

ArtPRO

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COLLABORATORS

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<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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REVISION HISTORY

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Chapter 1

ArtPRO

1.1 ArtPRO v1.20 © 1994-1998 Frank Pagels / Defect Softworks

ArtPRO v1.20

multi-purpose graphics converter
and image processor

© 1994-1998 by Frank Pagels
Defect Softworks

~Copyright~~~~~
Copyright notes

~Disclaimer~~~~~
Warranties? No way.

~Distribution~~~~~
How to distribute

~Shareware~~~~~
About the shareware concept

~Registration~~~~~
How to register

~Author~~~~~
How to reach the author

~Overview~~~~~
Introduction and new features

~Requirements~~~~~
What's required to run ArtPRO

~Installation~~~~~
How to install ArtPRO

~Usage~
Using the graphical user interface

~Problems~
Being worked at

~History~
What happened meanwhile

~Acknowledges~
The people involved

~Todo~
What should be done

1.2 Copyright

Copyright

The entire ArtPRO package was created and is copyrighted © 1994-1997 by Frank Pagels, except for reqtools.library which is copyrighted © by Nico François and render.library and guigfx.library which are copyrighted © by Timm S. Müller.

ArtPRO makes use of the Tower JPEG Codec Class. The JPEG codec is Copyright © 1994 Christoph Feck, TowerSystems. All Rights Reserved. It is based in part on the work of the Independent JPEG Group.

1.3 Disclaimer

Disclaimer

This software is provided "as-is" without any warranty, either expressed or implied. the author accepts no responsibility for damage and/or loss of data/equipment resulting from the use of this software.

1.4 Distribution

Distribution

The ArtPRO package may be redistributed freely, as long as there are no changes made to any part of this software or documentation. No parts of this package may be omitted or altered by any means except for archiving. You have to reproduce the package completely.

Neither fees may be charged nor profits may be made by distributing this piece of software. Only a nominal fee for costs of magnetic media is

acceptable, whereby the amount of US \$2 or DM 2,- must not be exceeded for a disk containing ArtPRO.

1.5 Shareware

Shareware

ArtPRO is shareware. You're requested to register if you use ArtPRO frequently. First of all this helps to ensure further development. Second, registered users will get a private keyfile along with the latest version available, and finally, you'll be able to use ALL the features provided by ArtPRO without limitations.

Limitations for non-registered users

- No requester for customized sprite control-word calculations
- No screenmode lock
- Registration reminder pops up at exit
- The GIFANIM saver does not handle 24bit images.

The number of features reserved for registered users will grow in the future, of course.

The shareware idea behind ArtPRO is that development stays transparent to you. The earlier you register, the better your demands can be taken into account.

Last not least, updates stay free until doomsday.

1.6 Registration

Registration

To register, fill out the included registration form, bring it to paper and send it to the

author

. The registration fee is DM 20,- or US \$15 or UK £10.

Try to get a registration with other currencies if you dare. Include cash, international money order, or cheque. Coins in currencies different from German Marks cannot be accepted. Cheques are only acceptable from within Germany. Make international money orders and cheques payable to Frank Pagels.

Registered users will receive a sending by mail, including your personal keyfile and the latest ArtPRO revision. More updates are available if you send disks and additional money or stamps for postage. Updates should also be available at your local bulletin board systems and on Aminet.

1.7 Author

Author

Submit suggestions, bug reports, registrations to:

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copper@Hysteria.dssd.sub.org
Subject: ArtPRO

WWW: <http://home.pages.de/~defect>

the E-Mail will be changed October '98
check the Homepage to get the real one!!

1.8 Overview

Overview

Interchange of different file formats

ArtPRO supports a lot of different file formats, such as ILBM, GIF, TIFF, BMP, PCX, and everything that can be loaded via Datatypes. Even a variety of raw formats can be loaded and saved.

RAW conversion

Highly flexible source code generation is supported as well as binary and linkable output. Images can be saved as bitplanes, chunky and truecolor in many variations. Copperlists and sprite control-words can be generated automatically. The AGA hardware features are extensively supported. ArtPRO even creates labels for your source code and lets you convert raw data back to images.

ArtPRO has got a configurable saver section. That's what programmers always have been looking for. Create and configure all the different raw format savers you require for your projects - with a few simple mouse clicks!

Palette and image processing

ArtPRO offers blazingly fast color reduction and rendering, palette optimization, realtime color bias (even with truecolor images), and a fully-featured palette editor.

Comfortable GUI

ArtPRO doesn't consist of an empty screen with dozens of menus, driving you berzerk with unsuitable colors and weird screen resolutions - instead, it has got an expensive GUI which can be driven by both gadgets and keyboard shortcuts. It can be configured in many ways to suit your taste.

Programmable interfaces

If you want to customize ArtPRO with a bunch of your own, special weirdo formats: Just contact the author to get the documentation of the external interfaces for loaders, savers, and operators.

1.9 System requirements

System requirements

- an Amiga
- OS 3.0 (v39)
- MC 68020 CPU
- 1-2 MB RAM (more suggested)

1.10 Installation

Installation

That's the easiest part. Just double-click on the 'Install' icon.

All steps to ensure proper functionality will be performed in the installation script. No bad hacks are getting installed, and there won't be fiddled around with your user-startup. There's no reason to risk a installation by hand.

1.11 Usage

GUI Usage

```
~Main~Control~Panel~
~Image~Control~~~~~~
~Undo/Redo~~~~~~
```

```

~File~Operation~~~~~
~Image~Operation~~~~~
~Brush~Operation~~~~~
~Palette~Operation~~~~~
~Selecting~a~loader~/~saver~
~Settings~Window~~~~~

```

1.12 History

History

V1.20 01.09.1998

- german guide
- added 18bit option to the RGB Chunky loader/saver
- added gamma correction in the colorbias operator
- colorbias has been speed up by up to 700%
- pack colors crashed with truecolor pictures. fixed.
- the load name now appears in the save filerequester as well
- when artpro was running on a customscreen, the palette was broken. fixed.
- the TIFF loader now handles EPSF files
- added scale operator
- a picture's format is now set in the file's comment.
- the image preview now handles the picture's aspect.
- the GIF loader caused problems when the file contained a comment. fixed.
- added sharpen operator
- the IFF saver (RLE compression) was buggy. fixed.
- added a new option "No Render" in the listrender operator's palette type selection - it is now possible to convert series of pictures to a fileformat without rendering
- the RGB Chunky 24 saver crashed sometimes. fixed.

