

ARTIC

COLLABORATORS

	<i>TITLE :</i> ARTIC		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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REVISION HISTORY

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Chapter 1

ARTIC

1.1 Contents

A R T I C V1.7 (DEMO VERSION)

Amiga Real Time Italian Compressor

Legal Stuff

- Disclaimer
- CopyRight
- Distribution

Main Topics

- Requirements
- What is Artic ?
- What's new in V1.7 ?
- Compression Methods
- What is XPK ?
- Demo version Limitations
- Installation
- CLI commands
- Advanced Topics and Hints

The Author/Registration...

- How to contact The Author
- How to Register
- Upgrades policy
- Future Improvements
- Credits

1.2 disclaimer

Disclaimer

This program comes "as is" with no warranty, either expressed or implied including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the programs is with you. Should the programs prove defective, you assume the cost of all necessary servicing, repair or correction.

The author is in no way responsible for any damage or loss that may occur due to direct or indirect usage of this software. Use this software entirely at your own risk.

Nevertheless The Artic Package has been tested for a long time, with many different applications, on different amiga models with different kickstarts, and with excellent debug tools. In These conditions it has never caused any data Loss and/or any nasty system error Guru.

See Requirements for more information on this.

1.3 copyright

CopyRight

This software is freely distributable, BUT all programs and documentation are copyright 1994 AlgarSoft. No parts of this package may be altered by any means (this includes editing, reprogramming, crunching, resourceing etc.), except archiving.

You are warmly encouraged by the author to spread this Demo Version as far as you can or to include it in a PD/Shareware collection like Magazines or CD-ROMS. In both cases I would really appreciate a postcard or even better an E-mail message specifying the BBS or PD collection in which you have included the demo. (And your greetings, suggestions.. of course !! :->).

1.4 distribution

Distribution

Permission is given to include this DEMO version of the original program in a public archive (such as a BBS, FTP site or PD library) providing that all parts of the original distribution are kept intact. These are as follows:

```
ar.info
ar/adir
ar/aman
ar/aman.info
ar/aman_mui
ar/aman_mui.info
ar/amode
ar/artic
ar/artic.guide
ar/artic.guide.info
```

```
ar/artic020_demo
ar/artic_manager.guide.info
ar/artic_manager_eng.guide
ar/artic_manager_ita.guide
ar/artrem
Install_Artic
Install_Artic.info
OrderForm
OrderForm.info
README.eng
README.eng.info
README.ita
README.ita.info
```

No charge may be made for this program, other than a reasonable copying fee, and/or the price of the media or normal PD collection.

Note that if you include this program in some Magazine or PD collection, I would REALLY appreciate receiving some note by you: send me an E-Mail at least :-> !

1.5 requirements

Requirements

Artic requires Kickstart V37 (release 2.04) or above. It has been extensively tested with Mungwall and Enforcer on these amiga models:

A1200	2Mb Chip 0Mb Fast + 80Mb HardDisk	KS 3.0
A1200	2Mb Chip 4Mb fast + A1220 + 100Mb HardDisk	KS 3.0
A4000/40	2Mb Chip 4Mb Fast + 120Mb HardDisk	KS 3.0
A4000/30	2Mb Chip 2Mb Fast + 120Mb HardDisk	KS 3.0
A500	0.5MB Chip 2.5Mb Fast + 121Mb HardDisk	KS 2.04 (V37.175)

on these KickStarts:

KS 2.04 (V37) KS2.1 (V38) KS 3.0 (V39) KS 3.1 (V40)

and with these WorkBenchs:

WB 37.67 WB 38.21 WB 39.29 WB 40.35

1.6 what_is_artic

What is Artic ?

Artic is a device based compressor, like Stacker on the PCs (Blah!) or CopressDisk.Device or DiskExpander.., but with some different features that make it easier, more practical and faster to use.

