

**IFFMaster**

<b>COLLABORATORS</b>
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<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>
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NUMBER	DATE	DESCRIPTION	NAME

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# Chapter 1

## IFFMaster

### 1.1 IFFMaster.guide

IFFMaster

Version 1.4 - Freeware

(C) 1994, 1995 by Kay Drangmeister

Introduction

Installation

Usage

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### 1.2 IFFMaster.guide/Introduction

Introduction

\*\*\*\*\*

IFFMASTER is a program that allows you to have a view inside the structure of IFF files. It is not yet another picture viewer or sound sample player, but it displays the internal entities (chunks) of a file.

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For example, the headers of pictures (ILBM) or sound samples (8SVX) are displayed in clear, so you can directly read the size and depth of the image or the sampling rate.

From time to time you will find an unknown file on your hard disk, let's say a preference file. Since preference files are often stored in IFFFormat, there is a chance you can directly examine the contents. There are some programs which write incorrect IFF files (e.g. the ILBM.CAMG chunk is a likely candidate), or which write additional information (e.g. copyright or author chunks). With IFFMASTER you can easily verify such cases.

During the last time I implemented some ways to manipulate files, e.g. delete and move chunks. Chunk contents can be edited using a text or binary editor depending on the content type. In future versions (see

History

) there will be options to add new chunks like a DPI chunk for images.

Current features include:

- \* MUI application
- \* localized GUI (with AmigaOS 2.1 or later)
- \* Extensive chunk type library (currently 46 form types, 257 known chunks, 79 of these with comprehensive structure description)
- \* Chunk contents are presented alternatively as structure, text or hex dump
- \* Bit fields and enumeration types are displayed in clear
- \* Fixed point values are printed in decimal (e.g. 8SVX.VHDR.Volume)
- \* Callback hooks for special attributes, e.g. the Mode-ID inside the CAMG chunk is de-referenced (e.g. PAL: Hires).

IFFMASTER is distributed under the concept of freeware. Standard disclaimer applies to this program.

## 1.3 IFFMaster.guide/Installation

Installation

\*\*\*\*\*

Nothing to it: just leave all files and the catalogs directory as they are in one directory, or alternatively copy the appropriate iffmaster.catalog to into the system's locale directory (i.e. LOCALE:Catalogs/yourlanguage/). By the way: if you mixed up catalog files for different languages, just use IFFMASTER to discover the catalog's language... :)

System requirements are:

- \* AmigaOS 2.0 (V37)
- \* AmigaOS 2.1 (V38) for localized GUI
- \* AmigaOS 3.0 (V39) for some extended features, like displaying colors in ILBM/CMAP chunks.
- \* MUI version 2.1 (muimaster.library v8), See  
MUI  
.

If you wish to start IFFMASTER inside the user-startup, you should do this with runback IFFMaster ICONIFIED. This will cause IFFMASTER to start as an AppIcon, so that Icons may be dragged onto this Icon.

## 1.4 IFFMaster.guide/Usage

Usage

\*\*\*\*\*

Main Window

Contents Window

Preferences Window

## 1.5 IFFMaster.guide/Main Window

Main Window

=====

The main window consists of 3 groups. The topmost one is the file specification group, the middle part ist the chunk list and below there are the action buttons.

File Specification

Chunk List

Action Buttons

The current version has some capabilities to manipulate files, ←  
but  
adding chunks is still not implemented. So the Add button is always  
inactive. However, moving (Up, Down), deleting (Del), and editing

---

(Edit) chunks is possible. Be warned that files may become unreadable to some applications if you delete mandatory chunks, i.e. if you delete the ILBM/BMHD chunk of a picture it will become undecodeable. To activate the manipulation buttons select Prefs/Editable file from menu. If that menu item is inactive (it can be locked if you are still unsure about the program's functions) you can activate it by opening the preferences window and setting the File editable switch to be off for new files or to be left unchanged, see

Safety

.

## 1.6 IFFMaster.guide/File Specification

### File Specification

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There are different ways to open a file. The most common one is by selecting Project/Open... from the menu, or by clicking on the popup gadget beside the string gadget for getting a file requester. Alternatively, you can simply drag an icon on IFFMASTER's main window (AppWindow). Furthermore, you can open the file which is currently in the clipboard by using the menu item Project/Open Clip.