- implemented Undo/Redo
- added configurable histogram precision.
- added negative operator.
- the flip operator was buggy when applied to bitmap images. fixed.
- some minor changes

V1.12 15.01.1998

- cut brush and colorbias crashed when no image was loaded. fixed.
- brush section changed in the main window. added clear gadget.
- the cut controlwindow had now integergadgets, you can type the brush coordinates with it.
- artpro now works on all kinds of custom screens.
- fixed saver and operator message when starting ArtPRO.
- fixed iconify problems.
- fixed accuracy problems in the colorbias operator.
- pack colors crashed. fixed.
- corrected problems with MCP newgadtools.
- EHB images were not displayed correctly in the preview and on operator screens. fixed.
- added FLIP operators.
- minor problems corrected

V1.10 07.12.1997

- added image preview in the main window
 - uses guigfx.library for operator screens
 - Kickstart 2.x no longer supported
 - better monitor selection for 24bit images, especially for graphics cards
 - v43 picture datatype import implemented
 - new screen handling for brush selection and colorbias, now working fine with graphics cards.
-

- IFF24 saver implemented
- JPEG loader/saver implemented
- new operators: MakeButton, ListRender, Count Colors
- fixed rgb chunky12 loader
- fixed rgb chunky 24 saver
- fixed GIF loader for transparent images and extensions
- fixed TIFF loader
- fixed GIF saver - datatype loading didn't work after saving GIFs
- of course lots of minor changes :-)

V1.03 23.03.1997

- render.library_020 crashed on machines without fpu --> fixed
- 24bit display with Picasso96 now possible
- Random dither has been implemented
- lots of minor changes

V1.02 16.02.1997

- "Load RAW" crashed --> fixed
- Universal loader didn't work under Kick 2.0 --> Fixed
- The palette editor didn't work under Kick 2.0 because I used only OS 3.0 functions :(--> Fixed
- "Conf. Overwrite" in the Global Settings worked opposite to the intended function --> Fixed
- After a Iconify the loader/saver names were not correctly restored --> Fixed
- Documentation completely reworked
- Render.Library developer package now included to ArtPRO's distribution

V1.00 04.02.1997

- Settings window reworked and cleaned up
 - Colorbias with HAM and 24bit images realtime
-

- with a preview 8/4 bit picture
- font problem with meminfo in the main window fixed
- implemented local prefs for loaders and savers
- false loading of raw HAM8 images fixed
- rendering and render control window added
- progress indicator window added
- universal loader added
- image is situated in fast memory now
- new, fantastic loader and saver management implemented
- GIF, raw rgb, and raw chunky loaders added
- TIFF, BMP, PCX, IFF support 24bit now
- CybergraphX 24/16/15 bit display implemented
- GIF and GIFANIM savers added
- tooltypes for loader & saver configs implemented
- problems with message handling fixed
- some user interface changes

V0.94 18.06.1995

- Palette Editor added.
 - TIFF loader/saver available
 - ArtPro uses now an appwindow.
 - External appicon can be changed by tooltypes.
 - Can save a image structure (only for sources)
 - The loader/saverwindow can now handled by keyboard completely.
 - Should work better on GFX cards. ;-)
 - The cut-frame can now moved by mouse.
 - Shortcuts for 'Add dir'/'Kill all' fixed. Also shortcut for 'Execute Operator' and 'Change ID-Mode.'
 - View Pic can now exit by ESC.
-

- To exit while ArtPRO is iconified as window should work.
- Now there is an error message while loading IFF24.
- To exit without saving the config can be reached by pressing Shift+'x' or Shift+Exit button.
- Removed a bug in autocut

V0.90 18.06.1995

- Saving RAW HAM8 produced wrong output. Fixed.
- Ask Mask-Color didn't work 100% all the time. Problem solved hopefully.
- The sprite control word calculation for 32 and 64 pixel wide sprites generated non-AGA control words - bug removed.
- The "Kill" gadget shortcut had no effect - finally, it works
- An "Info" gadget has been added to the module windows for quick reference on the loaders and savers.
- Automatic and semi-automatic label generation implemented (assembler only so far).
- Serious bug fixed: If you saved a brush having an odd width with one of the CHUNKY savers, the machine crashed. (Yuck)
- Another heavy bug: Saving a link object with no object name crashed.
- Finally, an installation script has been included to the distribution package.
- External savers included: PCX and BMP.
- Pack Colors image operator included.
- The cut-frame is now kept when re-entering the control screen.
- Minor bug removed that caused problems with the control screen and screenmode promoting programs.

V0.88u 05.04.1995

- Special release for the Amiga Inside CD by UMD!
-

Read the ArtPRO.readme file!

V0.87 03.04.1995

- Cosmetic: "ART-Pro" changed to "ArtPRO".
- GUI completely reworked. ArtPRO now opens a font-sensitive window on the Workbench or on a public screen, or opens an own public screen. A font can be selected.
- Color-Bias screen overwork.
- The windows' positions and a locked screenmode are saved on exit now.
- External loaders included: PCX and BMP.
- The Settings section has got a "Save" and a "Save as" button now.
- "Confirm exit" included.
- Bug removed when selecting a frame NOT from upper-left to lower-right. The brush size should be correct now.
- The logo is scaled according to the window's dimensions and is rendered to a screen's palette (V37) or its sharable/obtainable pens (V39).
- The "Center Pic" option caused some problems. Believe it or not, this mighty important feature has been REMOVED.
- Few minor bugs removed.

V0.79 4.1.1995 (major bugfix)

- Parts of the guide have been rewritten for V0.78. Some passages were linked incorrectly, some were completely wrong, some were malformatted. Fixed.
 - Saving images which have been loaded as RAW HAM6 crashed. Fixed.
 - Displaying or saving images which have been loaded as RAW EHB could crash under certain circumstances. In addition to that, saving images which have been loaded as RAW-EHB led to 64color non-EHB images. Fixed.
 - Iconify plus un-iconify "un-registered" ArtPRO. Solved.
 - The Load-RAW screenmode requester will now keep the last
-

selected screenmode.

- The RGB-CHUNKY-12Bit and RGB-CHUNKY-24Bit savers crashed on 68000 and 68010 based machines. This has been fixed. Now the code differentiates correctly between 68000 and 680x0 based machines for the use of optimized routines.
- Minor bugs and several Enforcer-hits removed.

V0.78 30.12.1994 (The Party 4 release)

- After cutting a brush and iconifying, ArtPRO saved the complete picture instead of the brush. Solved.
- GUI layout in the preference section changed, for the source code settings are now global and apply to all output formats.
- RAW-CHUNKY (LEFT/RIGHT) savers implemented.
- RGB-CHUNKY-12BIT and 24BIT savers implemented.
- COLOR-RAW and COLOR-IFF loaders implemented.
- First public release with a keyfile for registered users.
- Color-Bias included.
- Ask Mask-Color crashed sometimes. Fixed.
- User prompt for customized control-word calculation included to the sprite output settings. (Registered users only.)
- various minor bugs fixed.

V0.77 ... V0.70 (several internal releases)

- Screenmode lock implemented. (Registered users only)
- ArtPRO crashed when saving an 8bit copperlist as binary. This has been fixed.
- Source-generator completed. ArtPRO now supports Assembler, C, Basic, E, and Pascal.

V0.641 12.11.1994 (quick update)

- ArtPRO crashed on 68000 based machines - now fixed
 - ArtPRO did strange nonsense when having no directory name in the file requester! Oops...
-

V0.64 05.11.1994 (Coma Party Köln)

- removed a major bug - ArtPRO crashed on exit if a screenmode wasn't available/supported - now fixed
- bug in AutoCut fixed - left box edge not set correctly sometimes
- added a text field at the control screen and inside the main window, displaying a brush's width in words
- ArtPRO now saves the selected loader/saver modules to its default prefs path on exit
- now a busy-pointer appears when needed
- some minor bugfixes

V0.62 21.10.1994

- added link-object
- ArtPRO now saves its load/save paths to its default prefs paths on exit
- some bugfixes

V0.60 08.10.1994

First public release for the tool competition at the Doomsday Party.

