Scions

Jimmy Westerlund

COLLABORATORS			
	TITLE : Scions		
ACTION	*NAME*	*DATE*	*SIGNATURE*
WRITTEN BY	Jimmy Westerlund	February 15, 2023	

REVISION HISTORY			
NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

Scions

1.1   ALMAGICA -- Scions of a Forgotten World -- Preview Version 2 ©Copyright by DSP 1996, All rights reserved

```
            Welcome to the Second Preview of ALMAGICA – Scions of a  ←
               Forgotten World.
----------------------------------------------------------------------
This is the second preview version of a new realtime strategy war game,
called Almagica – Scions of a Forgotten World.

The reason for us realeasing this preview is to give you a chance to see
what kind of game this will be. And I would like to say a few words before
you start this preview. This preview IS NOT ment to impress anybody with
blending full framerate 256 color graphics or to make you howl with joy
about the stunning soundfx or make you spending hours trying to outsmart
the AI. This IS STILL only a preview, so don't be disappointed if Scions
doesn't kick WarCraft 2's ass...


            Disclaimer

            Installation

            Requirements

            Limitations

            Game description

            Units and Houses

            How to train more units

            Configuring

            The Keyboard

            New Features

            About DSP
```

How to contact DSP

Bugreports

Credits

Changes

Troubleshooting

1.2   Disclaimer

```
Disclaimer
--------------------------------------------------------------------------
```
Almagica – Scions of a Forgotten World is ©Copyright by DSP 1996, All
rights reserved.

This preview version of scions is FREEWARE. You may copy it as you like and
how much you like (that's the general idea with a preview release) as long
as you do not alter the contents of the archive in ANY way.

Magazines/PD libraries/etc have our permission to include this preview on
Cover Disks or similar IF AND ONLY IF we can have ATLEAST ONE FREE COPY of
the issue/disk/CD in question. This does NOT apply to AmiNET or AmiNET CD.

Please note that the above ONLY apply for THIS release. The final version
of Scions WILL NOT be freeware.

Needless to say, you MAY NOT sell Almagica for profit.

And as usual... You use this software ON YOUR OWN RISK. DSP cannot be held
responsible for ANY kind om damage Almagica may produce.

1.3   How to install Scions

```
Installation
--------------------------------------------------------------------------
```
Installing Almagica shouldn't prove any difficulties. SImply run the
supplied installation script.

Almagica uses the AHI (Audio Hardware Interface by Martin Blom) for the
audio. A minimal installation of AHI will be made if you want by the
installation script.

If you sould want for some obscure reason remove Almagica from you system,
you sould know that all files are kept together in the directory created
during the installation, with the exception if AHI, which is placed in your
DEVS: directory.

1.4   Requirements

```
Requirements
----------------------------------------------------------------------------
To be able to run this preview, you will need atleast this equipment.

o AGA chipset or a CyberGraphiX card.

o AmigaDOS 3.0 (V39) or better.

o We can't guarantee that this version will work properly on a machine with
only 2 MB of ram. 4 MB of ram should be enough by a fair margin.

o 68020 or better.

o Harddrive with about 1.2 MByte free space.

o For the audio, Almagica need AHI to be installed.

o Default stuff like a mouse and a keyboard.
```

1.5   Limitations

```
Limitations
----------------------------------------------------------------------------
This preview has the following limitations.

o Only 5 levels.
o Only 4 different kinds of troops.
o Only 4 different kinds of houses.
o You cannot load or save games.
o No surprises.
```

1.6   About the game

```
About Scions
----------------------------------------------------------------------------
As said before, Scions is a realtime strategy war game. Other simular
famous games in this genre are Dune II, War Craft (NoAmiga) and Command &
Conquer (NoAmiga). Since fewer and fewer games are ported to the Amiga
platform, we decided that something had to be done.

Anyway, this preview isn't very complicated, only a few minutes of gameplay
is needed for you getting acustomed to how things are done. But to give you
all a headstart I'll try to describe what you're supposed to do.

After you have started the preview you will be presented with the main game
view. Here you will see that most part is taken up with a map showing
different kinds of terrains with troops and houses placed here and there.
It's on this map most of your gameplay will take place.

On the bottom right corner you have a smaller map. This overview map shows
```

the entire gameplay area, with parts that you haven't discovered colored
black. Enemy houses and troops are displayed as red dots and your troops
and houses as blue.

Above this smaller map is the "currently-activated-item-picture" box. Here
you will see a picture and the name of the currently active object (troop
or house). Also when something is activated you may see a number of boxes
appear beneath this box. These boxes are called "orderboxes", because they
represent different kind of orders you may give your troops or houses.

And finally, on the top-right of the display you have the amount of
resources you have. Resources are needed for you to build and repair houses
and troops, and a couple of other things. If you ever run out of resources,
then it's time for you to consider yourself in trouble.

In this release there are five levels. Since you cannot save or load games
yet, we have included a simple code system. When a level is won, you will
be presented with a four digit code. Simply type this code at any time
during the game and that level will be loaded.

1.7   Houses and Units appearing in this preview

```
Units & Houses
----------------------------------------------------------------------------
Here is a brief description of all units and houses appearing in this
preview, together with a summary of the different orders they can perform.
Note the the keyboard shortcut for each order is within parantesis.


The Farmer
----------------------------------------------------------------------------
The farmer is your hardworking man. He is responsible for tasks such as
harvesting and mining, building and repairing. The farmer is quite
ordinary, only equipped with an axe and some other useful tools. He does
not know anything about warfare, but if neccesary you can order him to
attack. As the farmer becomes more experienced, he will be able to both
carry more goods and become better in working in the forest.

The farmer can be ordered to:
(M)ove to a position    (R)etreat to the inn    (G)uard a position
(H)arvest tree or mine  Re(p)air a house        (A)ttack an enemy
(D)rop some resources   Build a (F)arm          Build a (B)lacksmith
Build a (W)ell          Build an (I)nn


The Militia
----------------------------------------------------------------------------
The militias are ordinary villagers that has been equipped with light armor
and has been somewhat trained in the art of battle. Far from being
professional warriors, they are still the best defense you can hope for in
a small village. Since they are carrying armor, they cannot move as good as
the farmers, but on the other hand, they can survive much longer in battle.
The more battles a warrior survives, the better and more experienced he
will be, becoming more and more deadly.
```

```
The militia can be ordered to:
(M)ove to a position    (R)etreat to the inn    (G)uard a position
(P)atrol a route        (A)ttack an enemy
```