First of all ARTIC is not an exec device BUT a dos handler using the standard packets interface. This means that:

- you no longer need to compress a whole disk or partition, but you simply specify a directory on an existing device where you want the compressed files to be placed.
- you can have on one single device (HardDisk for instance) a place where files will be compressed (through the ARTIC device), and a place where files will be untouched (i.e. your normal HardDisk). So you can use the ARTIC device to store only CERTAIN files (texts or programs that you don't use very often) and the original device for critical tasks.
- the files in the compressed device are stored as FILES and not as tracks or whatever, so you can still manipulate your files (but in compressed format) even if the handler is not loaded into memory. This Feature ensures also that when you delete a file ALL of its unused space is immediately released.
- You can avoid the compression of already compressed files (Lha,Gif...), telling the handler their filename patterns.
- You can use different Crunching Algorithms (XPK) in the SAME device, compressing certain files (the less used) with a high gain (but slow) method, and the ones you use often with a faster method.

Some others interesting features are:

- EVERY device that is a FileSystem can be used to store ARTIC files. You can use RAM:, DF0:, HD1:.... (but not SER: or PAR: of course !)
- there is no limit (but the memory) for the number of active handlers. You could have, for example, one static ARTIC device assigned to your hard disk and one temporary device assigned to RAM: to be used only when needed.
- an ARTIC device can handle files both in compressed or uncompressed format; you can bypass the Device copying a file directly in its directory and the file will be still usable by the ARTIC device.
- the ARTIC package comes with a very user-friendly program: ArticManager that lets you perform the most important tasks (creating, removing, measuring, checking) on ARTIC devices quickly and assisted by a context sensitive help. This application can also use MUI if you have it :-)

Three CLI commands are also provided.

1.7 whats_new

What's New in Version 1.7 ?

(Artic V1.7, ArticManager V1.994, ArticManagerMUI 1.0, Adir V1.93, Artrem V1.1, Amode V1.0)

- Multiple Compression Algorithms :
ARTIC can now compress your files with TWO internal algorithms or use the
-

XPk external compression libraries.

- MUI interface for the ArticManager.
- Led Blinking during (de)compression in 68000 version eliminated.
- Squashed a bug in the Meter that caused the % gauge to be fooled with big numbers.
- Standard intuition Busy pointer is now used (if KS >=V39).
- The driver icon is now written with PutDiskObject().
- Syntax of Adir and Artrem slightly changed. Now you can use the devices volume names too.
- New CLI command Amode added.

What's New in Version 1.63 ?

Mostly bug fixes:

- Added support of target directories with spaces in their names.
- WRITE and READ packets return codes Fixed.
- Allowed handling of very long path names in the handler.
- Other minor enhancements and bug-fixes. :-)

What's New from 1.5 ?

- This version fixes a very nasty bug of my C compiler code generator that made files with unused space in the first segment unusable. (I'm very sorry but as earlier stated, THAT WAS NOT A BUG OF THE CODE BUT OF THE COMPILER).
 - Speed improvements have been made for the 68020+ version. The new version is a rough 10% faster in crunching and a rough 40% faster in decrunching than the previous 68020+ version !!
 - Volume Name and volume creation date are now saved in a configuration file (that is placed in the directory assigned to the device), and so are no longer lost when you switch the computer off.
 - Capability of specifying files that you DON'T want to compress via AmigaDos pattern. ('#?.lha' or '#?.jpeg'...). Those pattern are also stored in the configuration file.
 - External font and assign for the help files have been eliminated.
-

1.8 methods

Multiple Compression Methods

The main enhancement in ARTIC V1.7 is the ability to use several compression algorithms (with different features) to satisfy every user needs and/or tastes.

- Artic V1.7 comes with two "internal" methods:

NORMAL : Basically the same as in the older versions, but with a little hash table (approx. 8.5 KB).

TURBO : Almost TWICE as fast as NORMAL in crunching, but with a big hash table (65 KB) and a bit less effective (-2/3% gain).

(Please note that as the moment of writing this documentation, the TURBO mode is implemented in the 68020+ version ONLY ! I will certainly fix this in the nearest future.)

The format of the files is THE SAME of the previous versions so you can perfectly use your old ARTIC files with V1.7 :-)

- YOU CAN ALSO USE THE EXTERNAL XPK COMPRESSION LIBRARIES, BUT please note that these are NOT written by the author of ARTIC, and I can NOT distribute them with the program. Anyway if you are already using XPK but you have not registered yet to their authors, PLEASE DO ! XPK is a WONDERFUL software work (one of those that make the Amiga GREAT) and their authors really deserve your support !

In this version the XPK is used to compress only chunks of memory so the file format is NOT XPK compatible. Maybe I'll fix this in the future...