1.13 Acknowledgements

Acknowledgements

- Thanks to Timm S. Müller alias Captain Bifat / TEK neoscientists for suggestions, testing, designing the graphical user interface, drawing the logo, writing parts of the documentation and the fantastic render.library.
 - Thanks to Jörg "M.U.D.U." Krempien / Defect Softworks for the nice Mona Lisa icon, moral support and continuing care about the documentation.
 - Thanks to Henryk "Buggs" Richter / Defect Softworks for suggestions, additional help, and testing.
 - Greetings fly to:
 - Gerd Frank (the 1st registered user)
 - Tim Favro ,Kirster Simon Skrtic and Uwe Schröder for suggestion and testing
-

- Stefan Sommerfeld for find my stupid bug, that ArtPRO don't work with the MCP NewGadtools function
- TIK/Retire (thanx for help with HAM8 and the Spritecontrolwords)
- all registered user
- and of course all members of Defect and TEK neoscientists

1.14 To Do

ToDo

There are still some features not finished yet...

- total rewrite of the Gif Anim saver
- AREXX Port
- new Operators
- new Loaders & Savers
- german documentation
- LZW support for TIFF loader/saver
- better graphics card handling
- ...

1.15 Main Control Panel

Main Control Panel

There are four buttons and several text fields located in this area, affecting global operations and displaying general information.

The status line reflects ArtPRO's current status - errors are displayed here as well as messages of any kind. At startup, you find a welcome message there.

The three text fields below inform you about the memory currently being available, seperated into 'Memory' (total), 'Chip' and 'Fast'.

```

~
  About
  ~~   ~
  Settings
  ~~   ~
  Iconify
  ~~   ~
  Exit
  ~

```

1.16 Tooltype Settings

Tooltypes

ArtPRO can be customized with a few tooltype settings.

APPICON=filename	the appicon to be used when ArtPRO gets iconified. Specify without '.info'.
LOADLIST=filename	list and configuration of loaders to be loaded at startup. Default: ENV:ArtPRO/loaderdefault.cfg
SAVELIST=filename	list and configuration of savers to be loaded at startup. Default: ENV:ArtPRO/saverdefault.cfg
TEMPDIR=path	Disk Path for temporary files. ArtPRO uses this path for saving the undo steps. Default is T: - this path is normally located in RAM:, so you can easily run out of memory. Use a path on your harddisk in this case.
UNDOLEVEL=steps	number of undo steps. Default: 3

1.17 About

About

This one opens a stunning requester with some information about the ArtPRO revision running, the author's~address~and stuff like that.

If you're a registered user, you can activate the 'key' button for further information on your registration key.

1.18 Iconify

Iconify

As the name suggests, this leads to iconification of ArtPRO and frees as much memory as possible. ArtPRO opens a tiny window on the Workbench then, appends an AppItem to the tool menu, or leaves an AppIcon on your Workbench, depending on the selected iconification mode. (Refer to the

settings~section
) .

You may also use a custom appicon. Refer to the
tooltypes~section

1.19 Exit

Exit

Press this button to quit ArtPRO.

On exit, ArtPRO saves the current load/savepath, window positions, the screen-lock setting and the current loader/saver to ENV:ArtPRO/. Hold down the SHIFT key while exiting, and ArtPRO will exit without saving anything of its configuration.

By default, you must confirm to exit ArtPRO. This behavior may be changed in the

global~settings~section

1.20 File Operation

File Operation

You find four buttons and three text fields in this area. They allow you to import and export files and they reflect which

loaders
and
savers
are

currently selected.

~Load~

~1~

~Save~

~2~

To enter the
loaders~or~savers~section

, activate either of the tiny buttons at the right, labelled with '1' and '2'.

1.21 Load

Load

Press this button to open a file requester for loading an image.

You find the current loader displayed in the text field on the right. Read

the~

```
loaders
  ~section for details and the available file formats.
```

Click the tiny button at the right labelled with '1' to enter the

```
loader~selection
.
```

ArtPRO's main window is an appwindow, i.e. you can also drag & drop image icons on it in order to load a file.

1.22 Save

Save

Click on this button to open a file requester for saving.

You find the selected saver displayed in the text field on the right. Refer to the

```
savers
  ~section for details and the available formats.
```

Click the tiny button at the right labelled with '2' to activate the

```
saver~selection
.
```

By default, you will be prompted to confirm overwriting files which already exist. This behaviour can be changed in the

```
settings~section
.
```

1.23 Image Control

Image Control

There are four buttons and four text fields located in this area. They affect the screen's resolution, display mode, and depth, and they reflect the size and depth of the image.

```
~
~~~~~Screenmode~~~~~
  ~
~Render/Display~
~Render~Ctrl~
~Lock~
```

1.24 Selecting a Screen Mode

Screen Mode Selection

This is the button labelled with '3' - it is located right to the text field displaying the current screen mode. It brings up a list of all screen modes available to your system. The set of screen modes offered here depends on your machine's chipset revision and on the monitors located in your Devs/Monitors system drawer.

Some screen mode modifications require rendering, e.g. a 256-color image cannot be displayed on OCS/ECS PAL-Hires.

1.25 Render / Redisplay

Render/Display

Press this button to display the current picture. If you modified the settings in the

```
render-control
section, the image will be rendered first.
```

1.26 Brush Operation

Brush Operation

This section is for selecting an area inside the image. When such an area (or 'brush') is selected, most of ArtPRO's operations apply to this area rather than to the complete image.

click on

```
~Select~Brush~
to mark a new brush
```

Clear to clear the current selection.

1.27 Control Screen

Control Screen

There are three buttons and four text fields located on the brush control screen. They're labelled as follows:

X - displays the horizontal position of the cursor,
relative to the left screen border

Y - displays the vertical position of the cursor,

relative to the upper screen border

- BW - the frame's current width
- BH - the frame's current height
- Wrd - counts the frame's width in words (multiples of 16)
- (box) - indicates whether the brush width is exactly a multiple of 16. If so, the box gets highlighted.

~AutoCut~

- to automatically enclosure the brush at its outmost edges

- Accept - to accept a brush selection
- Cancel - to leave this section without a new brush

When the control screen annoys you: you can turn it off and on by pressing the space bar. This is also an intermediate solution for CybergraphX / Picasso 96 users.

1.28 Selecting a Frame

Selecting a Frame

Move your mouse to an appropriate location inside your picture, press the left mouse button and size the rubber frame. There's no need to keep the left mouse button pressed. Press the left mouse button once again to use the frame.

To redo that operation, press the right mouse button and select another frame. If you're satisfied with your brush selection, leave this section by clicking the 'Accept' button.

You don't need to cut your brush at its exact borders, try the
AutoCut
feature after you've selected a rough frame.

After you've selected a frame, you can modify it in various ways:

- Click with the left mouse button into the frame to drag it around
- Cursor to move the frame
- SHIFT-Cursor to resize the frame at the lower-right
- ALT-Cursor to resize the frame at the upper-left

1.29 Grid

Grid

The grid's width amounts to 16 pixels. Toggle it on or off by pressing the 'g' key.

By default, a grid is drawn. This behavior can be changed in the

