

PicBoot

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REVISION HISTORY

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Chapter 1

PicBoot

1.1 PicBoot.guide

This file describes PicBoot, version 2.3, a program to show an IFF ILBM or GIF picture during boot.

Introduction	What is PicBoot?
System requirements	What you need to run the program
Legal information	Legal information and disclaimer
Usage	Basic usage
Known problems	Problems and bugs
StopPicBoot	What is StopPicBoot
GetModeID	What is GetModeID
UnpackILBM	What is UnpackILBM
Author contact	How to reach me
Version history	Version history

1.2 PicBoot.guide/Introduction

Introduction

Have you removed all output in your 2.0+ startup, and only see a black screen during boot? Wouldn't it be nice to have a picture instead? A picture that disappeared when the Workbench screen opened?

If so, PicBoot is certainly a program for you. What it will do is to read any IFF file containing an ILBM picture - or a GIF file - and show that picture. As soon as the Workbench screen appears (or you press any mouse-button), the picture will go away.

Features:

- * Fast picture unpacking, using highly optimized assembler. The entire picture is read into memory and then unpacked. This applies both to the IFF and the GIF unpacker.
- * Optional auto-detaching; the picture is loaded as fast as possible, with minimal memory fragmentation.
- * A picture can be shown a user-specified time after the Workbench screen opens (see DELAY and PATCH).
- * Extremely flexible argument parser.
- * Random select among any number of pictures, in several different ways.
- * Force a certain display mode for a picture, even if saved with another (can be selected on a picture by picture basis).
- * The comment field of a file may be used to specify options.
- * Optional screen centering (horisontally).

1.3 PicBoot.guide/System requirements

System requirements

Apart from OS 2.04+, PicBoot doesn't require any special libraries. The only non-ROM library required is iffparse.library (which normally resides in Libs:).

PicBoot have full support for OS 3.0+ and AGA graphics.

1.4 PicBoot.guide/Legal information

Legal information

This program is freeware. You may copy and use this program freely, as long as the following conditions are met:

- * All files are copied in an unmodified state. If additional information is needed, place it in a separate file. Preferably redistribute in the original archive form (*.lha).

Exception: So called BBS ads may not be added!

- * The copying is done on a non-commercial and non-profit basis only. A copy fee to cover media costs, postage etc. may be

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Disclaimer

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1.5 PicBoot.guide/Usage

Usage

To activate PicBoot, add a line to your S:Startup-Sequence, looking something like this:

```
PicBoot Pics:Hi-res/Calvin01.Pic DETACH
```

Or, if you have a list of files in "Work:Text/PicList":

```
PicBoot Work:Text/PicList LIST DETACH
```

Or, if your drawer Pics:BootPics contains some pictures:

```
PicBoot Pics:BootPics/#?.(Pic|Gif) DETACH
```

This line should be located near the beginning in the S:Startup-Sequence (no point in placing it near the LoadWB command, is it? :), but keep it after SetPatch. PicBoot will only output any text if it fails, so don't re-direct its output. Note however that if you place PicBoot before any additional monitors are installed, you'll be stuck with the default.monitor for showing your picture. The DEFAULT switch may be of help here.

Make sure no program makes any output in the CLI window, since then the Workbench screen will open with a boring CLI-window instead...

Options:

FILES	Picture(s) to view, or name(s) of listfile(s)
MODEID	Use this display mode
LIST	The pictures to view are stored in a listfile
CENTER	Should the screen be centered?
DEFAULT	Force the default monitor to be used?
AUTOSCROLL	Enable autoscrolling?
VIDEOOVERSCAN	Use video overscan?
DELAY	Delay close after Workbench screen open
PATCH	Prevent Workbench from open in front of PicBoot
DETACH	Detach from the Shell when picture is loaded

1.6 PicBoot.guide/FILES

FILES
=====

This is the only required argument. Here you specify the name of the picture you want to view. You may enter several files here, in which case PicBoot will select one of them randomly, and show that one.

The name(s) can also be the name of an ASCII file containing a filename list if you specified the LIST option.

The name(s) can also be the name of a drawer, in which case PicBoot will randomly select one of the files in this drawer. To use a pattern during this scanning, simply enter the pattern like it had been the name of a file in the drawer. Example:

```
Work:Pics/#?.gif
```

which would make PicBoot select a file ending in .gif in the drawer
Work:Pics

If the comment field of the selected listfile or picture starts with "*PicBoot*: " (case sensitive), then the rest of the comment is taken to be arguments, like those in a LIST file.