The Archer

Villagers with a talent from archery can prove very handy to have in
battle. The Archers are equipped with a bow and a large quiver of arrows.
Unlike the militias, they are not armored in any way, so they are easier to
kill. But because of the lack of armor, they are of course faster then the
militias.

```
The Archer can be ordered to:
(M)ove to a position    (R)etreat to the inn    (G)uard a position
(A)ttack an enemy
```

The Scout

Scouts are faster then both farmers and archers, and when becoming more
experieced, they can see farther then any other unit. Their only weapon is
a dagger, so they should not be used in offensive attacks.

```
The Scout can be ordered to:
(M)ove to a position    (R)etreat to the inn    (G)uard a position
(A)ttack an enemy
```

The Inn

The inn is the natrual place for you headquarter. It's here that the young
people in the village gather, waiting for the elder people to allow them to
serve the village in what they think is the best way. The inn is also the
natrual place for storing all the resources the farmer bring back to the
village. The inn got a status bar telling you of how many free citizens
that can be trained into units you got, in relation to the maximum number
of citizens you can have.

The Farm

In the farm, young people learns what it takes to become a farmer,
including mining and foresting. They also learn the craft of building and
maintaining different kinds houses. The farm has a statusbar which displays
the amount of units in relation to the maximun number of units possible. If
no bar is shown, you got more units then can be supported by the farms.

```
The farm can:
Build a (F)armer
```

The Blacksmith

When someone is selected to be a warrior, they are sent to the blacksmith
to be equipped and receive a little education.

```
The blacksmith can:
Build a (M)ilitia         Build an (A)rcher         Build a (S)cout


The Well
---------------------------------------------------------------------------
Without a well a village cannot survive for long. Its water is essential
for human and animals both. Without a well, the risk for a plauge becomes
greater, preventing your village to grow. The well have a status bar
telling you of how long it will take before a new citizen is created.
```

1.8 How to make more units

```
How to make more units
---------------------------------------------------------------------------
Creating new units is not as simple as just to make them, there are some
limitations that must be considered.


Maximum population limit
------------------------
The first limit limits how many units you can have totally. This limit is
raised by building either inns or farms. Inns raises the limit by two and
farms by four. If this limit is reached or exceeded, no more units can be
trained and a message will appear telling you to first build more farms.


Difference between citizens and units
-------------------------------------
The second limit is not as much a limit as it is a principle. You cannot
"create" units, you rather "train" units. This means that you must have
someone to train. These someones are called "Citizens" and are people that
you cannot see. They sit inside the inn waiting for you to select them for
training. If you are to train a unit you will need a citizen. If you are
out of citizens a message will appear telling you of the problem.

New citizens are created by building wells. By selecting a well, you can
see how long it will take until a new citizen is created.


An Example
---------------------------------------------------------------------------
Suppose you got one inn and two farms. This mean that the Maximum
Population Limit is 10 (2+4+4).

Now suppose you got 2 farmers and 4 militias out (totally 6 units). The
maximum number of citizens you can now have is then 4 (10-6). If you select
an inn then the CITIZENS bar will show you how many you have, and a full
bar then means 4.

If you now got 4 citizens (the bar is full), then you cannot create more
citizens from the well. The GROWTH bar on the wells will stop on maximum
waiting until a new citizen can be created.

Training a new unit will remove one of your citizens (3 left) and make him
```

into an unit (7 unit totally).

Selecting a farm will display a bar telling you that you got 7 units of a
maximum of 10.

1.9 Configuring Scions

How to configure Almagica – Scions of a Forgotten World

There are a number of options that is either impossible or senseless to
change "in game". These options are placed in an external program. To
configure Almagica, run the program called 'setup' placed in the scions
directory. The setup window consists of a number of buttons and checkboxes
and slider.

Title   Description
-------------------- --
Select Screen Mode:
        Use this to select what screen mode to run in. Note
        that the width of the screen MUST be an even count of
        64, if not, the width will be rounded down. The
        minimum allowes size is 320x200.

Select Audio Mode:
        Simular to "Select Screen Mode", but lets you select
        what audiomode and mixfrequency to use.

Emulate Blitter:
        If checked, then all blitter actions will be emulated
        by the CPU. If not checked, the blitter will be used
        directly. Using "Emulate Blitter" will save a lot of
        CHIP memory if you have some FAST memory installed.

Bitmaps in FAST:
        Checking this will force scions to place the render
        bitmaps in FASTmem instead of CHIPmem. On ordinary
        computers (i.e. no gfx card and such) it's slower to
        have them in FAST, since then they have to be copied
        to CHIP before they can be displayed.

Pause when inactive:
        Check this if you want scions to pause whenever you
        deactivate its screen.

CyberGraphX:
        Set up scions to be used with a CyberGraphX screen
        mode.

No Audio:
        Disables all audio. No audio resources at all will be
        used if this option is used.

Audio Channels:
        Lets you select how many audiochannels to use.

```
Priority:
        Sets the priority of Scions when it is activated.

Sleep Pri:
        Sets the priority of Scions when it is inactive. Note
        that this slider is disabled when the 'Pause when
        inactive' checkbox is active.

Hot Spot X & Y:
        Due to a bug in either CybGfx or Scions, the hot spot
        on the mousepointer isn't correct when using a
        CyberGraphX screen mode. You can manually correct
        this with these sliders. Note that different screen
        modes may/will require different settings.


Save & Run:
        Saves configuration and runs scions.

Save:
        Only save configuration.

Cancel:
        Forget changes and quit.
```

1.10 The Keyboard

```
              The Keyboard
------------------------------------------------------------------------
There are several keys used in Almagica and here is a brief summary:

<Shift> F1 to F4      Snapshot up to four different positions on the map.

F1 to F4              Recall a previously snapped position of the map.

Tab                   This key has different meanings when different
        objects are active:

        A bounch of friendly units: Rotate the leader in the
        group.

        A friendly house: Activate the next friendly house.

<Shift> Tab           The same as Tab, only backwards.

Esc                   Bring up the menu.

<Shift> Esc           Fast quit.

<Alt> RMB$^1$         Performs a default action on a unit, or a group of
        units.

Return                Centers the view over the place the last message
        refered to.
```

```
Enter                   Zooms the overview map if you are playing on large
          maps.
```

Apart from the above keys, there are some keys that can be used to select
an order. These keys vary from unit to
                unit
                 .