```
settings~section
```

```
.
```

1.30 AutoCut

AutoCut

This feature is very handy when you have to cut a brush at its exact borders. The rubber frame will automatically enclosure your brush at its outmost edges.

This does not work with a noisy background around the object you want to select.

1.31 Loaders

Loaders

In this version, ArtPRO supports the following loaders:

internal loaders:

```
DATATYPE~~~~~
~~~~~
```

```
IFF~ILBM~~~~~
```

```
PALETTE~~~~~
```

```
SCREEN~~~~~
~~
```

```
RAW~~~~~
~~~~~
```

```
RAW~INTERLEAVED
```

```
UNIVERSAL~~~~~
```

external loaders:

```
BMP~~~~~
```

```
CHUNKY~~~~~
```

```
GIF~~~~~
```

PCX~~~~~

RGB~CHUNKY~~~~

TIFF~~~~~

JPEG~~~~~

PNM~~~~~

If you want to develop other loaders please contact the
author

.

1.32 BMP

BMP

Loads Windows Bitmaps and OS/2 Bitmaps. Supports RLE4 and RLE8 compression. RLE8 is not fully tested yet. 24bit pictures are supported.

1.33 CHUNKY

CHUNKY

Loads RAW chunky images, with one byte representing one pixel. Chunky maps may either be left- or right-oriented.

Left-oriented: Bit %76543210
 Plane %12345678

the most significant bit represents the lowest bitplane

Right-oriented: Bit %76543210
 Plane %87654321

the most significant bit represents the highest bitplane

1.34 DATATYPE

DATATYPE

This loader is ArtPRO's interface to the operating system's datatypes. This loader isn't available under OS2.x.

Datatypes provide a general technique for the access to different data formats, especially to formats that are unknown to a specific application. Many datatypes (stored in SYS:Classes/Datatypes and DEVS:Datatypes) are available.

Use this loader whenever you want to load an image format that is not supported by ArtPRO.

ArtPRO does not support 24 bit datatypes.

1.35 GIF

GIF

Loads a GIF (graphics interchange file format) picture. The formats GIF 87a and 89a are supported from 1 to 8 bit. Multipic is not available yet.

1.36 IFF ILBM

IFF ILBM

Loads IFF ILBM (Interchange File Format / Interleaved BitMap) pictures. The first frame of IFF ANIMs is read as well. 24bit is also supported.

1.37 PALETTE

PALETTE

This loader allows you to load a raw or IFF palette over a previously loaded image. This depends on the
palette~loader's~configuration
, as well as how raw
color data is interpreted.

1.38 PCX

PCX

Loads PCX pictures from 1 to 24 bit. This fileformat is used by PaintBrush.

1.39 RGB CHUNKY

RGB Chunky

This loader loads raw RGB chunky data in either 12, 18 or 24bit.

1.40 SCREEN

SCREEN

This loader is a screen grabber that allows you to fetch any screen being open on your system. Choose a screen when the requester pops up.

1.41 RAW

RAW

This loader allows you to load standard (i.e. non-interleaved) raw bitplane data. After selecting 'Load' a requester will pop up and prompt you to specify the raw-formatted picture's width, height, depth, and display mode. The cycle gadget entitled 'Display' allows you to choose between normal, halfbright and HAM display mode. Select 'Do it' to load the raw image file. You will then be prompted to select a screen mode, and finally, the raw picture will be loaded.

1.42 RAW INTERLEAVED

RAW INTERLEAVED

This loader allows you to load raw interleaved bitmap data. After selecting 'Load' a requester will pop up and prompt you to specify the raw-formatted picture's width, height, depth, and display mode. The cycle gadget entitled 'Display' allows you to choose between normal, halfbright and HAM display mode. Select 'Do it' to load the raw image file. You will then be prompted to select a screen mode, and finally, the raw picture will be loaded.

1.43 TIFF

TIFF

Loads TIFF (Tag Image File Format) images from 1bit up to 24bit. Only packbit compression is supported yet. EPSF is supported.

1.44 UNIVERSAL

UNIVERSAL

This loader tries to determine the image format automatically. ArtPRO tries to use its own loaders first, then picture class datatype.

Raw formats cannot be detected automatically.

1.45 LoaderPrefs Palette

Palette Loader Configuration

- IFF - Fetch a palette from an IFF CMAP chunk.
- LoadRGB - The raw color data are interpreted as for the LoadRGB32() or LoadRGB4() functions in graphics.library. This depends on the depth setting. Use '4bit' for the LoadRGB4() format and '8bit' for the LoadRGB32() format.
- Pure - The raw color data are interpreted as 12bit or 24bit, right-justified R/G/B inside a word or a longword. Use the depth settings '4bit' for 0x0rgb, or '8bit' for 0x00rrggbb.

1.46 Savers

Savers

In this version, ArtPRO supports these savers:

internal:

```

IFF~ILBM
PALETTE~
RAW~~~~~
      ~~
SPRITE~~
CHUNKY~~
  external:
BMP~~~~~
GIF~~~~~
GIFANIM~
JPEG~~~~
PCX~~~~~
TIFF~~~~
PNM~~~~~

```

1.47 IFF ILBM

IFF ILBM

This saver allows you to save your current picture or brush as IFF-ILBM. Refer to the

~IFF~Saver~Prefs~

section for the available settings. 24bit is not supported yet.

1.48 PALETTE

PALETTE

This one saves the current picture's palette. Please refer to the

~PALETTE~Saver~Prefs~

section for the available options.

1.49 RAW

RAW

This one saves an image or brush in raw-bitplane format. Please refer

RAW-Saver~Prefs

~section for the available options. The width is always aligned to words (multiples of 16 pixels).

1.50 SPRITE

SPRITE

This will save your current brush as one or multiple hardware sprite(s). Please refer to the

SPRITE-Saver~Prefs

~section for the available options.

1.51 CHUNKY

CHUNKY

This saver will generate raw chunky output from your current picture or brush. The following types are supported:

- 8bit left-justified chunky (bytes)
 - 8bit right-justified chunky (bytes)
-

- 12bit truecolor chunky (words)
- 18bit truecolor chunky
- 24bit truecolor chunky (longwords)

Please refer to the
CHUNKY-Saver~Prefs
section for further details.

1.52 BMP

BMP

Saves your current image or brush as BMP (Windows Bitmap) from 1 to 24 bit.
Also refer to the
BMP-Saver~Prefs
~section.

1.53 GIF

GIF

Saves an image or brush as GIF (Graphic Interchange Fileformat). The formats GIF87 and GIF89 are supported. Refer to the
GIF-Saver~Prefs
section for the
available options.

1.54 GIFANIM

GIFANIM

GIFANIM converts single frames to a GIF animation. Warning: This saver is a preliminary beta version.

First of all, you have to provide the single frames with file names that end with a number, e.g. 'Frame_0034'.

- 1) Load the first frame (with any loader).
If you're a registered user, you can load 24bit frames.
In that case, enter the
render-control~section
now and
render the first frame to another depth.
Note: Only 24bit frames can be rendered.
 - 2) Execute the GIFANIM saver. Specify a file name.
 - 3) A requester pops up.
Specify the number of frames to process.
-

- 4) Another requester pops up.
Specify the delay between the frames.

After all, the GIFANIM will be generated, according to the

GIFANIM-Saver~settings

.

1.55 "

PCX

This will save the current image or brush as PCX from 1 bit up to 24 bit.
Refer to the

~PCX-Saver~Prefs~
section for the available settings.

1.56 TIFF

TIFF

This saver saves an image or brush as TIFF from 1 to 24 bit. Refer to the

~TIFF-Saver~Prefs~
section for the available options.

1.57 TIFF

TIFF-Saver Prefs

- Rendered - save the rendered image as TIFF.
- 24 bit - save the image as 24 bit TIFF.
HAM and HAM8 will be saved as 24 bit
automatically.

1.58 PCX

PCX-Saver Prefs

- Rendered - saves the rendered image.
 - 24 bit - saves the image as 24bit TIFF.
HAM and HAM8 will be saved as 24bit
automatically.
 - VGA - will save as VGA PCX with up to 8bit.
-

Only available if 'Rendered' is selected.
selected.

EGA - will save as EGA PCX with up to 4bit.
Only available if 'Rendered' is selected.

1.59 GIF

GIF-Saver Prefs

Save Format - GIF87a - An older GIF standard.
Handles interlaced mode.

GIF89a - The newer GIF standard.
Handles interlaced and
transparency.

Interlaced - Select for interlaced mode.

Transparency - Select for transparent mode.
Available only with the GIF89a format.

Trans. color - Index of the transparency color.

1.60 GIFANIM

GIFANIM-Saver Prefs

Interlaced - Toggle between interlaced and non-interlaced
GIFANIM mode.

Transparency - Select for transparency mode.

Trans. color - Color index of the transparent color.

1.61 BMP

BMP-Saver Prefs

Rendered - Saves the rendered picture.

24 bit - Will save the current picture in 24bit.
HAM and HAM8 pictures will be saved as 24bit
automatically.

1.62 CHUNKY

CHUNKY-Saver Prefs

Save Format	Source Format
~Output~~~~	
~Type~~~~~	
~Language~	
~~Width~	
~Byte~Type~	
~RGB~Type~	
~Indent~	
~Line~Entries~	

1.63 CHUNKY

Chunky Type

- Byte - This will save chunky bytes, with one pixel representing one pixel, either left or right justified. This can be specified with the
Byte~Type
cycle gadget.
- RGB - This will generate 12bit or 24bit tricolor output, with one pixel represented by either a word or a longword. This can be specified with the
RGB~Type
cycle gadget.

1.64 CHUNKY

Byte Type

Here you can select the chunky byte's bit justification.

```
left:    %12345678
right:   %87654321
```

Each digit represents its corresponding bitplane. Left justification is rather unconventional, it is mainly used for fast assembler chunky-to-bitplane conversions via cascades of ADD/ADDX opcodes. With this

format there's no need to shift the chunkies to the left when converting less than 8 bitplanes.

1.65 CHUNKY

RGB Type

Specify the RGB chunky type here.

```

12bit:    0x0RGB      words      2 bytes per pixel
18bit:    0x000ROGOB longwords  4 bytes per pixel
          it use only 6 bit for every color component
24bit:    0x00RRGGBB longwords  4 bytes per pixel

```

1.66 Sprite

SPRITE-Saver Prefs

Save Format

Source Format

~Output~

~Ctrl.~Words~

~Language~

~~Width~

~Colors~

~Width~~~~~

~Indent~

~Labels~

~Line~Entries~

1.67 Sprite Colors

Number of Colors

Here you can adjust the number of colors for the sprite conversion. Choose between 4 or 16 colors.

The Amiga customchip hardware supports sprites in either 4 or 16 colors. For using 16 colors, a sprite pair of two 4colored sprites has to be 'attached'. Attaching means, the positions of the attached sprite-pair have to be identical, and the attach-bit of at least the second (odd) sprite has to be

set.

Using ArtPRO, there's no need to bother. Just select 16 colors, and your brush selection is interpreted accordingly. If you select the

```
control~word~calculation
, even the attach-bit will be set automatically.
```

1.68 Sprite Control Words

Control Words

Hardware sprites require so-called control words at their beginning. These control words contain all the information needed for the sprite display, such as horizontal and vertical start positions, vertical stop position, and the attach-bit mentioned in the~