## 1.7 IFFMaster.guide/Chunk List

### Chunk List

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The chunk list can show several types of information: the left column shows the chunk ID (e.g. BMHD), then there is the chunk type (e.g. ILBM), and at the right side there is the size of the chunk. Below the action buttons there is a cycle gadget labeled Show that specifies the format of the chunk list. If it states Description you will get a description of the chunk's purpose (e.g. Bitmap Header), and Contents will display a short summary of the chunk's contents. You can advance the cycle gadget by pressing the space key.

Because it is impossible to display the entire contents of a chunk in a single line you can get a comprehensive list by first selecting a chunk in the chunk list and then pressing Info (you can as well double-click on the chunk). A new window containing the chunk's contents will appear. You can display the contents either as structure, plain text or as a hex dump. Change the presentation by using the register above the contents list, or by pressing cursor left and cursor right.

You need not close the contents window to display the contents of another chunk. Just click on that chunk in the chunk list or press

cursor up or cursor down after having activated the chunk list via the TAB key. The new contents are displayed using the appropriate data type.

## 1.8 IFFMaster.guide/Action Buttons

### Action Buttons

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Each of the buttons in this group performs an action on the currently active chunk, i.e. the one that is marked by the cursor in the

### Chunk List

.

The buttons that are used to modify a file are inactive if the menu item (switch) File Editable is turned off. This is for safety reasons, so that the file structure or contents cannot be damaged unintentionally. Depending on the experience of the user there are different locking modes for that switch, see

### Safety

.

### Info

The

### Contents Window

will be opened, and additional information about the chunk is displayed in it.

### Edit

Depending on the chunk's contents (text or binary data) a text or binary editor is called to let you edit the chunk's contents. See

### General

.

### Add

This action is not implemented yet due to extremely low user feedback. So this button is always disabled.

### Delete

The active chunk is entirely deleted.

### Up

The chunk is moved before its predecessor. Because chunks can not be moved out of their containers, this action will only succeed if the preceding chunk is not one of the type FORM, CAT or LIST. Furthermore, only chunks containing data can be moved, i.e. container chunks (type FORM, CAT or LIST) are not moveable.

### Down

The chunk is moved behind its successor. The same restrictions as in Up apply.

### Top

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The chunk is moved up as far as possible. The same restrictions as in Up apply.

Bottom

The chunk is moved up as down as possible. The same restrictions as in Up apply.

## 1.9 IFFMaster.guide/Contents Window

Contents Window

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The contents window displays the contents of the active chunk, see

Chunk List

. Depending on the type of the contents one of the following three display types is (automatically) used.

Structure

This is the most sophisticated method to display the chunk's contents. All parts of the content are decoded and displayed line by line together with a description.

Example: A sampled sound (FORM 8SVX) has a header chunk (VHDR) that is 20 bytes long. Displayed as a sequence of hex numbers it would read: 00021432 00000000 00000020 41560100 00010000. Displayed as a structure it reads like this:

```

OneShot HiSamples 136,242
Repeat HiSamples 0
Samples / HiCycle 32
    Samples / s 16,726
        # Octaves 1
Compression Technique None
    Volume [0,1] 1.00000

```

Text

Some chunks contain plain text, e.g. ANNO chunks. Texts are formatted block-justified, but no other processing is done.

Hex Dump

If a chunk contains neither structured data nor text the contents are displayed using a hex dump. There are some ways to customize the appearance of the dump, see

Hexdump

.

You can also switch between some display styles by hand, using the register gadgets. For example you can have the above mentioned VHDR chunk displayed as a hex dump instead of a structure. To switch between the display styles you can also use the cursor left and cursor right keys, even if the active window is the main window and not the contents window. This way you can control all display functions from

the main window.

## 1.10 IFFMaster.guide/Preferences Window

Preferences Window

=====

The preferences are grouped on four pages:

General

Safety

Layout

Hexdump

After having edited the preferences you may choose to

Save

For storing the settings on disk. All future invocations of IFFMASTER will use that settings.

Use

For storing the settings in RAM only, so they will only last until you reboot your computer.

Cancel

For aborting the adjustments you made and use the previously stored settings.