^{1}: RMB is short for Right Mouse Button

1.11 New Features

```
New Features
-------------------------------------------------------------------------
These are the major improvents done since the first preview version was
released.

o Dynamic Screen Size
The first preview allowed the user to choose which screen mode to use,
but the game area was always set to 320x200. This has now been changed.
Almagica should now be able to handle screensizes up to 8192x6144 in
theory, but the highest practical resolution is problaby somewhere around
640x512. Anything bigger then that will make it hard to see your units.
Ohh.. Just one more thing. Don't blame the low AGA bandwidth on us , or
to put it simply, DBLPAL:Hires No Flicker in 256 IS slow, and will
continue to be slow.

o Support for Audio Cards
Almagica now uses the AHI audio system. AHI is a system for Audio
Hardware independent sound, giving Almagica support for different Audio
Cards.

o Default Actions
This is one of the most frequently wanted features. What it means is that
the unit itself decides what to do in a specific siutation. For example,
it ordering a unit to perform the default action on an empty grass spot
on the map, the unit will move there. Ordering a default action for a
militia on an enemy will make him attack him. For a farmer on a damaged
house, the farmer will start repairing it etc etc. The default action is
invoked by pressing <ALT> and Right Mouse Button.

o New order system
The orders are now processed in a totally new way. The user will not
notice much about this change, except that orders are now much more
intelligent. Previously units tended to constantly forget what they where
supposed to do, which should no longer be the case.

o New order icon system
In the first preview, all units had a fixed maximum number of different
orders (9). We could not accept this and so the entire order giving
system was rewritten. All orders are now devided into three different
groups, Action orders, House building orders and Troop building orders.
Action orders are "normal" orders such as Move, Harvest and Attack. These
orders are displayed one group at a time. If there are more orders of a
```

group then can be fitted on the screen at the same time, they will be
displayed in pages of six orders at a time. The lowest three ordericons
does not connect to normal orders, but are used to control the display of
ordericons. There are five different types of controlorders. The first
three are to move to the Action, Build House and Build Troop groups. The
last two is used to scroll between the different pages. It's not as
complicated as it sounds, try it out and you should get the hang of it
pretty soon. Please note that default actions and keys are totally
independent on what's currently on the screen.

o Unit experience
Units now gets experience. This means that units surviving for a long
time gets better and better. A unit may for example become tougher, or
can get to carry more stuff, when raising in experience.

o "Big graphics"
Well... Couldn't think of any better title for this. Previously a unit
could not have graphics that extended into another square (if a unit
attacked another, there was no way of actually making his weapon seem to
touch the enemy). This has now been fixed.

o Farmer no longer disappears when building houses
The farmers used to be removed when they built houses. This is no longer
the case. When houses are built now, they are built with only 1 hitpoint.
The farmer then automatically starts repairing the house unit it is fully
"healed". The only differnece between a hurt house, and a not yet built
house, is that the hurt house still have it's orders functional and
performs special stuff like increasing population pool.

Stuff NOT made in this version

There are some stuff that we are thinking of implementing, but that is not
present in this demo.

o Direct CyberGraphics Support
The current support of Cyber Graphics is quite primitive. The reason is
simple. Cyber Graphics are chunky modes, and Almagica is purely planar.
Because of this we need to reserve temporary memory to first build a
planar version of the display, which is then converted into chunky and
copied to the graphics cards internal display memory (made by a call to
graphics.library/BltBitMap(). We ARE however, considering to support
chunky mode directly. This would mean that all graphics are converted
into chunky when loaded and that all parts of the code writing to the
display would be created in one planar and one chunky version. Now the
only problem is this... I don't have CyberGraphics, and trying to make
this support without being able to test if myself would only result in me
eating Losec as candy.

o ECS version
We have been asked to make an ECS version of this game as well. We have
not yet decided if we should make one, but we do know that we won't start
on it before the AGA version is finished. However, an ECS conversion
should be fairly easy to do.

o Traps
Different kinds of traps will problaby be implemented at some time.

```
o Strategy part in addition to the action part.
We are problaby going to devide the game into two parts, one strategy
part and one action part. This would result in a game quite simular to
the concept of Dune II, but much more advanced. The strategy part would
hold stuff like moving troops, spying etc.


o Multiplayer game
Yes, I know you all want this one. We will see what we can do about it,
but I can't promise anything(!!).



More details
-------------------------------------------------------------------------
For a more complete documentation of all the changes made to almagica since
the last preview version, please refer the the text "Recent_Changes" in the
root directory of Almagica. Please note that the translation of this text
into english started quite late, so some of the oldest entries are still
written in swedish.
```

1.12 About DSP

```
About DSP
-------------------------------------------------------------------------
DSP currently consists of the following people:

Jimmy Westerlund (nick krywes)
That's me. I'm the main programer. That means that if the game crashes or
something, it's me you should blame. It also means that you shouldn't
blame me if you don't like the graphics :-)


Björn Hagström (nick orgin)
Björn is our misc guy. We havn't really been able to find out exactly
what he does yet, but I'm sure it's something important. But we do know
some of what he does, and that includes writing a level editor, thinking
up nice pathfinder algorithms, making contact with various non-DSP people
on the net etc etc.


Per-Anton Aronsson (nick Dahmal)
Per-Anton (or more shortly, just PA) is the one that is to blaim for the
graphics. I know I should be writing a little more about him or he'll
just be envious, but I really can't come up with somthing... He's simply
making the graphics, and belive me, that's quite enough.


Fredrik Svensson (nick digital)
Fredrik is the person responsible for the music. In his defense I have
to note that the sounds effects are not his doing, but I'm sure you like
the music which is very much his creation.


We are all about 20 to 23 years old and VERY dedicaded to our lovely
computer. For this reason I think I speak for all of us when I say that we
WON'T abandon the Amiga for the PC. Please, don't ask us to make a PC
version of Scions, we may get rather upset...


Except for the four of us there's a number of other people that has in
```

different ways helped and inspired us all. These are people like Magazine
editors, betatesters, idea sharers and not the least, all of you who have
bothered to send us an e-mail. Without all of you, there would have been a
risk that Almagica, due to the amout of work it needs, would have died a
long time ago. Thanks...

1.13 How to contact us

```
Contacting DSP
-------------------------------------------------------------------------
You can contact us on the following addresses:

E-mail              Snail mail             IRC
-----------------   --------------------   -------------------------------
orgin@medio.mh.se   Jimmy Westerlund       krywes    (Jimmy Westerlund)
ing9435@ind.mh.se   Ringvägen 15           orgin     (Björn Hagström)
            S-890 42 Mellansel     #AmigaSWE
            Sweden


WWW
----------------------------------------
http://www.ind.mh.se/~ing9435/DSP
```

And please... we prefer E-Mail before snail-mail... Don't expect answers on
snail-mails...

