

Identify-E

COLLABORATORS

	<i>TITLE :</i> Identify-E		
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REVISION HISTORY

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Chapter 1

Identify-E

1.1 Identify-E.guide

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```

      _____
     | _ | _ _ | . | _ \ /
     | ( _ | ( / _ | ) | | | /      v6.0

```

== THE ORIGINAL ==

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2. Copyright	Please read!
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5. Guru	The Guru tool
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7. ARexx	The ARexx interface

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B. History	What has happened so far?
C. Credits	Greetings and credits

REGISTER

Concept Index

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1.2 Identify-E.guide/Introduction

Introduction

The identify.library has a rather long history.

It all began when I got mad about all the System info programs only showing the expansion boards as a number. So I wrote expname.library, which you may already be familiar with.

Later, expname could also identify the system's parameters (even if it was wrong sometimes ;)). I still have new ideas for this library. The only trouble is that the name does not fit any more.

Well, now you have the second generation of the expname.library, called identify.library. It has been completely rewritten and expanded. The conceptional flaws of the expname.library have been removed, and a lot of new features have been added.

The library has currently these features:

- * Converting manufacturer and product id into manufacturer name, product name, and product class.
- * Converting the cryptical Amiga Guru codes into readable descriptions.
- * Analyzing the system's configuration (system type, processor, memory, graphics and so on...).
- * Converting shared library offsets into function names.

Even if the library appears to be quite ready -- it is still far from complete!

I need your help! Please send manufacturer and product names and IDs, your system's configuration, suggestions, bug reports and so on; simply all you want to see implemented in the library.

1.3 Identify-E.guide/Copyright

Copyright

Please read this part carefully.

COPYRIGHT

This software is copyrighted by Richard Körber. That means that you are NOT ALLOWED to modify the program and documentation in any way. Especially you MUST NOT REMOVE the documentation, include files or this text file.

You are NOT allowed to use this software or any part of it for any other purpose than that one mentioned in its documentation, this also includes any fonts, images or samples. You are NOT allowed to decompile, disassemble or reverse-engineer any part of the packet. This means the expansion database in particular!

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FREWARE

This packet is FREWARE. You are allowed to use it without any registration fee. Note that you only have the right to use this software, but no rights on the software itself.

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This package is freely distributable. That means you are allowed to redistribute this package as long as you follow these points:

- * Any re-distribution has to include all files in this archive, without any modifications. You are NOT allowed to add any files to the archive. Exception: if you use the identify.library only, you do not need to distribute all related files if you write a short note in your program's documentation.
 - * This package may be freely distributed via BBSs, InterNet/UseNet, software libraries such as Fred Fish's and Aminet CD-ROM, and other similar electronic channels.
 - * Disk magazines and services that charge extra for file transfers may NOT distribute it without written permission from me!
 - * You are allowed to use the expname.library even in a
-

commercial product without any written permission of me.
Please note in your program's documentation that you're using
identify.library by Richard Körber.

DISCLAIMER

By using this product, you accept the FULL responsibility for any
damage or loss that might occur through its use or the inability to
use it. The developer of the software can NOT be held responsible.

CONTENTS OF THE PACKAGE

The Identify package is only complete if these files are present:

- FILE_ID.DIZ
- Identify.info
- Identify/Function
- Identify/Guru
- Identify/ListExp
- Identify/arexx/alert.ify
- Identify/arexx/expansions.ify
- Identify/arexx/functionname.ify
- Identify/arexx/system.ify
- Identify/arexx/versioncheck.ify
- Identify/catalogs/deutsch/Identify.catalog
- Identify/catalogs/deutsch/IdentifyTools.catalog
- Identify/catalogs/Identify.cd
- Identify/catalogs/IdentifyTools.cd
- Identify/examples/ExpansionMUI
- Identify/examples/ExpansionMUI.c
- Identify/examples/MyExp
- Identify/examples/MyExp.c
- Identify/identify.doc
- Identify/identify.doc.info
- Identify/Identify-D.dvi
- Identify/Identify-D.dvi.info
- Identify/Identify-D.guide
- Identify/Identify-D.guide.info
- Identify/Identify-E.dvi
- Identify/Identify-E.dvi.info
- Identify/Identify-E.guide
- Identify/Identify-E.guide.info
- Identify/include/identify_lib.i
- Identify/include/clib/identify_protos.h
- Identify/include/fd/identify_lib.fd
- Identify/include/inline/identify.h
- Identify/include/libraries/identify.h
- Identify/include/libraries/identify.i
- Identify/include/modules/identify.m
- Identify/include/modules/identify.txt
- Identify/include/modules/libraries/identify.e
- Identify/include/modules/libraries/identify.m
- Identify/include/Pascal/identify.lib
- Identify/include/Pascal/libraries/identify.h
- Identify/include/pragmas/identify_pragmas.h
- Identify/include/proto/identify.h
- Identify/libs/identify.library
- Identify/libs/rexxidentify.library

TRADEMARKS

The copyright and trademarks of all manufacturers and products mentioned are held by their respective owners.

If you do not agree with these copyright notes, you must delete the Identify packet and all related files immediately!

1.4 Identify-E.guide/Address

My Address

Please send all bug-reports, board descriptions, missing graphic OS, keyfiles, flames and so on to one of the following e-mail addresses:

INTERNET

I'm reachable through Internet via these E-Mail address:

shred@chessy.aworld.de

Check my home page for the latest release and other programs. The URL is:

<http://www.is-koeln.de/einwohner/shred>

SNAIL MAIL

You can send me a snail mail letter, too. My address is:

Richard Körber
Hornstraße 20
51465 Bergisch Gladbach
Germany

Please enclose a "1 DM" stamp if you live in Germany and want to get a reply.

INFOLISTE

You can add yourself to a information list to get notified when new versions of the library are available. Just write a mail with the subject "HELP" (body will be ignored) to:

richard.koerber@koeln.netsurf.de

This list is handled offline, so please allow some days for the reply.

1.5 Identify-E.guide/ListExp

ListExp

ListExp is a small tool that was already included in the `expname.library` package.

It describes the hardware components of the system. On the first line it will write some hardware parameters (like CPU, Memory). After that, all expansion boards will be listed (hopefully by name).

By using the option `FULL`, all currently used commodities are listed too. The output is then useable for bug reports and similar.

A further option allows to get the manufacturer name, product name and class from manufacturer ID and product ID. Use the options `MANUFID` and `PRODID` to do so.

Example:

```
> ListExp MANUFID=514 PRODID=9
-- ListExp V6.0 -- by Richard Koerber
```

```
Manufacturer: Commodore West Chester
Product:      A2060
Class:        ArcNet
```

If some entries in the expansion list begin with a `#` instead of a name, you should send a copy of the ListExp output and the description of the missing board (manufacturer name, product name, product class) to me. :-)

Please write me if an expansion name has been guessed. You can easily recognize this by the class (guessed).

It is also not possible to check out all combinations of Amiga expansions. If your hardware is not properly recognized, please write me.

Please note: Some manufacturers, especially GVP and Phase 5, assigned the same ID to different boards. `identify.library` is prepared and tries to differ these boards, anyhow it can't in any case decide right.

Example:

```
ListExp FULL
```

1.6 Identify-E.guide/Guru

Guru

Guru translates the cryptical alert code into a human-readable form.

You may provide your alert code (all eight digits without any symbols before or behind) as parameter. An example:

```
> guru 81000005
-- Guru V1.2 -- by Richard Koerber
```

```
Alert Code: 81000005
Type:      Deadend
Subsystem: exec.library
General:   General fault
Specified: Corrupt memory list detected in FreeMem
```

Or you can pass LASTALERT. In this case, the last alert code will be examined.

Please read the results like this::

Alert Code

This is the alert code that has been decoded.

Type

What kind of alert is it? It may be a deadend alert, or a recovery alert.

Subsystem

Which system caused the alert?

General

To what general class does this alert belong? In this case, it is a general fault which must be specified later.

Specified

What was the cause? This example shows that the memory list has been corrupted by a badly written program.

Example:

```
Guru 81000005
```

1.7 Identify-E.guide/Function

Function

```
*****
```

You can use the tool Function to decode the name of a function by providing the library name and the function offset.

The first argument is the library name, e.g. exec.library. You may also specify device or resource names here. All letters after the point (including the point itself) are optional, but it is case sensitive.

The last argument is the function offset to be decoded. It must be a multiple of 6, but it doesn't need to be signed.

Example:

```
> Function exec.library -456
-- Function V1.0 -- by Richard Koerber
```

```
Library:   exec.library
Offset:    -456
```

Function: DoIO

This function requires the .fd files and an assign FD: to the drawer containing these files. The files must have the usual file name format, e.g. exec_lib.fd.

Example:

```
Function exec.library -456
```

1.8 Identify-E.guide/ARexx

ARexx

Since V6.0 an ARexx function library is available. You can now also use Identify in your ARexx scripts.

To do so, you just have to install the rexxidentify.library into libs:. The library is included into ARexx by using a CALL AddLib("/libs/rexxidentify.library",0,-30,0) command.

These functions are available in Release 1:

ID_Release()

Returns the release- and version numbers of the rexxidentify.library. The format is: '<release> <version>.<revision>(<date>)' (Example: '1 1.0(23.4.97)'). You should use the <release> part to check out if a function or option is available (e.g. Word(ID_Release(),1)). The result can also be easily split up into the single contents by using the PARSE command.

ID_NumBoards()

Returns the number of expansion boards added to the system. You can easily construct a loop for ID_Expansion, using this function.

ID_Expansion(<board>,<result code>)

Returns the appropriate result to the board number <board> (0 to ID_NumBoards()-1) and the <result code>. Result codes are:

MANUF

Manufacturer name

PROD

Product name

CLASS

Product class (localized)

ADDRESS

Memory address of the expansion (hexadecimal)

SIZE

Reserved amount of memory for the expansion board (decimal, KBytes)

SHUTUP

Has the expansion been shut up? (0:No, 1:Yes)

ID_Function(<library>,<offset>)

Returns the name of the <library>'s function and the offset <offset>. See the Shell program Function.

ID_Alert(<code>,<result code>)

Returns the appropriate result to the alert code <code> (hexadecimal string) and the <result code>. Result codes are:

DEAD

Deadend or Recovery?

SUBSYS

System causing the alert

GENERAL

General alert class

SPEC

Specific alert class See the Shell program Guru.

ID_Hardware(<result code>)

Returns a description of the hardware. <result code> are:

SYSTEM

Used Amiga model (e.g. Amiga 4000)

CPU

Used CPU

FPU

Used FPU, if available

MMU

Used MMU, if available

OSVER

AmigaOS ROM version

EXECVER

exec.library version

WBVER

Workbench version, if available

ROMSIZE

Size of the AmigaOS ROM.

CHIPSET

Available chip set (e.g. AGA)

GFXSYS

Used graphics system (e.g. CyberGraphX)

CHIPRAM

Total size of Chip RAM (includes virtual RAM)

FASTRAM
Total size of Fast RAM (includes virtual RAM)

RAM
Total size of total RAM (includes virtual RAM)

SETPATCHVER
SetPatch version, if available.

AUDIOSYS
Used audio system (e.g. AHI)

OSNR
Used OS version (e.g. 3.0)

VMMCHIPRAM
Size of virtual Chip RAM

VMMFASTRAM
Size of virtual Fast RAM

VMMRAM
Size of virtual RAM

PLNCHIPRAM
Size of physical Chip RAM

PLNFASTRAM
Size of physical Fast RAM

PLNRAM
Size of physical RAM

VBR
Address of the processor vectors

LASTALERT
Last system alert

VBLANKFREQ
VBlank interrupt frequency

POWERFREQ
Power frequency

ECLOCK
Special system clock's frequency

SLOWRAM
Size of the A500 and A2000's special Fast RAM.

GARY
Gary version

RAMSEY
Ramsey version

BATTCLOCK

Battery backed up clock available? See also the AutoDocs of IdHardware().

Some example programs you'll find in the arexx drawer.

1.9 Identify-E.guide/Bugs

Known Bugs

This is a snapshot of my current Amiga:

```
-- ListExp V6.0 -- by Richard Koerber (mailto:shred@chessy.aworld.de)
ListExp is a part of the Identify package (see AmiNet util/libs)
```

** HARDWARE **

```
System: Amiga 4000 (CPU=68060 FPU=68060 MMU=68060 VBR=0x08066378)
Chipset: AGA (RAMSEY F, GARY Normal)
AmigaOS: 3.0 (V39.106, SetPatch V43.4) Exec V39.47 Workbench V39.29
Support: GraphicOS: CyberGraphX, AudioOS: Maestix
Clock: Power 50 Hz, VBlank 50 Hz, E-Clock 709379 Hz
```