Closing the window with the close gadget has the same effect as clicking on Cancel.

## 1.11 IFFMaster.guide/General

General

-----

On this page you can specify the editors.

Text Editor

specifies the editor that is used for chunks containing plain text, e.g. ANNO-Chunks. You have to make sure that the editor does not spawn itself from the shell, but runs synchronously. If you are using e.g. the CYGNUSED you may enter `ed -sticky`. If you leave this gadget empty the editor specified in the environment variable

EDITOR is used.

#### Binary Editor

specifies the editor that is used for chunks containing binary data. A common name for these editors is file zapper, and are likely to be available on the aminet. This editor has also to run synchronously. If you leave this gadget empty the editor specified in the environment variable BINEDITOR is used.

## 1.12 IFFMaster.guide/Safety

### Safety

-----

The following settings are used to prevent inintentional damage to files. Since numerous 'okay to do...?' requests by the program are evenly unacceptable you can adjust between the two extremes safety and ease of use. Beginners and casual users should always use the safe settings.

#### File Editable switch

In the menu Settings there is a switch File Editable which turns on or off the file manipulation gadgets, see  
Action Buttons  
. You  
can set here the behaviour of that switch.

#### off and locked

is the safest setting. The switch is off and disabled, effectively preventing you from accidentally turing on the editing buttons.

#### off for new files

turns off the manipulation gadgets each time a new file is opened. If you want to edit files only infrequently this is a good setting.

#### left unchanged

leaves the switch always in the state you switched it to. If you want to edit many files in a row you have to turn on the manipulation gadgets only once.

#### Overwrite files

If you want to edit many files without keeping backups you can turn the prompting off. Otherwise it is recommended to leave this gadget always on the safe prompt position, because since IFFMASTER can be fully driven by keyboard it just needs two keypresses like Del and s (for Save) to possibly destroy a file.

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## 1.13 IFFMaster.guide/Layout

Layout

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The layout page currently features only one setting:

Hex indicator

lets you choose your favourite pre- or postfix string to indicate hexadecimal numbers in the structure page of the contents window. For an example file which contains hex numbers open ENV:Sys/locale.prefs and select the LCLE chunk. The first 4 numbers (16 Bytes) are reserved and displayed as hex numbers.

NB: This setting does not affect the  
Hexdump

.

## 1.14 IFFMaster.guide/Hexdump

Hexdump

-----

This page contains gadgets that affect the appearance of the hex dump in the contents window.

Limit # bytes

Building hex dumps of very large chunks (e.g. ILBM.BODY) can take a long time. Therefore the number of bytes in a hex dump can be limited to a certain amount. The default limit is 512 bytes. Since in most cases hex dumps are not very meaningful you may wish to leave this value reasonably low. To adjust the value you may use the slider or the string gadget to the right of it. With the check mark button you can turn the limit off, but this is not recommended.

Offset format

The leftmost column of the hex dump shows the offset of the first byte in each row. Use this gadget to specify if that offset should be displayed in decimal or hexadecimal.

Dump characters

If the (fixed-width) font used in the hex dump contains all 256 characters you can turn on to print even normally non-printable characters like LineFeed, 0x0A, which will then be displayed as an inverse 'J' or something like that. If only a rectangle appears then your font supports only printable characters and you will have to turn on printable only. Then all non-printable characters are displayed as a dot.

A good way to test this feature is to load a 24 bit ILBM picture. These pictures normally contain three CLUT chunks. Normally these

chunks contain all byte values in increasing order.

## 1.15 IFFMaster.guide/Problems?

Problems?

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Building hex dumps of very large chunks (e.g. ILBM.BODY) can take a long time. Therefore the number of bytes in a hex dump can be limited to a certain amount. The default limit is 512 bytes, it can be adjusted or turned off in the Preferences, see  
Hexdump  
.

Some chunks (e.g. FORM) are container chunks with no contents, and therefore there is no presentation. Some other chunks (e.g. BODY) contain raw data, presentation of these chunks is limited to hex dump.

## 1.16 IFFMaster.guide/Credits

Credits

\*\*\*\*\*

I like to thank:

Stefan Stuntz  
for MUI, see  
MUI  
.