1.14 How to write a bugreport

```
How to write a bugreport
-------------------------------------------------------------------------
If you find a suspected bug, we would like it if you could write us a
bugreport. If you decide to send us a report, please have these things in
mind :

o Your system (Computer, CPU, memory, GfxCard, OS version, etc etc).
Althought this never should be the cause of the bug, it still might.
Better give to much info about your system then to little.

o What happens?
Describe what happens. If you get an enforcer/mungwall hit you should
include where the hit happend (hunk and offset). See if you can get to
reproduce the bug regulary. If you can tell us exactly where, when and
how to get this bug, it will be much easier for us to track it down and
remove it.

o Is there another program interfearring with scions?
If you get a bug and is able to reproduce it, see if it is still there
if you boot with no startup-sequence. If the bug has suddenly gone
away, then you are running a program that for some reason interfears
with Scions. In that case, try to find out which this program is.
```

1.15 Credits

```
These people who were involved in this release
----------------------------------------------------------------------
Programming:   Jimmy Westerlund     - Krywes
        Björn Hagström      - Orgin

Graphics:      Per-Antron Aronsson   - Dahmal
        Björn Hagström

Music:         Fredrik Svensson     - Digital

PT-replayer routine is taken direktly from the AHI distribuation.



In addition to the above, a whole bunch of other people been of much help
to us. These are all our betatesters, all the people who sent us reports of
bugs an suggestions for improvements etc.
```

1.16 Changes

```
             Recent Changes in 'Almagica - Scions of a Forgotten World'

--------------------------------------------------------------------------------
0.18 Second official demo release - Early February 1997
```

o Removed the internal resourcetracking routines and made them a runtime library
  (tracker.library). There are two versions of this library. One is able to dump
  info to the serial port, while the other (tracker.library.nodebug) is silent.

o Rewrote the routines that handles the drawing of the units. Previously there
  was two different routines, one for small and one for big troops. These could
  only handle gfx that was 16xh and 32xh pixles big. These two has been replaced
  by one single routine that can handle up to 32x32 pixels for small units, and
  up to 48x48 pixels for big units. This allows us to have unit gfx that extends
  into the next square, so it's possible to draw gfx that REALLY looks like it
  is attacking somebody, and not just dancing with him... NOTE!! Watch out for
  gfx-trashing. Try to find situations where trash appears. There situation are
  most likley to occur when two or more units gfx exists on the same place. This
  routine does not clip units against the shadows and it is about 30% faster
  then the old routines when the blitter is used. If the blitter is emulated it
  is about 2.5 times slower since the old routines uses special optimized
  blitting code. It should now be quite simple to replace these routines so that
  they read/write chunky data instead of planar.

o Removed quite a bit of obsolete code, mainly all left over code from the old
  ai system. Results in a smaller exacutable and faster compilation time.

o Created a generic function for loading graphics. This function automagically
  unpacks the gfx if it has been packed, so most gfx files are now packed saving
  quite a lot of diskspace. The packer are a simple ByteRun1 encoding.

o The setupprogram should now filter out all non 8bit CybGfx modes. No more
  playing Scions on a 24 bit True Color screen :)

o Degraded the setupprogram from 1.7 to 0.8, since version 0 is more logical at this stage then version 1.

o Beware!!! The enemy militias now attacks when encountered again. And they still bring their friends...

o Reimplemented the intro. All pictures are still only 320x200 and are centered on the screen.

o Remade the "troop-selected-boxes" a little, just to see what you think about it.

o Spent a little time cleaning up various parts of the code. Lots of totally ancient #define's, structure members etc removed.

o Added experience levels to units. The units have (for the moment) each three experienselevels. Units can gain experience in a number of differennt ways. Each time a unit hits an emeny in battle, he gains experience. Since farmers aren't involved in battles, units also gain experience when delivering resources to the inn. The more experience a unit get, the better he becomes. Attributes like hitpoints, damage, carry ability and simular may increase when a new experience level is reached. The only way to see what level a unit is currenly on is on his name bar. In the future it might happen that experienced unit get new intresting orders. A message is displayed when a unit reaces a new level.

o Added bars for units to show experience and resources carried. These bars are only displayed for friendly units.

o The background of the resource digits are now taken from the backdrop image.

o Minor change to the namefield made. Characters like p, f, t etc now look better.

o Changed the behaviour of farmers when they are attacked. Now they drop what they are currently doing and retreats to the nearest inn. If they are followed by the enemy, they will defend themselves at the inn, rather then just waiting to die. Note that IF they survive the attack, they will have forgotten what they where doing and must be given a new order. The same thing happens when a RETREAT order has been given.

o Population pool now increases again.

o If a farmer harvesting tree runs out of forest to cut down, he now returns to the inn and enters GUARD mode.

o Farms can now only build Farmers.

o Blacksmiths can now only build Militias.

o Added a simple code system for the levels.

o If an error occured and a unit ran an infinitive orderloop, more detailed info are now displayed.

o A farmer reparing/building a house will use the reqources he carries before

using the "global" resources.

o A retreating farmer carrying resources will now also enter the inn.

o New system for "population control". In addition to the previous system where
  you got to have a citizen to train a new unit, there is now a limit of the
  maximum number of units you can have. This limit in rasied when specific
  houses are build (now farms and inns).

o Added the GROWTH bar to the wells.

o Added the UNITS bar to the farms (name will problaby be changed).

o Healing units now costs resources.

o Farmers are now animated while repairing/building houses. Temporarily uses the
  attack/cut tree animation until we got some real repait gfx.

o Added a DROP_SOME_RESOURCES order to make it possible for a farmer to get rid
  of resources it carries without having to take them to the inn.

o Rewrote the overviewmap routines. Now you will have a overviewmap on every
  possible screen size and every possible mapsize.

o Goldmines now "collapses" when all their gold had been taken out.

o By pressing RETURN, you can now scroll to the object that caused a message to
  be shown.

o Fixed minor bug in the PATROL order.

o All intuition keyboard replacemens for the mouse now works (Amiga-Left Alt ==
  Left Mouse Button etc).

o When GUARDing troops are bored, they now amuses themselfs by turning every now
  and then.

o You can no longer repair destroyed houses.

