions with
                orbs
                . The orb will always die,
  regardless of whether it itself had armour.
7.  unarmoured orbs.

Armour is only temporary. Its power will count down at a constant
rate, regardless of the worm's speed.
  While you have armour your head-image will show you wearing a
helmet. When your armour is nearly gone your head will flash.
  Armour power can be extended by the acquisition of more armour.

                                * ORBS *

Armour will protect orbs from getting killed by:

1.  Bullets, whether from
                worms
                or
```

```
                killers
                .
2.
                Bombs
                .
3.
                Fragments
                .
4.
                Missiles
                . In fact, the missile will not even
   hunt the orb.
```

Armour is only temporary. Its power will count down at a constant
rate, regardless of the orb's speed.
   While it has armour the orb will be green.
   Armour power can be extended by the acquisition of more armour.

1.22 Bias

Frequency: Rare
Points Value: 500

                                * WORMS *

This item does these:

   . missiles will not home in on you.
   . orbs with eater will leave gold in your tail instead of silver.
   . whenever you acquire armour, tongue, eater, ammo, bias, ice
     bomb or lives you will get the maximum possible amount.

                                * ORBS *

This will remove all bias from all worms.

1.23 Bomb

                 Frequency: Special
Points Value: 300

As soon as you go over one of these the bomb will go off, clearing the
area around you. The blast radius is random. The only things that are not
destroyed within the radius are:

   .
                armoured
                heads.
   .
                armoured

                orbs

```
                        .
    . walls and bricks.
  .
                    killers
                        .
    . the triggerer's
                    missile
                  , if any.
  .
                    teleports
                        .
  .
                    protectors
                        .
  .
                    skulls
                        .
    . silver and gold.

Any
                    orbs
                    or objects that are destroyed yield their
points to the triggerer of the blast.
    The blast is always contained by the edges of the field.
    The frequency of the bomb is dependant on the number of worms
the game began with. This is because of the assumption that the field
will fill up quicker with more worms. The basic frequency is
'uncommon', and is multiplied by the number of worms.
```

1.24 Bonus

```
Frequency:      Common
Points Value:   100
```

These have no purpose other than to increase your score.

1.25 Diagonal

```
Frequency:  Rare
Points Value: 300
```

```
                            * WORMS *
```

Once you have this item, you will be able to move diagonally.

```
                            * ORBS *
```

Each of these will double the orb's speed, to a maximum of 'very fast'.

1.26 Eater

```
                Frequency:  Very rare
Points Value: 900
```

```
                          * WORMS *
```

This item will provide these benefits:
  1. heaps of points.
  2. the effects of a
                  tongue
                  .
  3. the worm can clear areas of the field by going over them.

It provides points this way:
  1. whenever the worm eats a tail square it receives:
    50 points if it eats its tail
    100 points if it eats another worm's tail
  2. you stop leaving a tail behind you, and instead leave:
    empties
  or silver   if it goes over its tail
  or gold   if it goes over another worm's tail

Your
                  protectors
                  will not eat any tails while you are
in eater mode, to help you maximise your score.
  While you have eater your head will change shape. Eater counts
down at a constant rate. When it is nearly gone your head will flash.
More eater will replenish it.

```
                          * ORBS *
```

This item provides these benefits:
  1. heaps of points.
  2. the effects of a
                  tongue
                  .
  3. the orb can clear areas of the field by going over them.

It provides points this way:
  1. whenever the orb eats a tail square it receives 50 points.
  2. it leaves:
    empties
  or silver   if it goes over a worm without
                  bias
                  or gold   if it goes over a worm with
                  bias
                While eater is in use the orb will be red.

1.27   Ice