```
colors~section
. ArtPRO supports sprite control
```

words in four ways: None, Empty, Auto, or Prompt. Use the cycle gadget to adjust one of these.

- | | | | | | | | |
|-----------------|---|---------------|--|--------------|---|-----------------|---|
| None | ArtPRO doesn't care about control words. They will be omitted. | | | | | | |
| Empty | ArtPRO includes control words at the beginning of the sprite datalists, but they're empty, i.e. set to zero. | | | | | | |
| Auto | ArtPRO includes sprite control words containing ALL the information needed for proper display. The control word calculation will be performed as follows: <table> <tbody> <tr> <td>VerticalStart</td> <td>= raster line \$2c + brush's top edge
inside your picture</td> </tr> <tr> <td>VerticalStop</td> <td>= raster line \$2c + brush's top edge
+ brush's height</td> </tr> <tr> <td>HorizontalStart</td> <td>= DMA start \$80 + brush's left edge
inside your picture</td> </tr> </tbody> </table> | VerticalStart | = raster line \$2c + brush's top edge
inside your picture | VerticalStop | = raster line \$2c + brush's top edge
+ brush's height | HorizontalStart | = DMA start \$80 + brush's left edge
inside your picture |
| VerticalStart | = raster line \$2c + brush's top edge
inside your picture | | | | | | |
| VerticalStop | = raster line \$2c + brush's top edge
+ brush's height | | | | | | |
| HorizontalStart | = DMA start \$80 + brush's left edge
inside your picture | | | | | | |
| Prompt | ArtPRO will bring up a requester for a customized control word calculation when saving one or multiple sprites. Here you can adjust the VerticalStart and HorizontalStart values as well as the image-relative brush coordinates. | | | | | | |

The latter two settings can be extremely useful for you, if you're one of those hardware programmers who use static sprites for complex screen layouts. Experienced programmers will have noticed that the values used with the 'Auto' setting apply to standard non-overscan screens. Use the 'Prompt' setting if these don't fulfill your needs.

1.69 Labels

Labels

Labels are implemented for assembly-language source code generation only. Adjust this switch to either 'Auto' or 'Prompt' for automatic or semi-automatic label generation.

When a brush is wider than 16/32/64 pixels, it has to be divided into multiple data segments. If you select 'Auto', each segment will be labelled 'Sprite<n>:'. If you select 'Prompt', a requester shows up before saving. You can enter the label name and the starting index there. Use 'Create' to use this definition for a single sprite, or 'Create all' to use it for all sprites with the index increasing automatically.

1.70 Sprite Width

Width

Adjust the sprite width here. Choose between 16, 32, or 64 pixels. Note: The OCS/ECS hardware does not support sprites wider than 16 pixels.

1.71 RAW

RAW-Saver Prefs

Save Format

Source Format

~Output~~~~

~BlitWord~

~Language~

~Width~

~ ~

~Indent~

~Line~Entries~

Options:

- | | |
|-------------|--|
| Interleaved | - generate interleaved bitplanes. |
| Mask | - create a mask. If you save in non-interleaved mode, this mask consists of one bitplane. In interleaved mode, the masking bits appear in all bitplanes. |
| Ask | - Normally, all colors different from color zero are taken into account when a mask is generated. With this option |
-

enabled, you will be prompted to enter a single, specific mask color instead.

Image Structure - In source mode, saves the image or brush as an image structure (struct Image, intuition.library).

1.72 Blitword

Blitword

You can adjust this cycle gadget to 'None', 'Left', or 'Right'. For shifted blitting, you may wish to add extra words at either the left or right side, whereby the brush will be enlarged by one word (16 pixels) in width.

1.73 IFF ILBM

IFF ILBM-Saver Prefs

Options:

not packed - uncompressed ILBM

RLE packed - RunLength (CmpByteRun1) compression

1.74 PALETTE

PALETTE-Saver Prefs

Save Format

Source Format

~Output~

~

~Type~

~Language~

~Width~

~ ~~

~Indent~

~Line~entries~

Depth - use this cycle to set the palette's resolution. This can be either 4bit or 8bit.

1.75 Type

Palette Type

- Copper - generates a hardware copperlist. If the depth setting is adjusted to 4bit, the copperlist will be of the OCS/ECS type. With depth set to 8bit, an AGA copperlist will be created.
- LoadRGB - generates a palette in LoadRGB4() or LoadRGB32() format (graphics.library). This depends on the setting of the depth gadget. 4bit generates the LoadRGB4() format, 8bit generates a LoadRGB32() palette.
- Pure - generates a raw palette in either 4bit (0x0rgb) or 8bit (0x00rrggbb), depending on the depth setting.

1.76 Output

Output

Specify the output type with this cycle gadget:

- Source - generates source code.
- Binary - generates binary (raw, pure) data.
- Link - generates a linkable object. Before saving, a requester shows up. Specify an external label definition and the type of memory there.

1.77 Sourceformat

Language

Here you can select the programming language you want to generate source code for. Available languages are Assembler, C, Pascal, E, and Basic.

1.78 Width

Width

Adjust the desired data width for the source code generation here.

- Bytes - save as bytes (8bit)
- Words - save as words (16bit)
- Longs - save as longwords (32 bit)

1.79 Indent

Width

Adjust the desired data width for the source code generation here.

- Bytes - save as bytes (8bit)
- Words - save as words (16bit)
- Longs - save as longwords (32 bit)

1.80 Output

Output

Specify the palette output type with this cycle gadget:

- Source - generates source code.
- Binary - generates binary (raw, pure) data.
- Link - generates a linkable objects. A requester will show up before saving. Specify a label and the type of memory there.
- IFF - generates an IFF file with a CMAP chunk.

1.81 Line Entries

Line Entries

Enter the number of entries to appear in a single line of source code. If you enter 0 here, a line will be filled up completely. Note: Not all editors can handle lines with extreme lengths.

1.82 Display Picture

Display Picture

With this switch enabled, any picture will be displayed right after loading.

1.83 Draw Grid

Draw Grid

Activate this switch if you want a grid to be drawn when you select a frame for cutting a brush.

1.84 Overwrite

Confirm Overwrite

Activate this switch if you want to confirm overwriting files.

1.85 Image Operation

Image Operation

Image operators currently available:

```
~Pack~Colors~~~~~  
~Count~Colors~~~~~  
~List~Render~~~~~  
~Make~Button~~~~~  
~FlipX~~~~~  
~FlipY~~~~~  
~Scale~~~~~  
~Sharpen~~~~~  
~Negative~~~~~
```

1.86 Settings Window

Settings Window

```
~Global~Settings~  
~System~~~~~  
~Operator~Screen~  
~Histogram~
```

1.87 Global Settings

Global settings

```
~Display~Picture~~~~~
~Draw~Grid~~~~~
~Confirm~Exit~~~~~
~Confirm~Overwrite~~~
~Show~Preview~~~~~
~Autosave~Palette~~~~
```

1.88 Autosave Palette

Autosave Palette

Activate this switch if you want to automatically save a picture's palette along with the image.

The file name will be the same as for the image, with an appropriate extension added, such as .asm for assembler source code.

1.89 Iconify Mode

Iconify Mode

ArtPRO offers three different ways of iconification - AppItem, AppIcon, and Window. You can adjust your preferred mode here. An AppItem named 'ArtPRO' will be appended to the Workbench's tool menu, an appicon will be put somewhere on your Workbench, or a tiny window will be opened.

To re-enter ArtPRO, select the menu item, double-click the appicon or click the zip gadget in the tiny window's title bar.

You can use a custom AppIcon. Refer to the
 iconify~section
 for details.

1.90 Adjust Palette

Adjust Palette

This button is available for custom screens only. A palette requester will pop up for you to adjust the screen colors.

1.91 Palette Operation

Palette Operation

Palette operators implemented to ArtPRO so far:

```
~Color-Bias~  
~~Palette~~~
```

1.92 Color Bias

Color Bias

Color-Bias is a great tool for global palette adjustments. Select the color-bias palette operator to enter your current picture with a tiny control screen at its bottom. Press the right mouse button to switch the control screen on and off.

This control screen contains six sliders, entitled 'Color', 'Bright', 'Contrast', and 'R'/'G'/'B'. In addition to these, you find three buttons at the right, labelled 'Use', 'Keep', and 'Cancel'.

Moving a slider to the left will reduce a value, moving it to the right will increase it. The color bias palette modification will be performed real-time.

Press the 'Use' button to leave this section with the new palette. If you select 'Cancel', you abort the Color-Bias operator and undo all changes. Select 'Keep' to re-adjust the slider knobs to zero with the current settings. Press the 'Color', 'Bright', 'R'/'G'/'B' etc. buttons to re-adjust the associated value to zero.

1.93 Confirm Exit

Confirm exit

Activate this switch if you want to confirm exiting ArtPRO.

1.94 Quick Reference

Quick Reference

Global Settings

System Settings

```
~Autosave~Palette~~
```

~Adjust~Palette~
~Confirm~Exit~~~~~
~Font~~~~~
~Confirm~Overwrite~
~Iconify~~~~~
~Display~Picture~~~
~Screen~/~Set~~~
~Draw~Grid~~~~~
~Tooltype~Settings~
 Loaders

~BMP~~~~~
~BMP~~~~~
~CHUNKY~~~~~
~CHUNKY~~~
~DATATYPE~~~~~
~GIF~~~~~
~GIF~~~~~
~GIFANIM~~~
~IFF~ILBM~~~~~
~IFF~ILBM~
~JPEG~~~~~
~JPEG~~~~~
~PALETTE~~~~~
~PALETTE~~~
~PCX~~~~~
~PCX~~~~~
~RAW~~~~~
~RAW~~~~~

Savers