o Replaced the PT-replayer code with the new code supplied in ahi v2.6. Seems
  like this code works better then the old (sounds better).

o Changed the way creating/healing units works. Training units now works like
  building houses. The unit is created with a minimum of hp, and is the healed
  until full hp is reached and the unit can exit the house. As a side effect of
  this, all houses that trains units will be able to heal them too, and they can
  hold a maximum of one unit at a time. The old PROGRESS bar has been devided
  into two new, TRAINING and HEALING. Later on we will problaby implement
  somekind of "Make Units exit the house" order. This order will then NOT work
  while training units (then there will be an "Abort training" order instead).
  The reason for this is that it is not logical that you should be able to
  release units only half trained, like it is not logical that houses under
  construction can train units.

o Default Actions now works on the overviewmap too.

o If a new order was given to a unit while he was entering a house, that new

order tried to start running when the unit was fully inside the house. This caused an error and the unit got stuck inside the house forever. Now that new order does not start until the unit has exited the house.

o If a house was destroyed while a unit was entering the house, that unit did not die but was left alive, unusable and unselectable and overwalkable by others. Now that unit, along with all the units still in the house, will die. Only units leaving a house that gets destroyed will survive.

o Took the first steps in implementing Load and Save.

o Added new units Archer, Scout and ship.

o Added the Arrow projectile for the archer.

o New graphics for burning wells.

o Minor change in the unit sfx system. There are now two more definable sound for each unit (repair and harvest), and it is now also possible to define when in the animation the sound should start.

o Made the feature of "direction modification" dynamic. Dirmod means the in certain animations, the unit should not face the opponent directly. Look at the militia attack. They turn 45 degress to the right before they attack.

0.17

o Added an UNLOAD command, so that troop carrying other troops may get rid of them too. The "Testing Troop" on the level 'test.map' has this order.

o Fixed a bug that would cause a corrupt orderstream if an unit recieved two interrupts on the same frame. An example of this is that if you entered a ship with two troops at the same time, the ship got one interrupt message from each of the boarding units. This resulted in a lot of enforcerhits when the ship's next order had finisihed. A unit should now be able to handle up to 255 interrupts in one frame.

o Removed a bug that could made the troop walk on terrains it shouldn't be able to, if that terrain was undiscovered when the troop started to trace the path to walk. This happend due to the stepbuffering introduced in 0.16.

o Spent some time fixing the move-orders for big units, which should now work quite ok. Be aware that the pathfinder is only capable of finding paths for small troops for the moment. Big troops will still use the pathfinder, but it might happend than an illegal path is selected for them because they are to big to fit into certain parts of the map. When this happens the big unit will complain about a corrupt orderstream and put the unit into GUARD mode. You DON'T have to report this as a bug :)

o Compiled all sources, using all kinds of optimizations in SAS/C, twice. Once for 020 and once for 060. Please check if there are any noticable speedups (the 060 version SHOULD(!) run faster on a 060 then before). I want to know if it's worth the time compiling it (took about 1 hour to compile it).

0.16

o Scions now buffers the steps traced by the pathfinder again. The advantage of buffering steps is that the troop don't have to retrace a path for each step he makes, thus saving a lot of time. The disadvantage is that the troop becomes more stupid, since he don't react on changes in the map. Unlike the previewversion, this buffering should work a lot better because of the new order-command system. The number of steps buffered are now also variable and is currently hardcoded to 8. It might happen that this becomes some sort of "Very Advanced Setup" in the future, allowing the user to select between speed and intelligence himself.

o Fixed a minor bug introduced in 0.15. The GUARD icon is now set when an order is finished.

o Fixed Enemy Milita gfx (the blit-masks where wrong).

o Fixed a bug that made Default Action to become unfunctional. This bug was problably introduced in 0.15.

o Fixed a bug that caused a troop to ignore all order either after he had been created and had moved out of the house, or if you had previously told him to enter a house.

o Tracked down a little memoryleak (12 bytes). Even though the internal resourcetracking found and freed the leak, there's no reason not to remove it.

o Removed another bug introduced in 0.15. When a house was destroyed the proper FreeVec() rountine wasn't called. Instead of calling the resource tracking routine (trFreeVec()), exec.library/FreeVec() was called instead. This made the resource tracking very confused and caused a number of enforcer hits.

o If an unit has been told to board another unit (a ship for example), and that unit is moving, the boarding unit will follow after it.

o Gosh... Sometimes I wonder why we didn't do a Civilization clone instead.. How easy it would have been... Added a little feature that will look like a simple one, but which in fact is among the most complicated stuff in the game so far. If a troop is going to board another troop (a ship), then a lot of stuff happens. The first unit (A) sends a message to the ship (B) telling it A want to enter it. When B receives this message, it replies to A that it is waiting for A to enter, at the same time that unit B's current orderstream is interrupted. Then when A is fully inside B, A sends a third message telling it it's inside, and B continue with its old orderstream. This should work well even if one of the units is killed in the middle of this message exchange, but please, DON'T give unit A a new order, 'couse it will problaby make unit B wait forever (or unit you give it a new order)...

0.15

o Fixed a bug in the ATTACK order. If you attacked for example the center of a 3x3 building the order would enter an inifinitive loop. The reason was that the script didn't see that it could attack the edge of the house, but instead tried to walk closer to the center of the house, which it couldn't.

o The enemy militia now acts as in the preview version (0.6). This means attacking your units/houses and calling for help.

o Took the first steps to include Load and Save by rewriting the routines that
  allocates and initializes units and houses.

o If you had the active order on the current ordermenu (i.e an ordericon pressed
  down) and then used the keyboard to select an order on another menu, the
  downpressed icon on this menu was not "unpressed". This has been fixed.

o If you aborted an order during a MOVE, the next square the unit was supposed
  to go to was reserved for that unit. This made it, for example, impossible for
  anyother units to use that square. Fixed.

o Cleaned up the unit structure a little bit.

o Started lightly to reimplement big troops. You can find a big troop in the
  test.map level, (yes, I made the gfx for it :) Don't expect it to work ok...

o Fixed linebrakeing in messages. The message is now broken on spaces, tabs and
  NULLs. This will make long messages MUCH easier to read.