I could have used level 0 sublibraries only, but my timing tests showed that speed improvement would have been too small.

You can select a device compression mode with the ArticManager or with the Amode CLI command.

The handler automatically recognizes the compression method of files so you can use DIFFERENT methods (even no compression !) in ONE device (for instance using a slow but high compressing method on files you don't use very often).

1.9 whatis_xpk

XPK: The answer to standardize compression on the Amiga.

"The xpk standard is to data compression what xpr is to file transmission. It consists of three layers:

Level 2: The application/xpk interface for archives (planned)

Level 1: The application/xpk interface for files

Level 0: The xpk/packer interface

In addition, there is an optional standard xpk file format."

"All parts of the xpk standard are implemented in shared libraries. There is one master library for archive level access, one master library for file level access, and one library for each compression algorithm."

You can find XPK on Aminet : util/pack/xpk25usr.lha

1.10 whatis_mui

This application uses

MUI - MagicUserInterface

(c) Copyright 1993 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 "muiXX.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 20.- or US\$ 15.-

to

Stefan Stuntz
Eduard-Spranger-Straße 7
80935 München
GERMANY

1.11 demo_limit

This is a DEMO version !!

Please Remember that this copy of ARTIC is SHAREWARE !

This freely distributable package is a DEMO version. The handler capabilities have been limited to let you use ARTIC and decide if you really need it. These limitations include:

- * You can't use files greater than 100KB. Any attempt of writing and or reading such files will make the handler to truncate them.

- * No speed optimizations have been made. This is a plain 68000 version.
- * A boring requester will pop up time to time while using Artic. This requester reminds you that you are using a DEMO version.
- * Some newest AmigaDOS Packets haven't been supported yet.

If you find ARTIC useful and you want to exploit all of its capabilities, you can register yourself.

1.12 installation

Installation

Installing ARTIC on your system is very simple. Just Double-Click the installation icon (named Install_Artic) in the directory where the installation files reside. The installation script is actually an AmigaDOS script so you will need the system command IconX to start it from WB; if you don't have IconX you can start it from the shell typing:

```
1> cd <the directory where the installation files reside>
1> execute Install_Artic
```

The installation script will ask you where to put some files (eg. the CLI commands, the help files, ...) via RequestFile command. If you don't have it the files will be copied in default drawers.

The installation script will also generate an Un-Installation script that will delete all files installed. This file will be placed in s:Uninstall_Artic. If you want to remove artic from your system just type:

```
1> execute s:Uninstall_Artic
```

Once installed ARTIC, you can create ARTIC devices via the Artic Manager.

1.13 cli_commands

CLI commands

For Those who often use the cli command shell, some cli commands are provided. These commands are:

```
Adir    to list files and show their gain percentage.
Artrem  to remove an ARTIC device from memory.
Amode   to set or see the compression method used by a device.
```

1.14 adir

Adir lists files and shows their gain percentage.

SYNTAX: Adir [file|dir] [[file|dir]...] [ALL/S] [QUIET/S]

The Adir command acts like the 'dir' or 'list' dos commands but if used on ARTIC files gives the gain percentage of each file and each directory. You can specify a directory (or more than one) or a file (or more than one) and you can even use AmigaDOS wildcards.

The ALL switch tells the command to recursively examine subdirectories as well.

The QUIET switch tells the command not to display information for each single file but only for each directory.

EXAMPLES:

```
1> adir artic:docs
```

lists the files in artic:doc and their gain percentages.

```
1> adir artic:include/exec/#?.h QUIET
```

lists only files ending with .h in artic:include/exec and does not show the gain percentage for each file but only for the entire directory.

```
1> adir artic:include ALL
```

lists each file in EACH directory starting from artic:include. All subdirectories are examined.

```
1> adir artic:#?.info artic:scoptions
```

lists files ending with '.info' and the file named 'scoptions'

1.15 artrem

Artrem removes an ARTIC device from memory.

SYNTAX: Artrem DEV=<device name>
Artrem <device name>

After installed you can remove an artic device from memory with the Artrem command. The operative system will receive back all the memory that the device has used; any other access to the removed device will cause a request from DOS to insert volume 'xxxxx'.

You can remove an ARTIC device only if there aren't file opened and/or dangling locks.