Eric Totel  
for his great MUIBUILDER, and for keeping MUIBUILDER up with the needs of IFFMASTER :). This program would not exist without it.

Francesco Dipietromaria  
for the italian translation

Kai Iske and Walter Dörwald  
for support and betatesting

Thomas Reinhardt  
for his IFF files

H. Phil Duby, Bryan Ewert and Klaus Seistrup  
for bug reports and comments

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## 1.17 IFFMaster.guide/MUI

MUI  
===

This application uses  
MUI - MagicUserInterface  
(c) Copyright 1993/94 by Stefan Stuntz

MUI is a system to generate and maintain graphical user interfaces. With the aid of a preferences program, the user of an application has the ability to customize the outfit according to his personal taste.

MUI is distributed as shareware. To obtain a complete package containing lots of examples and more information about registration please look for a file called "muiXXusr.lha" (XX means the latest version number) on your local bulletin boards or on public domain disks.

If you want to register directly, feel free to send

DM 30.- or US\$ 20.-

to

Stefan Stuntz  
Eduard-Spranger-Straße 7  
80935 München  
GERMANY

## 1.18 IFFMaster.guide/History

History

\*\*\*\*\*

Version 1.0  
First release

Version 1.1  
FIX  
version 1.0 was compiled with option 68030 - sorry!

NEW  
many new chunk types

NEW  
menu (moved about and prefs into the menu, gaining some space)

NEW  
specifying file names at command line

NEW

---

loading files directly from clipboard

NEW

improved keyboard handling

#### Version 1.2

NEW

fully localized GUI

NEW

chunk contents can be saved

NEW

AppWindow and AppIcon, command line option iconified

NEW

improved formatting capabilities for structure entries

NEW

sophisticated IFF parser, even brain-dead formats like EMOD.EMIC are handled appropriately

NEW

chunks now have nominal length, a message is displayed if a chunk is too short or too long

BUG

Beta testers reported problems with de-iconify function when an icon was dropped onto the AppIcon. I removed the said call, so you have to double-click the AppIcon after dropping an icon.

#### Version 1.3

FIX

prefs window: close gadget now functioning, see

Preferences Window

.

FIX

cycle chain (TAB) now works in all windows

NEW

new chunk IDs: IAND, IANM, DR2D, RGB8, RGBN, SPLT

NEW

hex numbers get a user-chosen indicator, construction of hex dumps is now more than 3 times faster, see

Hexdump

.

NEW

IFFs can be saved, even nested FORMs, e.g. images inside animations

NEW

implemented some editing capabilities (delete chunks), see

---

## Action Buttons

.

## NEW

preferences can be saved, see  
Preferences Window

.

## Version 1.4

## NEW

Completely changed to GNU-C. Differences are: new startup code, no more ANSI-C functions like `sprintf()` used, enabling some things like localized output of floating point numbers.

## FIX

should finally run without `locale.library`

## NEW

Online help

## NEW

new chunk IDs: AMBA, AMDE, AMIN, AMHU, AMUN, EQE1, RESO, VARS, ...

## NEW

complete structure descriptions of system preference files, some new hooks. Be sure to try out e.g. IFFMaster `ENV:sys/locale.prefs`.

## NEW

color descriptions (RGB values) are now also displayed as a colorfield, if you have WB 3.0. Check out IFFMaster `ENV:sys/palette.prefs` or any ILBM/CMAP. NOTE: You need some free pens for this feature, so you may need to specify a deep screen for IFFMASTER inside MUIPREFS.

## FIX

<Clipboard> is now accepted as a name for the clipboard. So Save now works as Save Clip when working on a clipboard file. As a side-effect you can now enter IFFMaster "<Clipboard>" at the command line to load directly from the clipboard.

## FIX

button key definitions did overlap

## NEW

'non-printable' characters can now be displayed in the hex dump, if the font comprises 256 characters, see  
Hexdump

.

(Requested by Walter Dörwald)

## NEW

some more editing capabilities (move chunks), see

## Action Buttons



NEW

Chunks containing text or binary data can be edited via text or binary editors, see Action Buttons

NEW

new icon, which is also used as AppIcon now

I would greatly appreciate new ideas and enhancement requests. If you discover any chunk unknown to IFFMASTER, please let me know (i.e. try to send me that (short) file or even a description of the chunk's structure, if known). If you dare to translate the catalog to your language, please have a look at translators.readme first.