o Implemented a simple internal resource tracking system. Certain calls are
  tracked and remembered. If the game finishes unnormally (low memory or such),
  all those calls will be freed by the exit code. Currently calls to AllocVec(),
  Open() and Lock() are tracked. WARNING!!! In order to be able to test how
  these things work now and then you can deny some things to happen. For example
  you can make the next AllocVec fail to see how the game reacts on it. To do
  this you need to have and external textterminal or another computer or
  something hooked up on the serial port. By pressing down 'a', the next
  AllocVec() will fail. 'l' and 'o' are used for Lock() and Open(). So once
  again... DO NOT play ANY betaversion while using a modem or such. Strange
  things may happen!!!!

o Due to the implementation of the Resource Tracking, I've now done some
  low-memory actions. If you run out of memory and an AllocVec() (Only
  AllocVec()) fails, Almagica will bring up an Alert giving you the choice to
  either quit Almagica now, or wait in 10 seconds and retry the AllocVec(). In
  these 10 seconds the user have the chance to close down stuff in the
  background and thus freeing memory. In the future I will make it possible for
  each subsystem (units, houses, sound etc) to "flush", i.e removing and freeing
  unused memory. That will make the game run on lesser memory but will instead
  increase diskaccess. Note that ONLY failed calls to AllocVec() is noticed now,
  but since almost all memoryallocations is done through AllocVec() (with the
  exeption of the order-ai-memorypool) this is not a problem.

o New gfx for water (not perfekt yet, will change more)...

o Militia's should now react on attacks. When they are attacked, the current
  order is interrupted and the milita responds to the attack. If he wins the
  fight, then he should return to the original order.

o Minor change in the setup program. When the CybGfx checkbox is checked, it
  doesn't automagically selects "Bitmaps in fast" to.

o Minor change in the install script. You are now asked if you wish to install
  AHI.

o This install script should now install AHI properly. The problem was that the

files in DEVS:AudioModes did not have any version strings in them, so the
installer command (copylib ...) failed.

0.14

o From now on 'recent changes' will be written in english. This because that we
  now have our first non-swede betatesting-like person. And as usual with my
  english, please don't mind the numerous grammar/spelling errors :) Will
  translate the rest of the file later when I'm boored enough :)

o Fixed a minor bug concerning attacks. The skeletonfile for the militia falsely
  said that the attackrange was 0 instead of 1. This made the attack order get
  stuck in an infinitive loop if a militia attacked diagonally.

o Fixed a bug that could cause an enforcer hit or a freeze when a troop died of
  violence. The reason for this bug was that I've started to include code that
  will make troops react correctly when they are attacked. This code was not at
  all finished and not tested at all, and gave the troop a couple of hundreds
  MOVE orders.

o After a house has been built, it is now given the correct orderboxes.

o Removed some obsolete order-vars from the house structure.

o If a housebuilding order is cancelled, the housebox is now removed.

o Fixed a bug regarding the order-assignment and orderbox-highlightning. Suppose
  you gave a troop an order to move to point A. After the troop have started to
  move, but before he reaches A you prepare a new moveorder by pressing either
  the MOVE-icon or pressing M. You only prepare it, you don't select a
  coordinate. Now the troop will ofcourse keep moving towards point A. When he
  reaches A that move order is completed and he gets a GUARD order. Before now,
  the result of this was that the GUARD icon was activated and the new MOVE
  order was forgotten, but the troop was still in "i'm-waiting-for
  you-to-select-a-coordinate-to-go-to" mode (move-mousepointer etc). When you
  now selected a coordinate the troop ignored it. This is quite a complicated
  part of the code and I do hope that it will work ok from now on.

o The militia attack animation does not flicker each animationcycle any longer.

o A bug in the setup was fixed (now 1.7). If you where really unlucky with AHI,
  it was possible to end up with a setup.config file that stated that the user
  wanted to use one channel. Since the game requires, and uses, a minimum of
  four channels, you got LOTS of sexy enforcerhits.

o Introduced a new switch, "No Audio". When this switch is used, AHI is not
  opened and no sound at all is loaded into memory. If you think this is a
  pointless option, then watch out for the "might-come" switch named "No
  Graphics" (no, it's not a joke)...

o In the BUILD HOUSE and REPAIR HOUSE orders, the farmer now actually turns to
  face the building.

o The population pool is now increased again. Actually if was possible to
  increase it before, but only if you was (un)lucky enough to allocate a house
  structure on address $0 :)

o Enemy farmers now act as they did in the preview (0.6), i.e. chopping down and
  digging stuff.

0.13

o The Setup program can now be started even if AHI isn't installed

o Maximum number of audiochannels that can be used is now limited to the number
  that the audiodriver can handle, but no more then 16384 channels.

o Added support for AutoScroll and Overscan (setup 1.5)

o Units created by a house now gets a NAI_MOVE_OUT order. This means that the
  troop now actually walks out of the house, instead of standing GUARD inside it
  :)

o Reimplemented RETREAT.

o Created a REPAIR HOUSE order. This is the default action for a farmer on a
  damaged house.

o Made a change in princip when building houses. When the house is created, it's
  created with only 1 HP. The rest of the building in then the same as reparing
  a damaged house. The difference is that a damaged house still can perform
  orders and such, while a house that being built cannot do a thing. This means
  also that several farmers can assist eachother while building. The first
  farmer builds the house and the rest assists by repairing it. This also means
  that building new houses in the middle of an attack isn't such a bright idea,
  because the house can then very easily be destroyed.

o Removed 2 "Emulate Blitter" bugs. The first one occured after a cleanup in one
  of the cpublit routines which resulted by mistake that the intructions was
  move.l AMOD(a6),a0 instead of add.l AMOD(a6),a0. The second bug was that I
  have changed the format of the setup.config file, changing the offset to the
  flagsfield. And of course I forgot to change and recompile the assembler
  sources. The effect was that the real blitter was used.

o If you start building a house ontop of the farmer, he now moves away before he
  starts building.

o If the construction area is occupied by something, the builder will now
  complain ever now and then to inform you of the problem.