```

~RAW~INTERLEAVED~

~SPRITE~~~

~RGB~CHUNKY~~~~~

~TIFF~~~~~

~SCREEN~~~~~

~TIFF~~~~~

~UNIVERSAL~~~~~
      Operators

~Count~Colors~

~List~Render~~

~Pack~Colors~~

~Make~Button~~

```

1.95 Font

Font

Select your favourite Font here.

1.96 Pack Colors

Pack Colors

This image operator will find and eliminate double and unused colors from an image's palette. A requester will pop up and inform you about how many double and unused entries have been found.

If your image contains redundant palette entries, ArtPRO asks if you wish to compress the palette. The 'Pack Colors' feature won't work with HAM and EHB pictures.

1.97 Palette Editor

Palette editor

Enter the Palette operator for modifications of an image's palette.

ArtPRO will open a screen with the image and two control areas at the bottom. One of these contains the image's palette, the other several buttons. The

image screen will autoscroll if the image is larger than the visible area. (The image has to be activated, i.e. clicked somewhere.) You can toggle the control area on and off by clicking the right mouse button.

There are max. 28 palette entries visible at the same time. Move the slider to scroll inside the image's palette. The range (from - to) is displayed on the right side of the slider.

To activate a palette entry for modification, just click on it so that it appears recessed. The selected entry will be once again displayed at the bottom of the control screen in a larger field.

```

~RGB~

~Copy~

~Spread~

~Swap~
  R -----
~Remap~

~Sort~

~Pick~
  G ----- sliders -----
B -----                Okay      Undo      Reset

```

Okay To leave the palette editor with the new palette.

Undo To undo the last change

Reset To reset the palette completely

1.98 Pick

Pick

Use this button to pick a color from the image. The pointer changes to a syringe. Press the left mouse button when the needle points to the color to pick.

1.99 Copy

Copy

Use 'copy' for duplicating a color entry. After pressing the button, select a destination color entry.

1.100 Swap

Swap

Use the swap button for swapping two color entries. After pressing the button, select a second entry.

1.101 Remap

Remap

Use this button to adapt your image to the new palette. This implies a complete rerendering.

1.102 Spread

Spread

Use the 'spread' button for creating a smooth color range. First, select the initial color. After pressing the button, select a destination color entry.

1.103 Sort

Sort

After pressing the 'sort' button a selector pops up. Choose the sort direction, either from dark to light or light to dark.

1.104 Color Model

RGB

Use the cycle button to choose either of these color systems:

RGB R - Red
G - Green
B - Blue

CMY C - Cyan
M - Mangenta
Y - Yellow

HSV H - Hue
S - Sateration
V - Value

YUV Y - Luminance
U - Colorvalue
V - Colorvalue

YIQ Y - Luminance
I - Colorvalue
Q - Colorvalue

1.105 Screen / Set

Screen / Set

Use the cycle gadget to select either of these screen modes:

Workbench	For ArtPRO to open its windows on the Workbench. The 'Set' gadget is disabled in Workbench mode.
PublicScreen	For ArtPRO to open its windows on a public screen that is currently open on the system. Select a screen with the 'Set' gadget.
CustomScreen	For ArtPRO to open an own public screen for its windows. Select a screen mode with the 'Set' gadget.

1.106 System Settings

System settings

These settings apply to ArtPRO's system interface.

```
~Iconify~~~~~
~Font~~~~~
~Screen~/~Set~~~
~Adjust~Palette~
~Enable~Undo~~~~
```

1.107 Lock

Lock

Use this checkmark to lock the selected screen mode. When you load another image, ArtPRO will try to keep the screen mode that you've adjusted before.

This feature is reserved for registered users. Refer to registration

.

1.108 Render Control

Render Control

Rendering means: an image gets converted to another screen mode, depth, color-system, or resolution. A consequence may also be that an image has to be reduced to less colors. ArtPRO offers blazingly fast and effective color reduction and rendering.

```

~~~~~Mode~~~~~
~~~~~Colors~~~~~
~~~
  Custom Palette

~~~~~Colors~Used~~~~~
~~~~~First~Color~~~~~
~~~~~Sort~~~~~
~~~~~Dither~~~~~
~~~~~Amount~~~~~
~~~Use~~~
~~~Render~~~
~~~Cancel~~~

```

1.109 Use

Use

Press this button to confirm your render-control settings and to leave this section. The image is not (yet) rendered.

1.110 Render

Render

The image will be rendered with the options and settings you made in the render-control section. After all, the rendered image will be (re)displayed.

1.111 Cancel

Cancel

Press this button to forget the changes you made to the render-control settings, and to leave this section.

1.112 Dither Type

Dither Type

Here you can adjust the dither type and amount you want the image to be rendered with. Dithering helps to preserve the color information of an image.

none - The image will be rendered without dithering.

Floyd-Steinberg - The image will be rendered with the Floyd-Steinberg algorithm. A dither amount is not required.

Dither amount - This gadget is not available yet.

1.113 Render Mode / Colors

Render Mode / Colors

Use the cycle gadget to choose the color model:

Palette - Normal color-table lookup mode

HAM8 - Amiga-specific color mode: HAM8 (Hold-and-Modify) with (virtually) 18bit truecolor resolution. This mode requires a native AGA screen mode.

HAM6 - Amiga-specific color mode: HAM6 (Hold-and-Modify) with (virtually) 12bit truecolor resolution. This mode requires a native OCS/ECS/AGA screen mode.

EHB - Amiga-specific color mode: 32 colors normal palette lookup, 32 colors with half the brightness of the first 32 colors. (Extra Half-Brite) This mode requires a native OCS/ECS/AGA screen mode.

Use the slider to adjust the number of colors. It is only available with the 'Palette' color mode.

1.114 Custom Palette

Custom Palette

Activate this checkmark in order to create a 'custom' palette with extended flexibility.

Colors Used

This slider determines how many colors are actually used.
Notes: In HAM6 and HAM8 mode, this number determines how many 'base colors' will be created. In EHB mode this value applies to the first 32 colors of the palette. Their half-bright equivalents will be used, too.

First Color

This slider determines the first color index to appear in the rendered image.

1.115 Sort Mode / Order

Sort Mode / Sort Order

A palette may be sorted by a specific criteria and in a specific direction.

- Sort Mode:

- None - do not sort at all.
- Brightness - sort palette entries by brightness.
- Saturation - sort palette entries by color intensity.
- Popularity - sort palette entries by the number of pixels that they represent.
- Representation - sort palette entries by the number of histogram entries that they represent.
- Significance - sort palette entries by their optical significance for the human eye.

The last three modes do not only apply to the palette, but also to the image itself. Especially the 'Significance' mode might be of highest interest for programmers. If you ObtainBestPen() a palette in that order, you get excellent results, even with low OBP_Precision - you avoid wasting valuable palette entries for less significant colors!

- Sort Order:

Choose between 'high to low' and 'low to high'. In this context, high means 'more of the given effect'.

1.116 Loader / Saver Selection

Loader / Saver selection

This section consists of a window containing a list with either the available

loaders
or
savers
.

Accept and Operate - leave this section with the selected loader / saver, and use it immediately. The same effect has a double-click on a loader / saver.

Okay - just leave this section. The selected loader / saver won't be used immediately.