You may freely mix picture and drawer names. Listfiles can only be mixed with the other two ones, if the comment contains the LIST switch. In that case, the LIST argument should not be used on the command line (or in a list file). Ofcourse you can random select among list files with the "drawer scanner" if you like.. :)

1.7 PicBoot.guide/MODEID

MODEID
=====

Short form: M

NOTE: This argument is mainly for the more "advanced" user.

This argument should be a decimal number specifying which screen mode to use. It basically replaces the so called CAMG hunk in an ILBM file (since it contains which screen mode to use). Thus, you must select mode with care, or else the picture will look like trash (nothing more serious can happen. I hope! :). When showing GIF files, it will override the internal "best mode" routines (which aren't good at all. But I haven't bothered to add code to make them better.. :).

To make it easier for you to find out which display mode id to use, there is a small program called GetModeID included, which uses the ReqTools or Asl screenmode requester. Simply select the display mode you want, and it will print out the number you should use here. See GetModeID.

The mode id will be passed through the same validity checking as a normal so called CAMG chunk, so PicBoot should handle bad values properly (although I haven't tested this much.. :).

1.8 PicBoot.guide/LIST

LIST
====

Short form: L

If this switch is specified, PicBoot will interpret the files in the FILES argument as names of files containing a list of pictures (or rather, argument lines). PicBoot will then randomly select one of the lines in the selected file, and process it almost like a normal argument line. The only difference is that you can't use the DETACH, DELAY or PATCH arguments. These arguments may not be specified in a listfile (no point in doing it anyway).

The listfile is an ASCII (text) file with a simple layout. On the first line you specify the number of argument lines in the file. This is usually <number of lines in file>-2 (one line is occupied by the count, and the other is the last linefeed). If this value is zero, then PicBoot will exit silently. The rest of the file is simply the argument lines to choose from. An example:

```
4
Work:Pics/Comics/Calvin02.Pic MODEID 137220
Work:Pics/Comics/Calvin03.Gif
Work:Text/MoreCalvins.txt LIST CENTER ON
Work:Pics/Misc/#?.Gif
```

Note that any arguments specified from the CLI, or in any previous listfile, will be taken as the new default value. In the listfile you may alter this default. This does not include the LIST argument (ofcourse). It is always turned off before parsing a line.

Warning: Since you may enter a new listfile within a listfile, you can be caught in an endless loop, constantly changing (maybe to the same) listfile. No checking for this is done. Also, since there is no CLI-window around, you have no chance to send PicBoot any CTRL-C, if PicBoot should happen to listen to this. You have been warned! :)

Note: A line in a listfile may not be more than 512 chars, or it will be truncated when read. This shouldn't cause any problems I think..

1.9 PicBoot.guide/CENTER

CENTER

=====

Short form: C

Possible arguments: YES, ON, NO, OFF. Default is NO.

If this switch is on (argument is YES or ON), PicBoot will center the picture. This centering should work fine for most screen modes, but one can never know.. :) If a screen promotor is active, then PicBoot can get it wrong (when the screen is opened in another mode than PicBoot had asked for).

1.10 PicBoot.guide/DEFAULT

DEFAULT

=====

Short form: DEF

Possible arguments: YES, ON, NO, OFF. Default is NO.

If this switch is on (argument is YES or ON), PicBoot will force the picture to use the default.monitor, regardless of what was actually stored in the picture (in the CAMG chunk). This is needed since very early in the startup, default.monitor is the only monitor available (e.g. multiscan.monitor is normally not available). In the future, I might add more types of "forcing" (e.g. force a picture to PAL, NTSC or whatever that might be useful).

This switch also acts on the MODEID parameter, if specified.

1.11 PicBoot.guide/AUTOSCROLL

AUTOSCROLL

=====

Short form: AS

Possible arguments: YES, ON, NO, OFF. Default is NO.

If this switch is on (argument is YES or ON), the OS 2.0+ autoscrolling of screens will be enabled.

Note: During boot, this switch may make the actual display a bit smaller than normally possible. There is nothing I can do about that... :) You can, however, by ensuring that ENV: is properly set up before PicBoot is started. Or you could try the VIDEOOVERSCAN switch.