0.12

o Units now walks by other units standing still, instead of waiting for them to
  move away.

o If an order generated a MOVE-order which wasn't necessary, the unit first
  turned to the right. This has been fixed.

o No longer requires AHI. If ahi.device couldn't be opened, you simply just can
  use any sound.

o The HARVEST TREE order now searches in a radious of 2 instead of only 1.

o Removes a small bug that made the ordericons not to be properly updated when
  using the keyboard.

o All messages is now displayed on 3/4 of the maparea, instead of as before on
  line #100.

o The settings and Setup files is now read and save to/from ENV: and ENVARC: if
  PROGDIR: is writeprotected (which problaby means the game is on a CD). This
  apply to both the game and the setup (1.4). This also means that these files
  no longer will be a part of the dist, so remember, ALWAYS start by running the
  Setup program...

o Reimplemented the BUILD HOUSE order. The unit building the house no longer
  enters the house and dissapears, but instead stand outside the house building
  it (settlers-like). There is no animation for housebuilding yet. If the unit
  dies while building the house, the house stops building. To continue building
  the house, it must be REPAIRed and that order is not available yet.

o GUARD order icon is now updated correctly when an order is finished.

o Units now dies directly when they dies, and not when the feel they got time
  over to die.

o Fixed the installer-script. AHI is now part of the game-archive. Only the
  PAULA-driver is included. There is a strange bug in the script, on lines 139
  to 148 (the part that installs DEVS:AudioModes). All installation regarding
  AHI before these lines is ok, like the creation of the DEVS:AudioModes
  directory. What happens next is quite funny. If you check with SnoopDos you
  will find that the (foreach ...) statement is able to Lock() all the files in
  AHI/AudioModes, but fails to Open() them. It is NOT the fileprotection that
  causes this. Since this part is identical to the part which installs DEVS:AHI
  (which works), I'm utterly confused.

0.11

o Almagica now detaches itself from the shell. All errormessages are now written
  to a requester, instead of to the shell.

o New ordercommand system implemented. Some old orders (GUARD, MOVE, PATROL,
  HARVEST) are rewritten to the new system. There are still some known bugs. For
  example, a new path is traced each time the troop arrives to a new square
  which means that walking long distances, or walking with plenty troops, will
  be very slow. If a troop is standing in the way for another troop, the last
  one will wait until the first one has moved out of the way, instead of walking
  around him. Some old bugs should now be removed forever, like the fact that
  the troop liked to go into GUARD all the time and forgot what the heck he
  where supposed to do. A troop should return to GUARD now only when the order
  is finished, something went wrong (no path found etc) or you've run out of
  memory (in which case you will get a lot of other problems too).

o One more thing worth mentioning. I will no more remove all KPrintF()'s in the
  betaversions, so you will problaby not want to run a beta version while you're
  using the serial port. Note that this only applies to internal beta versions,

NOT official demo versions.

0.10

o Modified ALL parts in the code that checked who a house or a unit belonged to.
  With the old method, we could only have friendly, enemy and neutral units. Now
  we will in princip be able to have how many sides as we wish (not dymanically
  though). Each side should be considered either as Allied, Enemy or Neutral.
  The code are also consistent now when checking for alliance, before there
  where about three diffrent ways to check it and they where all used
  (CHAOS!!)...

o Started to work on 'Default Actions' (or whatever we should call it). This
  means that the troop does whatever he thinks you want him to do when you wish
  him to do it, even if you don't tell him exactly what it is you want him to
  do...or something... Anyway, you give an 'Defaul Action' order by pressing
  ALT-RMB (yeah, yeah, I know... You WILL be able to choose how to activate it
  later :)

o Fixed a scroll bug that occured when the 'Bitmaps in FAST' option was used.

o Added support for AHI. Because of this, a whole bunch of new sexy gadgets has
  been added in the setup program (1.3). They are "Select Audio Mode..." and
  "Audio Channels". In the in-game menys, you will later be able to select what
  kinds of sounds you want to head. The options should be 'Music Only',
  'Music/Sfx', 'Mood/Sfx', and 'No Sound'. 'Mood' is sounds played depending on
  whatever is currenly visible on the screen (waves sounds, small furry animal
  sounds etc). The volumes for the tree different soundstypes will be separately
  adjustable.

o Because of the AHI-support, it's now possible to switch between music and sfx
  "on the fly". You don't have to select "Music", then "Save" and "Quit" and
  restart it all... Great, huh ? :)

0.9

o Units are no longer drawn on the first row below the maparea.

o A parts of the map are now drawn in the beginning.

o Added a limit for the number of ordercommands each unit may execute each
  frame. If the limit (40) is exceeded, the order is considered out of control
  and a message will be displayed while the troop is placed in GUARD mode.
  Hopefully most situations where the game freezes depends on this.

o The background of the ordericons, statusbars and the namefield are now correct
  (copied from the backdrop picture).

o Removed an unessecary KPrintF() from the setup.

o Rewrote the routines that draws mapblocks. The new ones are about 10% faster.

o Removed a minor bug the forced the entire maparea to be redrawn unessecary
  when you tried to scroll "out" of the map.

0.8

o The new order-issue system now works for houses too.

o Removed a buf that undiscover()ed wrongly when a unit entered another unit.
  The unit TestTroop on the level levels/test.map is the only unit for now that
  can carry other units, and then only farmers.

o Units can now enter squares which they shouldn't be allowed to enter, if on
  that square is something that this unit is going to enter.

o The ordericons are now updated when you tab-selects units.

o Started to implement dynamic screen size. Because of this there is no intro
  and only partially working background in this version. Beside of this, there
  should be quite a lot of new intressting bugs. With AGA you will problaby only
  want to run around 320x200 since any resolution above this will cause a huge
  drop in chipmem bandwidth. CyberGraphX users will problaby not want to run any
  larer resolutions then 640x480, since larger resolutions will make it very
  hard to see your units. The width of the screen MUST be an even count of 64.

o Due to the above, these changes where done in the setup program (1.2)...
  o Added Width and Height gadgets in the Screen mode requester.
  o The Screen Mode Requester now allows interlaced modes.

0.7

o Minor change in the hurthouse() function. The houses now continues to animate
  while they are hurt.

o Forgot to set the WFLG_NEWLOOKMENUS in the setup progam => black menus unless
  you ran (like me) some patch. Has been fixed.

o Added an TEXT_KIND gadget below "Select Screen Mode..." to show which screen
  mode currently selected.

o Remade the order-issue system. Now all orders are devided into three groups,
  action orders, build house orders and train unit orders. The order icons are
  now built around a couple of menus (one menu for each group of orders) where
  each menu can, if needed, be devided up in a number of submenus. Only the six
  topmost icons are now used for real orders, the last three are used to jump
  around in the menu system. The icons will be organized so that the most common
  orders are placed "on the first page". A lot of code has been changed, so
  expect quite a lot of new bugs. This has not been implemented for houses yet.

o Made a minor change in the palette. Color 17-20 are now white, so now all
  cybgfx mousepointer SHOULD look ok. A minor flaw is that these colors where
  (are) used on the units too :)

0.6 First Preview Release - Late July 1996

o Började så smått att inkludera kod för att kunna få en trupp att bära en annan
  för att senare kunna ha fraktskepp och likn.