```
                Frequency:  Very rare
Points Value: 600
```

```
                          * WORMS *
```

Ice will freeze all
                  orbs
                ,
                 killers
                 and
other
                 worms
                 for a short period of time. There is no defence against
ice.
  Additional ice will be added onto your amount remaining.

                          * ORBS *

If any orb gets ice it will freeze all worms for a short period.

1.28   Life

Frequency: Uncommon
Points Value: 800

                          * WORMS *

1-5 extra lives. You can exceed your starting number (50).

                          * ORBS *

This will cause the orb to split into up to 4 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.

1.29   Missile

                  Frequency: Uncommon
Points Value: 400

                           * WORMS *

Missiles are automatically guided and will hunt down the nearest
vulnerable worm or orb.

They can be destroyed by:

1. a wall.
2. a
                 killer
                 .
3. other
                 worms'
                 heads and tails, if that worm has
                 armour

```
                        .
4.  an enemy  protector .
5.  a

                    bombblast
                    (except yours).
6.  an

                    orb
                    collecting a missile object.

Missiles will not cross field edges.
  An

                    orb
                    can be destroyed by a missile if it is not

                    armoured
                        .
  All missiles will be destroyed if any
                    orb
                    collects a

missile object.
  Only 1 missile can be active for each worm at a time.
  Unlike bullets, missiles do not collect points for their firer on
they journey.

If you collect a missile:

1.      while you already have an active missile; or
2.      there are no other worms, orbs or chasers alive

then you will receive only points.

                            * ORBS *

All missiles currently active will be destroyed.
```

1.30 Multiplier

```
Frequency:  Rare
Points Value: 500

Each time you get a multiplier, your scoring for the rest of the game
will be doubled.
  Your points bonus for actually getting the multiplier will *not*
be affected by the new multiplier itself.
  If you get more than one it is doubled again. You can collect up
to 4 multipliers.

Multipliers      Scoring
    0              *1
    1              *2
    2              *4
    3              *8
    4             *16
```

1.31 Nitro

```
Frequency:       Uncommon
Points Value:    100
```

* WORMS *

A nitro will enable you to obtain five speeds instead of the usual three.
The new speeds are 'very slow' and 'very fast', at quarter and quadruple
normal speeds respectively. These are used in the same manner as normal
speed changes.
  Once obtained, a nitro is kept until the end of the game and its mere
possession is enough to grant the abilities.

* ORBS *

Each of these will double the orb's speed, to a maximum of 'very fast'.

1.32 Powerup

```
                Frequency:  Common
Points Value: 300
```

* WORMS *

This is power for your
              bullets
              . Each bullet you
fire becomes wider, requiring less accuracy for your firing.

```
      |            |||          |||||         |||||||    |
            bullets
              |            |||          |||||          |||||||    :  ←
              head
      :            :            :             :         # tail
      #            #            #             #
      #            #            #             #

    Single        Triple      Quintuple      Septuple
 (no powerups)  (one powerup) (two powerups) (three or more)
```

* ORBS *

Each of these will double the orb's speed, to a maximum of 'very fast'.

1.33 Protector