1.12 PicBoot.guide/VIDEOOVERSCAN

VIDEOOVERSCAN

=====

Short form: VO

Possible arguments: YES, ON, NO, OFF. Default is NO.

If this switch is on (argument is YES or ON), the visible size of the opened screen will be as large as the system can handle (assuming the picture is large enough). Forces AUTOSCROLL to YES.

1.13 PicBoot.guide/DELAY

DELAY

=====

Short form: DL

A "problem" with PicBoot is that the Workbench screen first opens, and then processes the Sys:WBStartup drawer, which takes a little time. This means that the picture PicBoot shows disappear before the boot is complete. To avoid this problem, the DELAY switch can be use to specify the number of ticks (there are 50 ticks each second) PicBoot will wait after the Workbench screen have opened.

However, this isn't perfect. When the Workbench screen opens, the PicBoot screen must be brought back to the front again. This causes a little "flicker". To avoid this, use the PATCH parameter as well (this feature requires OS 3.0+ to work).

There is a special delay value, 0, which causes PicBoot to wait until you either press any mouse button, or another program sends PicBoot a

break signal (CTRL-C). The program StopPicBoot was written to do this.

1.14 PicBoot.guide/PATCH

PATCH

=====

Short form: P

If this switch is specified, PicBoot will install a patch in Intuition, so that the Workbench screen (or rather, any screen opened, that explicitly doesn't say that the screen shouldn't open behind the others) doesn't open in front of the PicBoot screen. This removes the "flicker" that normally occurs when using the DELAY option. For this option to be useful, the DELAY parameter must be used as well.

Note: This option only works on OS 3.0 or higher. This is due to the OS (as far as I know), and there is nothing I can do about it (tech note: Workbench in OS 2.0x doesn't seem to call the open screen function via the external library vector).

Note: This kind of patching is not a recommended thing to do. Programs should not do temporary patches like this. However, to avoid the flickering, there is no alternative.. :)

Note: In case some other program patches the same function after PicBoot have installed its patch - and you don't have a program like e.g. SetMan installed - then PicBoot will leave a small memory allocation behind (6 bytes), to avoid any problems.

1.15 PicBoot.guide/DETACH

DETACH

=====

Short form: D

If this switch is specified, PicBoot will detach from its calling CLI when the picture is fully loaded and displayed. If you specify this option, you shouldn't "Run" PicBoot. This option will reduce memory fragmentation, and will ensure that the picture gets loaded quickly. I don't think this feature will cause any problems, but I added the switch just in case.

1.16 PicBoot.guide/Known problems

Known problems

I do not know of any real bugs in PicBoot. However, certain parts of the program may still contain bugs. E.g., pictures that have a mask bitplane (mskHasMask) are supported, but since I only have one (compressed) picture that have a mask, there might be a bug in that code (can't test it properly). Please report any problems!

Currently there is no support for SHAM, PCHG and similar "special" pictures. I'm not sure if this could be implemented in a "clean" way (that would work on future systems etc). These pictures aren't that common, and I have an Amiga with AA-graphics, so... :) Color cycling is currently ignored (I have no need for it).

Interlaced GIF pictures aren't supported, since I don't have any such picture (well, actually I have ONE :). Besides, the decompression of such pictures would be slower anyway.

PicBoot doesn't remap GIF files in any way. Even if you have ECS, GIF files can still be useful. This is because a GIF file can have from 2 to 256 colors (inclusive). Thus, if you have a program that can save a 16-color picture as a 16-color GIF file, there will be no problem to view it with PicBoot.

PicBoot doesn't make use of any chunky to planar hardware, if it should happen to be installed (e.g. Aikiko). Anyone who have it, so I can test it if I should decide implement it? :) It would be fairly simple to do, since my own chunky to planar routines have very similar restrictions.. :)

The "best mode" routine used in the GIF reader isn't good at all (this includes the ROM function in OS 3.0+! :). I suggest you use the MODEID parameter instead (Correction: The ROM function isn't good when there are several different monitors to choose from. If only one or two (similar) monitors are available, then the result is usually rather good).

Pictures with more than 8 bitplanes are currently not supported by PicBoot.

The centering for (some?) Super72 screens doesn't work. I suspect this is an OS-bug (I know that PicBoot calculates a reasonable offset, which Intuition seems to ignore).