Cancel - just leave this section. Forget the selected loader / saver.

Load - Load another list of loaders / savers.

Save - Save the current list of loaders / savers.

If you want to customize the list, refer to the loaders / savers

configuration~section
.

1.117 Loader / Saver Configuration

Loader / Saver configuration

Config - enter a loader's or saver's configuration window.

Clone - create a duplicate of the selected loader / saver.

Add - add a new basic loader / saver type.

Erase - remove the selected entry from the list.

Up - move the selected entry up one line.

Down - move the selected entry down one line.

Each loader / saver may have an individual name. It can be entered in the text gadget under the list. This name should somehow reflect the configuration of your loader / saver, e.g. 'Palette 8bit Asm', or 'RAW Intl. Mask', 'GIFANIM transp.' or maybe 'MainSprite', 'TextureMapping2', etc.

If you're engaged in different projects (image processing, programming the OS, games, or demos), create separate lists for your different tasks.

You can tell ArtPRO which list to load at startup. Please refer to the

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tooltypes~section
```

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1.118 Known Problems

Known Problems

According to some bug-reports reqtools.library might be a troublemaker. Try another version if you encounter any problems, and please contact me immediately.

One user reported problems with the drag-&-drop feature. Please contact me if this occurs with your configuration.

The CybergraphX graphics card driver is not fully compatible to the native Amiga screenmodes. Overlapping screens cannot use different palettes simultaneously, and the Picasso96 driver system doesn't even support overlapping screens. ArtPRO wasn't originally intended to handle this. This problem has been widely solved, only the palette editor is still using overlapping screens. a new palette editor is under development.

1.119 Operator Screen Settings

Operator Screen Settings

In this section you can configure the appearance of operator screens. Currently, these settings affect screens for selecting a frame, and for the colorbias operator.\$^l\$

ScreenMode

select a screenmode here.

graphics cards (including hi- and truecolor) are supported.

ColorMode

- grey

the image will be rendered to grayscales. this is significantly faster than colored.

- color

render the image to colors.

note: the colorbias operator is always driven in color mode.

Dither Image

render the image with Floyd-Steinberg dithering.

Don't Scale Image

by default, the image is scaled to the screen's size. if you activate this checkmark, ArtPRO will open an oversized screen

that fits the size of the image.

^1\$ the palette operator is not yet affected. a new palette operator for graphics card screens (without overlapping screens) is under development.

1.120 Show Preview

Show Preview

Activate this checkmark if you want to see the current picture as a small preview. The preview will be displayed instead of ArtPRO's logo.

1.121 Count Colors

Count Colors

This operator evaluates the real number of different colors in a picture.

Many programs tell you nonsense about it. ArtPRO uses a dynamic 24bit histogram to determine the exact number.

1.122 List Render

List Render

This operator processes a series of pictures. It allows to convert the file format, to reduce the number of colors, and to create a global palette for the series.

Usage is simple. First select the frames to process, then specify a destination directory. If you select the same directory again, make sure you have configured the operator to use a suffix for the processed files, otherwise the original files will be overwritten.

Configuration:

Palette Type

Local - create an own palette for each picture processed.

Global - create a global palette for all pictures.

No Render - do not render, just convert the file format.

Histo Type

Here you can specify the histogram type for the operation. 15bit histograms suffice when a local palettes is

generated. If you create a global palette for a huge series of pictures, it's highly advised to use a higher histogram resolution to obtain the best palette possible. the more bit, the better the quality.

Notes:

as the names suggest, the TURBO types are much faster than the normal histograms. quality will not suffer, but the turbo types are limited to 18bit. their memory consumption is predictable. a 18bit turbo histogram requires exactly 1MB of memory, the other types require less.

the memory consumption of the other histogram types is not predictable, and it is possible that you are running out of memory with 18-24bit histograms. try the next lower resolution successively if you encounter problems. another note: a 24bit histogram may theoretically grow to 335MB.

Add Suffix

Activate the checkmark and enter a suffix to be added to the picture's filenames. use this feature if you don't want your pictures to be overwritten accidentally.

Frame Offset

Specify a number of frames to skip when creating the histogram for a global palette. This feature can be used to speed up palette creation when you have got a huge number of similar frames to render.

1.123 Make Button

Make Button

This operator creates a button-like appearance. It allows you to create graphical buttons for WWW pages, for instance.

The operator is applied to the current picture, or to the currently selected frame.

Configuration:

Frame Width

with this slider you can specify the thickness of the button frame.

Intensity Top/Left/Right/Bottom

These sliders define the brightnesses (or darknesses) for the

upper, lower, left and right side of the button frame. Activate the checkmarks at the left for bright edges, and deactivate them for dark edges.

Gradient

with this checkmark enabled, the edges will be created using a gradient.

The preview is updated in realtime. Those who don't like too much theory simply play around with the sliders and checkmarks and see what happens :)

1.124 JPEG Loader

JPEG

Loads JPEG with the Tower JPEG Codec Class. Progressive JPEG is currently not supported by the Codec.

1.125 JPEG Saver

JPEG

This saver saves an image or brush as JPEG via the Tower JPEG Codec Class. Refer to the

JPEG~saver~configuration
section for the available options.

1.126 JPEG Saver Settings

JPEG Saver Configuration

Quality

or compression ratio. JPEG is a lossy compression algorithm. The higher, the better the output.

1.127 FlipX

FlipX

This operator horizontally flips or mirrors the current image or the selected frame. This can be determined in the configuration window.

1.128 FlipY

FlipY

This operator vertically flips or mirrors the current image or the selected frame. This can be determined in the configuration window.

1.129 Scale

Scale

This operator allows scaling. The width and height can be adjusted absolutely (in pixels) or in percent.

When "keep aspect" is activated, the relation between width and height is fixed and won't change.

If "Don't Popup" is disabled, then the configuration window will open whenever the scale operator is executed.

Interpolated scaling is currently not supported.

1.130 Sharpen

Sharpen

This operator performs a sharpen operation. It will intensify the contrast between neighbour pixels.

Use the slider to adjust the sharpen level.

When "Don't Popup" is disabled, then the configuration window will open whenever the operator is executed.

1.131 Negative

Negative

This operator creates a negative of a picture or a selected area. Black pixels become white, blue pixels become yellow, etc.

1.132 Undo / Redo

Undo / Redo

Use the Undo button to take back the last operation, and Redo to take back Undo, i.e. to get back to the latest change.

By default ArtPRO handles three undo levels. This number can be modified in the

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tooltype~configuration
.
```

Undo/Redo must be activated in the settings~window to work.

1.133 Histogram Setting

Histogram

This configuration allows you to adjust the precision of histograms. Histograms are color statistics. They are required for ArtPRO to render images to a palette (or to a palette with less colors). The higher the precision, the better the resulting palette. Please note that memory consumption and rendering time may increase dramatically with higher precisions. The standard precision (15 bit) suffices in most cases.

1.134 PNM

PNM

This loader handles the PNM format, which is a common format under Unix. It supports grey and color images.

1.135 PNM

PNM

This saver creates PNM images, which is widely used format in the Unix world. ArtPRO supports the sub-formats PGM (greyscale) and PPM (color) - they can be selected in the saver's configuration window.