```
                Frequency:  Uncommon
Points Value: 500
```

* WORMS *

Acquisition of this item will give you a companion who orbits around
you (as best he can) collecting
                    objects
                    for you exactly as if you had
moved over them yourself.
  You can have up to 3 protectors, each orbiting at a greater
distance than the last.
  They can destroy on contact:

1. Bullets of all types, whether fired by
                    worms
                    or
                    killers
                    .
2.   Orbs .
3.
                    Worm
                    tails, except yours. With
                    eater
                    , no tails are eaten.
4. The other player's head, if
                    unarmoured
                    .
5. Enemy
                    missiles
                    .
6.
                    Fragments
                    .

Protectors can be slain in these ways:

1. If any
                    orb
                    collects a protector object, all
  protectors will instantly be slain.
2. If protectors collide, they will be slain.

                              * ORBS *

This will slay all protectors.

1.34 Slayer

                    Frequency: Very rare
Points Value: 400

                              * WORMS *

Slayers are used immediately upon acquisition. They will destroy all
 orbs and
                    killers
                    instantly, and
take a life from all
                    unarmoured

                        enemy worms.
  All

                        orbs
                        will
                        explode
                        simultaneously,
so it must be used with care.

                              * ORBS *

The orb will

                        explode
                        , unless it is using
                        armour
                        .

1.35 Tongue

                        Frequency: Uncommon
Points Value: 200

                              * WORMS *

Tongue allows you to go through bricks and worms (heads or tails) without
taking damage.
  You can kill other

                        worms
                        with tongue by 'crossing heads' (ie.
your head and their head are both in the same square). If the other worm
also has tongue then neither will die and you will both receive 1000
points every time you cross heads.
  Tongue is only temporary. Its power will count down at a constant
rate, regardless of the worm's speed.
  While you have tongue your head-image show your tongue poking
out. When your tongue is nearly gone your head will flash.
  Tongue power can be extended by the acquisition of more tongue.

                              * ORBS *

This will allow the orb to pass through bricks and tails instead of
bouncing off them.
  While it has tongue the orb will be blue.

1.36 Teleports

                  You will never get just one of these; there will always be a pair. ←
                        Going
through one will teleport you to the other, and bestow points also.
  The following are teleported:

    .

                        worms

```
                        .
        .
                        orbs
                        .
        . bullets (
                        worm
                        and
                        killer
                        ).
        .
                        fragments
                        .


                        Protectors
                        are invisible over teleports. You will get points for them
being there, though.
  Two teleports can be defined in the
                        Field Editor
                        ; another two
may appear randomly during play.
```

1.37 Scoring

                Unless otherwise indicated these apply to both orbs and worms.

                        --OBJECT POINTS--

```
  +100 Bonus
  +100 Nitro
  +200 Ammo
  +200 Armour
  +200 Tongue
  +300 Bomb
  +300 Diagonal
  +300 Powerup
  +400 Missile
  +400 Slayer
  +500 Bias
  +500 Life
  +500 Multiplier
  +500 Protector
  +600 Ice
  +900 Eater
```

                        --SQUARE POINTS--

```
    +1 Empty
  +100 Silver
  +500 Gold
```

                        --ORB SCORES--

                Orbs

have points, which are yielded to those that slay them, whether
they be worms or other orbs. (They begin at 200, unless 'cloned' by collecting

life
, in which case they will have the score of the
parent.)

                          --SKILL POINTS--

                            * WORMS *

  +500 Kill a
                killer
                .
  +500 You shoot an orb, killer or worm's head.
 +1000
                Cross heads
                .
 +5000 You are the last surviving worm.

                            * ALL *

  +400 Each time you
                teleport
                .
 +1000 Damage a worm.
 +1000 Collect a
                skull
                .

There are also the bonuses for going over tails with
                eater
                .

1.38 Strategy

                Killers
                can only shoot at an edge (ie. they are
adjacent to a free space).

You will get more points by actually
                shooting
                something than
killing it by other methods.

                Protectors
                are, at any given time, in only 1 of the
possible areas they can occupy. This does not give good odds of them
being exactly where required, especially the outermost protectors.
Therefore you should not rely on them too much.

Remember that
                bullets
                , bombs ,

                    missiles
                    and
                    fragments
                  will *not* wrap around through wall gaps. Therefore you will be ↩
                      safer if
you cross over.

If you have
                    bullets
                  , save them until you have a few

                    powerups
                  , to use the bullets to maximum effect.

The best way to avoid a
                    missile
                    is to try and get it
to follow another creature.

Going quickly between
                    teleports
                    (usually done while you have tongue
or eater) will yield many points.

Crossing heads while you have
                    tongue
                    or
                    eater
                    is a good
maneuver.

The only way to destroy a wall is to kill a killer which is on it.

If you are moving fast you will be getting more points, but slower
speeds are required for fine maneouvering.

1.39 Field Editor

The Field Editor allows you to load, edit and/or save the playfields
which the worms compete on. You can create any pattern you desire, subject
to a few minor rules, and therefore the onus is on the creator to ensure
that the field is well-designed.
   The format of V3.0 field files is unlikely to be compatible with
later versions (or vice versa).

The 5 gadgets to the left of the field will change your current 'brush' to
the appropriate type, as would be expected. The 3 gadgets to the right are
slightly special:

Teleports: 2 teleports may be defined in the Field Editor. The gadget
to the left of the skull is for teleport #1 and the gadget to
the right of the skull is for teleport #2. These teleports
will teleport to each other during game play. They are completely
independent of any teleports that may be created randomly as the game
progresses. It is illegal to have only 1 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.

Skull: In the context of the Field Editor, the skull is used to
represent the starting location of all the worms. This is invisible during
gameplay. It is important to leave some empty squares in the four cardinal
directions from this square so that worms are not injured as they begin
play.