1.17 PicBoot.guide/StopPicBoot

StopPicBoot

StopPicBoot is a small program that simply tells PicBoot to quit, if it should happen to be in memory. This is useful in combination with the DELAY option. If this is set to 0, PicBoot expects someone to tell

it when it is time to exit, and this is what StopPicBoot does.

By having StopPicBoot in Sys:WBStartup, then PicBoot will close its screen when the boot process almost complete (the tooltype STARTPRI should be very low (-120 or so), so that StopPicBoot is started as the last program)

1.18 PicBoot.guide/GetModeID

GetModeID

GetModeID is a simple program that shows a Asl or ReqTools screenmode requester, whichever is available. The program will then print out the decimal identifier for the selected screenmode, suitable for use together with the MODEID parameter. This program can only be used from a Shell. Example usage:

```
PicBoot Island.Gif MODEID `GetModeID`
```

This will first show a screenmode requester (if you have one, that is), and then show the GIF-picture in the selected screenmode.

1.19 PicBoot.guide/UnpackILBM

UnpackILBM

UnpackILBM is another simple program (at least in theory... :). It will take any IFF ILBM picture and unpack the so called BODY chunk in it (this is the actual image data). This means that e.g. PicBoot will be able to display that image a little faster, at least if loading it from some fast media. Or, if you use PPSHOW/ShowIFF, you could repack the picture with PowerPacker/Xpk, to maximize the compression (as the compression used in IFF ILBM isn't a very efficient one. But on the other hand, it is rather fast and simple). But then PicBoot won't be able to load them.. :) Example usage:

```
UnpackILBM Island.Pic Island.Pic.NoComp
UnpackILBM Island.Pic
```

The first example will unpack the picture to a new one, while the other will - via a temporary file - overwrite the original picture with the uncompressed version.

Note: I haven't tested this program that much. I've converted a few pictures, so it seems to work fine (at least when there aren't any errors), but one can never know.. Please report any problems!

Note: This program doesn't strip any information. All chunks will

remain. The picture data is only decompressed.

1.20 PicBoot.guide/Author contact

Author contact

PicBoot was written by Magnus Holmgren. If you have any comments etc, feel free to send me a note. You can reach me via internet on this address:

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S-444 47 Stenungsund
SWEDEN

1.21 PicBoot.guide/Version history

Version history

Version 1.00
Version 1.01
Version 1.02
Version 1.03
Version 2.0
Version 2.1
Version 2.2
Version 2.3

1.22 PicBoot.guide/Version 1.00

Version 1.00

=====

Release date: 08 Feb 93

* Initial release.

1.23 PicBoot.guide/Version 1.01

Version 1.01

=====

Release date: 14 Feb 93

- * PicBoot would sometimes read past the end of the picture-list file, although the file was correct. Also, the last picture would never be showed. Fixed (thanks to Daniel Joseph Oak for reporting).
- * Did some tweeking, to make the program smaller. The total gain was eaten up by improved error messages though. PicBoot will now more accurately report why the display didn't open.
- * Added support for masked ILBMs, since I discovered that I had such a picture anyway. :) Since I only have one picture, its hard to tell if it really works, but it seems to be ok at least.
- * The autoscrolling of the screen didn't work. Fixed (so now you can view pictures larger than the screen, by moving the invisible mouse-pointer).
- * Added the CENTER switch.

1.24 PicBoot.guide/Version 1.02

Version 1.02

=====

Release date: 21 Feb 93

- * Added the DEFAULT switch. As Bradley Yen pointed out for me, there is (normally) only one monitor available early in the startup, and that is default.monitor (and what default.monitor is can vary. It can e.g. be PAL or NTSC). This switch will make the picture use the default.monitor, regardless what it was saved in.
- * Autoscrolling of screen disabled again, since this would make some overscanned pictures clipped, even if this wasn't needed.
- * A bug in the init code fixed.