## 1.19 IFFMaster.guide/Chunks

Chunks

\*\*\*\*\*

Following chunks are currently known to IFFMASTER:

[anywhere]

CSET, FVER, ANNO, AUTH, CHRS, HLID, NAME, TEXT, (c)

3DDD

OBJE

8SVX

ATAK, BODY, CHAN, FADE, PAN , RLSE, SEQN, VHDR

ANIM

ANSQ

AVCF

AVFH, GDAT

AVCO

CDAT, FLAG, IMAG

AVEV

ACTS, CDAT, FLAG, IMAG, PARS, REFL

CDVR

VARs

COPR

COPI, WAIT, MOVE

CTLG

LANG, STRS

---

DECK

RESO

DEEP

DBOD, DGBL, DLOC, DPEL

DR2D

ATTR, CMAP, CPLY, DASH, DRHD, FONS, OPLY

DTYP

DTHD, DTCD

EMOD

8SMP, EMIC, PATT

ENVL

LFOI, COEN, VOEN, PIEN, NOEN, REEN, PHEN

EQED

EQE1

FAX3

FXHD, GPHD, PAGE

FAXX

FXHD, GPHD, PAGE

FTXT

FONS

GXGA

GADA

GXMN

MEDA

GXUI

GGUI

GXWD

WDDA

IAND

BPCT, CMAP, BODY

IANM

BMHD, CAMG, BODY

IILBM

ANHD, ASDG, BHCP, BHSI, BMHD, BODY, CAMG, CCRT, CLUT, CMAP, CRNG,  
DEST, DLTA, DMMY, DPAN, DPI, DPPS, DPPV, DRNG, EQE1, FFEX, FITR,  
FXD2, FXPL, GRAB, JUNK, MAND, SPRT

ISTG

MAXF, SOBJ

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KCXM

VERS, PREF

LWOB

PNTS, POLS, SRFS, SURF

MCXB

PREF, VERS

MCXP

PREF, VERS

MTRX

ARRAY, BODY, DTYP, STRU

PREF

ALRT, AMBA, AMDE, AMIN, AMHU, AMUN, CONF, CTRY, DFSS, EVNT, ETXT,  
FLOP, FONT, GENA, GENC, GTCO, GUI, ICTL, INPT, JFIF, KEYS, LCLE,  
MENU, MIDI, OPER, OSCN, PALT, PATH, PDAT, PGFX, PNTR, PRHD, PSPD,  
PTRN, PTXT, PUNT, SCRML, SERL, SHMN, SOND, TMAC, TMDO, TMEX, TMIC,  
TMIM, TMMO, TMSO, VERS, WBCF, WBPC, XDOS

PTCH

INPF, OUTF, PSEQ, VERS

REAL

RANI, RATT, RMTR, ROBJ, RSCR, RSET, RVRS, RWIN

RGB8

BMHD, BODY, CAMG, CMAP, IMRT

RGBN

BMHD, BODY, CAMG, CMAP, IMRT

SC3D

EDGE, FACE, HIER, LAMP, LNAM, OBSV, PATH, VERT, VNAM, WRLD

SMUS

SHDR, INS1, INST, SNX1, TRAK

SPLT

INFO, BODY

TACF

TPAR, TPBR, TPCA, TPCM, TPMA, TPP1, TPPA, TPPX, TPSC, TPSE, VERS

TAKE

TFRM, THDR

TDDD

INFO, OBJ

TERM

CLIP, COMD, CPTR, DATE, DIAL, EMLN, FAST, FILE, MISC, MODM, PATH,  
PHON, RECV, SCRML, SEND, SERL, SOUN, SPEK, TRML, TRNS, VERS, WINF,  
WIND, XFER

TVP2

TVRX

VILL

CRC , MODE, MONI, VER

I am still looking for descriptions for the chunks in smaller print.

## 1.20 IFFMaster.guide/Author

Author

\*\*\*\*\*

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## 1.21 IFFMaster.guide/Index

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8SVX.VHDR.Volume

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Action Buttons

action buttons

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Main Window

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Installation

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cursor left	Contents Window

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