```
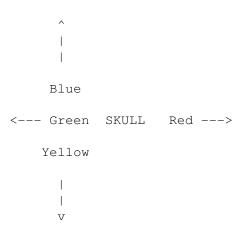        ^
        |
        |

       Blue

<--- Green   SKULL   Red --->

       Yellow

        |
        |
        v
```

Hints for Field Creation

One location is specified for the all worms. It must be a
considerable distance from all barriers as worms may emerge from it
in any direction. Also, try not to make any starting configuration
give an unfair advantage. (The easiest way to insure this is through
the use of symmetry.)

Avoid the temptation to make mazes which have their corridors only 1 tile
wide, unless you realize that it will be very difficult to play. 3-5 tiles
width is usually more appropriate for less skilled players.

Point-squares should be used with restraint, and generally only as a
reward for difficult maneouvering. 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 tricky maneuvering.

The more walls there are, the more prevalent killers will be.

Killers only fire when they are on the edge of the wall, but they move
randomly. Therefore some wall configurations will be more deadly than
others. For example, thin lines provide maximum contact between worms and
killers, and thick square areas will quickly generate them.

The field is not as large as I would like it to be, and as a result you
need to consciously give the players some room when you are designing
your fields.

1.40   Other Information

                        Contact Details

                          Development System

                          History

                          Catalogue
                   Jaemol Software are an attempt to create quality Canberran ↩
                            software for
the Amiga's loyal users.
  This software is completely free.
  Versions 1.0-2.1 were named Jaemol Tron.

1.41   Catalogue

                               ---XTRON---

XTron is a game by Jaemol Software on the X-Windows platform with a
similar theme to Worm Wars but is much simpler and less advanced. It has
achieved much recognition, and is distributed as standard as part of the
GNU/FSF DEBIAN LINUX, Red Hat Commercial LINUX, and S.u.S.E. SlackWare
LINUX distributions. The current version is V1.1a.

                             ---CODE WARS---

In the works is a new game from Jaemol Software...Code Wars.
  Have you played Core Wars or CRobots? You code a robot as a
program which controls its behaviour, and then you simulate a battlefield
and run several such robots, each running different programs, into
warfare. It is a game to test coding skill. It will be more advanced than
CRobots but similar in concept.
  Programs are actually written in your own compiler and you just
link the Code Wars library.
  It should be released on the Amiga and X-Windows formats.
  Don't expect anything until later in the year, though.

1.42   Contact Details

Please tell us your comments, criticisms, suggestions and any bug reports.
  If you create a field that you wish to share with others, you can
send it to us and it will most likely be included as a sample board
with the next update of JTron.

Snail mail:
  James Jacobs
        Jaemol Software
        11 Yate Gardens
        Rivett ACT 2611
        Australia

Voice:
        Australia (06) 288 2278

EMail:

        rhett@ise.canberra.edu.au

1.43 Development System

Hardware...

        Commodore Amiga 1200HD/40 too slow
        40Mb 2.5" IDE hard disk   too small
        2Mb chip RAM   too little
        2400 baud modem   too slow

Firmware...

        Kickstart 3.0   And a lovely chip it is!

Software...

        Workbench 3.0   The world's best operating system, by far.
        SAS/C 6.3   What a compiler! (and debugger :-))
        CygnusEd Professional Old and cranky but I'm used to it.
        Deluxe Paint 4   Not the AGA version! :-(
        MultiView   Hypertext.
  GadToolsBox   OK, I needed it!
  OctaMED 5.0   The brilliant sequencer.
  MEDPlayer Programmer's
    Sources   The excellent play routines.

Thanks to all those whose software was used to create Worm Wars, and
also to the composers.

1.44 History

              Note: 'Miscellaneous bugfixes' and 'Rule changes' are not ←
                explicitly
mentioned, as they generally occur with every new release.

1.0 [MS-DOS]: 1993. Not released.

1.1 [MS-DOS]: 1993. Not released.
        . Colour.
        . Selectable gamespeed.
        . Scoring.
        . EGA textmode.

1.2 beta [MS-DOS]: Oct 1993.
        . Guns.

1.2 [MS-DOS]: Thu 4 Nov 1993.
        . Helmets.
        . Bombs.
        . Remaining helmets shown on worm heads.