1.25 PicBoot.guide/Version 1.03

Version 1.03

=====

Release date: 15 Oct 93

- * If an error occurred, any black "cover screen" (BLACK option) wasn't closed. Fixed.
- * "Ported" to Macro68. At the same time, the code was cleaned up a little. All this saved more than 100 bytes from the program. Most of it eaten up by the improvements though.. :)
- * Added the MODEID parameter. rtGetModeID is included to make the use of this parameter easier.
- * Docs rewritten using Texinfo.
- * Pictures with mskHasMask were reported to have an "error in compressed BODY chunk", due to a bug. Sorry, but I don't have many pictures to test this code with.. :)
- * AUTOSCROLL switch added, so that you can scroll around in large pictures. Mostly useful when PicBoot is used from the Shell. During boot, this can cause the picture to be clipped when it isn't necessary.
- * PicBoot will now move the screen to the back before closing it (this makes the closing faster). Not needed during boot, but... :)
- * List files much improved! Each line will be parsed almost like the normal arguments. Old files should work fine, as long as no filename contains spaces, in which case those lines need to be quoted.
- * Altered command line syntax slightly. Needed because of the new listfile format. Technical note: I'm using a poorly documented feature of AmigaDOS: The /T specifier. If the argument following the keyword is YES or ON, the switch is turned on, if it is OFF or NO, the switch is off. Any other arguments causes an error. Testing revealed the true nature of this specifier... :)
- * Removed the "You need OS 2.04+" error message. An (Exec) Alert will be shown instead.
- * PicBoot will now random-select among the FILES arguments, even if the LIST argument have been used (previously, only the first file was used).
- * VIDEOOVERSCAN switch added. Makes the visible area as large as the system can handle. Requested by Stefan Boberg.
- * Screen centering improved. Should work fine with any screen mode now (but if you promote the screen, PicBoot will probably get it wrong. Unless the promotor also "promotes" QueryOverScan() :).

1.26 PicBoot.guide/Version 2.0

Version 2.0

=====

Release date: 29 Mar 94

- * BLACK argument removed. Not needed any more, since PicBoot now will first allocate the needed memory, decode the picture into this memory, and then open the screen. This makes the screen opening/closing a little faster too (practically instantaneous on my A4000/040).
- * Pictures (or rather, brushes) that were less than 16 pixels wide wouldn't decompress properly... :)
- * Added support for the CMAPOK flag in the BitMapHeader.bmh_Flags (previously called bmh_Pad) field (if this flag is set it indicates that the color map contains 8 bits/color rather than 4 bits/color).
- * Major code cleanup. Made the program somewhat larger, but... :)
- * GIF support added. Should be a little faster than PPSHOW.. :)
- * The MODEID argument wasn't properly "passed on" to any following listfile(s).
- * Rewrote rtGetModeID into GetModeID, that first checks for Asl, and then tries with ReqTools before giving up. This new version is in C, compiled with DICE, without any startup code, and is fully residentable. :) See GetModeID.
- * Included UnpackILBM, that takes any IFF ILBM file (with a BODY chunk, i.e. a normal picture) and writes it with an uncompressed BODY instead. Written upon user request. See UnpackILBM.

1.27 PicBoot.guide/Version 2.1

Version 2.1

=====

Release date: 14 May 94

- * The DEFAULT parameter didn't do anything. Fixed
- * UnpackILBM and GetModeID updated a little. Version string added, recompiled with DICE 3.0 and some other minor changes.

1.28 PicBoot.guide/Version 2.2

Version 2.2

=====

Release date: 12 Jul 94

- * If the listfile was too short (i.e. not enough number of lines in it), PicBoot would crash.
- * Made the detaching code more system friendly. I hope this will fix the problems a few users have had.
- * A few minor bugs fixed + some minor optimizations...
- * If the number on the first line in the listfile is 0, then PicBoot will exit silently. Now why did I add this... >);
- * Improved the random number algorithm.
- * Added the DELAY parameter.
- * Added the PATCH parameter.
- * Tweaked the GIF-unpacker a little. Found yet another Macro68 (V3.170) bug while doing that.. :/ (Watch out for bra.l to other sections/modules when generating code for the 68020+. The branch target is not correct. :)

1.29 PicBoot.guide/Version 2.3

Version 2.3

=====

Release date: 30 Aug 94

- * Rewrote startup code and argument parser in C, for easier maintainance (and to simplify the implementation of some of the features below).
 - * You can now also specify a directory (with optional pattern matching), and PicBoot will randomly select among the files found. As usual, you can use this feature wherever PicBoot used to expect a file name.
 - * If the comment field of a file that PicBoot will read (i.e. a list file or a picture) starts with the string "*PicBoot*: " (case sensitive), then the rest of the comment is assumed to be arguments, to be parsed like they had been found in a list file.
 - * UnpackILBM will not delete the temp file if it couldn't be renamed to the original.
 - * Removed a piece of debug code in the OpenScreen() patch (it flashed the screen). Harmless, but annoying.. :)
-