```
Memory:          CHIP    FAST  TOTAL  ROM = 512KB    SLOW = 0
                PLAIN    2MB   26MB   28MB
                VIRTUAL  0     0     0
                TOTAL    2MB   26MB   28MB
```

** EXPANSIONS **

Nr	ID	Address	Size	Manufacturer	Product
1	2140.22	40000000	64M	Phase 5	CyberVision 64 Graphics
2	2140.19	00EA0000	128K	Phase 5	CyberStorm MK-II Flash-ROM
3	082C.10	00E90000	64K	BSC	Multiface II Multi I/O
4	4754.0C	00EC0000	64K	MacroSystem Germany	Toccata Audio
5	4754.05	00ED0000	64K	MacroSystem Germany	MaestroPro Audio
6	082C.40	00EE0000	64K	BSC	ISDN MasterCard internal ISDN

THESE BUGS ARE CURRENTLY KNOWN:

- * Phase 5 and GVP have sometimes assigned one ID to two or more boards. In this case, identify.library may return a name that does not fit to the hardware.
- * Currently, an 68030 will only be recognized with MMU.
- * OCS/ECS Amiga with OS3.1 were always recognized as A3000 in the last versions. I hope this is fixed now.
- * I couldn't test the Amiga analysis completely, because of missing Amiga. If your Amiga model is not properly

recognized, please send me a copy of your ListExp output.

- * A new memory list will be ignored by identify if changed after its start (e.g. by starting VMM after identify). Workaround: simply remove the identify.library from memory, e.g. with avail flush.
- * The first IdHardware() or IdHardwareNum() could cause an Enforcer hit at 0x100. This is necessary and harmless.

1.10 Identify-E.guide/History

History

V 6.0

- * Added further boards.
- * OS2.1 recognized properly.
- * Some new hardware requests (VBR, Gary, RAMSEY, Slow-RAM, Frequencies, BattClock)
- * You can list all expansions without the need to open expansion.library now
- * IdHardwareNum() implemented: you can also request a numerical result for own evaluating purposes now
- * localized and actualized ListExp, Function and Guru
- * ARexx access to the library via rexxidentify.library
- * More example programs

V 5.2

- * Added further boards.
- * Wrote a small C example: using identify with MUI

V 5.1

- * Bugfix: did not recognize AHI properly
- * Added further boards.
- * Properly recognizes A500 with A570 expansion.
- * AmigaE include files [Roger Hågensen]

V 5.0

- * Better Picasso96 recognition
 - * Should now FINALLY recognize OCS/ECS Amiga with OS3.1
-

- * Added further boards.
- * Now also checks Audio OS and AmigaOS.
- * Added plain and VMM memory checkings.
- * Supports shared Manufacturer IDs now.
- * Bugfix: Enforcer hit when asking directly for an unknown expansion
- * Gained several KB by optimizing tables, database compression and clean-ups
- * Adapted ListExp

V 4.4

- * Recognizes Picasso96
- * Added further boards.
- * Bugfix: "-?-" printed beside guessed expansion name
- * Bugfix: Some Amiga 1200 were recognized as "Walker" :-)

V 4.3

- * Recognizes CyberGraphX V3
- * Added further boards.

V 4.2

- * CyberGraphX wasn't recognized properly.
- * Added further boards.

V 4.1

- * Bug fix: still some problems with Amiga recognition.
- * Picasso will be recognized.
- * Added further boards.

V 4.0

- * IdFunction() implemented.
- * New tool Function.
- * Added further boards.
- * Bugfix: In some cases the manufacturer name was trashed.
- * Pascal include files (made by Axel Dörfler)
- * Identifies SetPatch version

V 3.1

- * 2 boards added
-

- * Bugfix: always recognized an Amiga 3000 on ECS machines with OS3.1.
- * Bugfix: recognized CyberGraphX even when PictDT was installed only.
- * Improved memory rounding

V 3.0

- * Bases on the expname.library, but completely rewritten.
- * Now convert alert codes, too.
- * Wrote GURU.

1.11 Identify-E.guide/Credits

Credits

I want to thank especially these fellows (in no special order):

Andreas Gelhausen

for Scout, his board list and his ideas.

Martin Wietfeld

for his great board list!

Axel Dörfler

for using Identify in XOpa, and the PASCAL includes.

Thomas Kessler

for ShowConfigEnh and his many ideas.

Geert Uytterhoeven

for his board list and the description of the GVP codes.

Roger Hågensen

for the Amiga-E include files and his hints.

Timo Ronkko

for his ingenious hint!

Colin Thompson

for his field tests, checking my translations and his useful hints.

Frank Wille

for his great PhxAss assembler, and his hints!

Sascha Reissner

for ToxicBoards.

Kössi

for his many boards, his help for all my TexInfo problems, and his debug skills.

...and for their contributions (sorted alphabetically):

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Keep on!

```

//
\\ //  -- Amiga - The Computer for Creative Mind --
\X/

```

1.12 Identify-E.guide/Concept Index

Concept Index

Address

Address

Alert descriptions

Guru

ARexx

ARexx

Bugs

Bugs

Commercial Product

Copyright

Contents of the package Copyright	
Copyright	Copyright
Copyright note	Copyright
Credits	Credits
Decoding Library Offsets Function	
Disclaimer	Copyright
Distribution	Copyright
Distribution via electronic channels Copyright	
E-Mail	Address
FreeWare	Copyright
Function	Function
Guru	Guru
History	History
Homepage	Address
Infoliste	Address
Introduction	Introduction
ListExp	ListExp
rexxidentify.library ARexx	
Snail Mail	Address

Trademarks

Copyright

Unknown Boards

ListExp