```
1.3 beta [MS-DOS]: Nov 1993.
        . New colour scheme.
        . More sound routines.

1.3 [MS-DOS]: Fri 11 Feb 1994.
        . Speedups/slowdowns.
        . Improved blast routines.

1.4 [MS-DOS]: Wed 9 Mar 1994.
        . Shields.
        . More sound routines.
        . Improved scoring system.
        . The ability to enter the speed selector whenever desired.

1.5 [Amiga]: Sun 10 Jul 1994.
        . Bonuses, nitros and cannons.
        . Improved scoring system.
        . Orbs.

1.5a [Amiga]: Thu 25 Aug 1994.
   (Maintenance release.)

1.6 [Amiga]: Sun 9 Oct 1994.
        . 1-player mode.
        . Wall gaps.
        . Shadowing and other graphics changes.
        . Killers.
        . Slayers.
        . Monochrome support.
        . More keyboard support.

1.7 [Amiga]: Wed 26 Oct 1994.
        . Orb explosions.
        . Revised scoring.
        . Objects can use helmets and nitros.
        . Shields now used immediately.
        . High scores.
        . Field sizes can be set.
        . Reorganised status window.

2.0 [Amiga]: Sat 3 Dec 1994.
   . Opens its own screen.
   . New 16-colour graphics.
        . Games are now played in rounds.
        . Cause of death.
        . Symbols of objects on status bar.
        . Protectors.
        . Power-ups.
        . Optimized code.
        . Improved multitasking.
        . Improved keyboard routines.
        . Joystick support.
        . Number of players can be reselected for each game.

2.1 [Amiga]: Tue 27 Dec 1994.
        . Title logo.
```

```
            . Missiles.
            . Colour alterations.


3.0 [Amiga]: Thu 18 Jan 1996.
            . Amiga-controlled worms.
     . Music.
     . New graphics.
     . Field editor.
     . Mouse control.
     . Menus.
     . Up to 4 worms are now supported.
     . Name change.
     . CLI arguments.
            . Lives.
            . Multipliers.
            . Ice.
     . Gadgets.


3.1 [Amiga]. Possibly 1996.
     . Chasers chase you around the field and grab things.
     . Altering pointer, according to tile in use in Field Editor, and
     less obtrusive pointer in game.
     . Growers enlarge all silver and gold.
     . Icons created for field files.
     . Field Editor to support right mouse button; also possibly
     keyboard and joystick.
     . High scores.
     . Comments for field files.
     . Letters to collect, which form words to allow level completion,
     etc.


Whether or not I actually decide to create V3.1 is dependant upon
user demand.
                  Suggestions
                  for more features are of course
welcome.
```