o Lade till HSX och HSY keyworden (Hot Spot X resp. Y). Detta därför att
  hotspotten under CybGfx inte riktigt funkar som det ska (alt. jag gör fel :)

o Tog bort i stort sett ALLA tooltypes/keywords och flyttade in det i ett
  externt setup-program (setup). Kör setup-programmet för att configga saker som
  displayid, blitter emulering etc..

o Tog bort liten bug från intro-koden.

o Modifierade Install skriptet lite grann.

o Skuggade Load och Save i menyn.

o Tog bort Another World samplingarna från gubbarna.

o Bytte lite introgfx.

o Kan inte kontrollera fiender längre.

o Farmers kan nu bara skapa tre typar av hus, Wells, Farms och Blacksmiths.

o Lite ny (temorär ?) grafik till orderboxarna.

o Tog bort mindre bug från hus-byggar funktionen.

o Tog bort bug från hus-animationsystemet. Nu kan man animera hus med gfxfiler
  över 32k.

o Tog bort bug från audio-sfx-hanteringen. Nu spelas inte ljud om inte
  audiodevice har öppnats.

0.5.18

o Fixade töntig bug som introducerades i 0.5.17 pga "kod-rensning" :) Skuggor i
  höger/vänster kunde blev fel.

o Fixade annan töntig bug med kartan som gav fel y-kordinat om man valde ett mål
  på översiktskartan i zoomat läge.

o Intuition-muspekaren har nu rätt färger.

o Tog bort en bug ur Harvest-skriptet. När det tog slut på träd att hugga, så
  högg gubben en gång på en tom ruta, fick lite trä som han glatt tog med sig
  till Innet.

o En annan bug i Harvest-skriptet tog bort. Kunde inte hugga om man stog brevid
  skogen som skulle huggas när orden gavs.

o Ökade max antal inns på en level från 8 till 32.

o Eftersom INTUITION mod nu är så pass snabbt, så verkar det ologiskt att någon
  skulle vilja köra View's som default. Därför har INTUIION switchen bytts ut
  till NOINTUITION. View's finns istort sett enbart kvar utifall en pre V39
  version av scions skall göras.

o Kommer inget meddelande från fiendegubbar att en gruva är tom nu.

o Muspekaren återställs nu till ett kors när en ny level påbörjas.

o Ändrade hur en level avslutas som. Numera fryser inte allt i 2 sek och sedan
  tonas ner, utan ist så fortsätter spelet ngn sekund. Ser lite finare ut...

o Använder blittern för att kopiera ut bob-bakgrunderna istf cpun. Med ca 84
  gubbar synliga så ger det en grov total hastighetsökning runt 40% på en
  030/50.

o Bytte färg på texten i Options-menun.

o Ändrade lite i ai_move(). Nu så upptäcks nytt område direkt när gubber kommer
  in i den nya rutan, ist för som tidigare först när han var helt inne i den.

o Som en bieffekt av ändringen i ai_move(), så borde gubbar nu gå lite mer
  intelligent när de förflyttas i grupp.

0.5.17

o Bytte icon-hilight-metod. En "aktiv"-bild ritas nu ut istället för att släcka
  bitplan #7.

o Tog bort en bug som gjorde att gubbarna hackade till varje gång de gick in i
  en ny ruta.

o Synkroniserade hugg-ljud oxch hugg-gfx.

o Fixade en bug i ljudeffekterna. Ljud som bara skulle höras när det uppstog på
  skärmen, hördes trots att de hände ngn helt annanstans.

o Om man kör i INTUITION mod, och intuition allocerar BMF_INTERLEAVED och
  BMF_STANDARD bitmappar, så rendras nu grafiken direkt till dessa bitmappar,
  istf för att rendras till ngra rendermappar och sedan BltBitMap()as till
  skärmen. Detta gäller inte när man avänvder FASTBITMAP eller NODOUBLEBUFFER.

o Ändrade blåfärgen för vänliga trupper och meddelanden till en som syns bättre.

o Tog bort titeln från fönstret när man kör INTUITION mod.

o Tog bort NODOUBLEBUFFER switchen. Scions kollar nu om DIPF_IS_DBUFFER är satt
  eller inte for skärmens modeid och använder den för att bestämma om
  dubbelbuffring skall ske eller ej.

1.17 Troubleshooting

        This is a small guide to some of what we think will be the most
  common problems when playing Almagica - Scions of a Forgotten World.

Problems regarding the Audio

Misc Problems

1.18   Audio-problems

Questions regarding the Music and/or the soundeffects.

Q: When I start the Setup program, the "No Audio" checkbox is checked and ←
   ghosted, so
   I cannot use any sound at all.

A: The setup-program does this if it couldn't open the ahi device. Make sure ←
   that the
   file "DEVS:Ahi.device" exists and that none of the direcories "DEVS:AHI/" and
   "DEVS:AudioModes/" is empty.

Q: Why isn't there any soundeffects, even though I've selected Music/Sfx in the ←
   menus ?

A: You've problaby configured Almagica to use only four audiochannels. The Music ←
    will always
   require exactly four channels alone, thus leaving no channel free for the ←
      sound effects.
   Either swith of the Music or configure Almagica to use more then four ←
      audiochannels.

Q: How comes the sound quality is so low when I choose a mix frequency over 28 ←
   KHz ?
   Shouldn't it become better the higher the frequency ?

A: When running a screen mode that is not doublescanned (PAL or NTSC), the ←
   maximum
   mixfrequency is about 28 KHz. When running a doublescanned screen mode, the ←
      maximum
   frequency is twice that (56 KHz). This is simply the way the AGA-chips works. ←
       When
   running a doublescanned mode, the AGA chips must run at twice the speed. And ←
      since
   audio data is fetched from memory by these chips, you're able to fetch twice ←
      as much
   data on the same time. Select the mixing frequency just below 28 KHz and ←
      everything
   should sound just nice.

1.19   Misc problems

Q: Every now and then a yellow-flashing box is displayed with the text "Low ←
   Memory". Why and

```
     what is it?

A: Almagica brings up that box when you have runned out of memory. When this box ←
     is open you've
   got two choices. You can either quit Almagica by pressing the Right Mouse  ←
     Button, or you can
   press the Left Button. If you press the left button, Almagica will wait for  ←
     10 seconds before
   it retries to get the memory it needed. In those 10 seconds you can quit  ←
     other program that
   runs in the background, to free memory for Almagica.
```