If the device can be removed you will see this message:

```
'Remove message has been sent OK.'
```

otherwise you will be told that:

```
'Device is still in use!'
```

EXAMPLES:

```
1> artrem DEV=ARTIC:
    1> artrem ARTIC
```

tries to remove the device named ARTIC from memory.

1.16 amode

Amode Set or Show ARTIC devices compression method.

SYNTAX: Amode [DEV=<device name>] [PACKER=<method>] [MODE=<Xpk-mode>]

If invoked with NO arguments Amode will Show the current compression method of all ARTIC devices loaded in memory:

```
1> Amode
```

If you want to know what method is being used by a certain device you can use Amode followed by that device name (or volume name):

```
1> Amode ARTIC:
```

(Note that the colon ':' after the device name is optional)

Finally, to set a device compression mode from the CLI, you can use Amode followed by the device name (or volume name) and the PACKER=<method> keyword:

```
1> Amode ARTIC: PACKER=TURBO (or Amode ARTIC PACKER TURBO)
```

The two internal methods are NORMAL and TURBO. If you use the XPK compression libraries you can specify an external packer name and, optionally, that packer mode (an integer in the range 0-100):

```
1> Amode ARTIC: PACKER=NUKE
1> Amode ARTIC: PACKER=NUKE MODE=100
```

After setting a device compression method, all the files WRITTEN to that device will be compressed with the new method. Files already compressed with other methods will be automatically recognized and the proper method used.

You can also set or see ARTIC devices compression method with the ArticManager.

1.17 advanced_topics

Advanced Topics using ARTIC

It follows the description of some interesting tricks and Hints that the experienced user can use to exploit all ARTIC features.

These include:

- Making a device 'by hand'
- How to compress your s:

1.18 device_by_hand

How to make an ARTIC device without the Manager

ARTIC devices are dos devices exactly like CON: or DF0:, but they don't use exec devices (for instance DF0: uses trackdisk.device). So if you want to add an ARTIC device to your system without the Artic Manager, you can create a standard mount file, with your normal text-editor, like this:

```
/* Example of mount file */

Handler   = l:artic
Stacksize = 2048
Startup   = <the complete path of the dir. where to put files>
Priority   = 5
Mount     = 1
GlobVec   = -1
```

(Remember to create the directory you specify in 'Startup=xxx')

and save it as, for example, ram:foo and then mount the device typing at the CLI prompt:

```
l> mount ram:foo
```

If you want the systems to automatically mount your device when booted, you can save the mount file in DEVS:DOSDRIVERS

1.19 compress_s

How to compress your s: directory

Especially on FAT systems (HD, fast CPU), the s: directory will contain a lot of stuff that is mainly text or configuration files etc... Well on these files you can achieve a very good compress ratio, but how can you compress the s: directory that is used just at boot time, before the artic handler is mounted ?

It's very simple, just:

- * make a directory in your artic handler named 'S'.
- * move all the files in the original s (sys:s) in the new s directory
- * edit the startup-sequence script. Search for the point in which the dosdrivers are mounted. This should look like this:

```
> BindDrivers <
> C:Mount >NIL: DEVS:DOSDrivers/~(#?.info) <
```

just after these lines insert:

```
Assign >NIL: S: ARTIC:S
```

- * now copy the startup-sequence back in the real s: (sys:s)

And That's it ! Now the sys:s will contain ONLY the startup-sequence and the directory in the artic handler all the other files that now are compressed. You can still use the s: as usual, the only drawback is that if you want to change the startup-sequence (not very probable!) you must change the one in sys:s and not in s:.

On my system, I have gained 179222 bytes (56% out of 315862 bytes) !

1.20 the_author

How to contact the Author

You can contact the author at one of the following addresses. If you send your letter via e-mail, there's a good chance for getting a quick reply. Feel free to contact me for questions, comments, suggestions or whatever.

Normal Mail: Alessandro Garoli
Via A. Volta 7
12100 CUNEO
ITALY

E-Mail: lspall@di.unito.it
or
labstp23@di.unito.it (Marco Musso, a friend of mine)

1.21 registration

How to become a Registered user

Registered users will be shipped a disk with the newest public release of ARTIC, with:

- * NO File-Size limitation.
-

- * NO boring requesters.
- * Processor Optimizations (if requested).

A registered user can also get the upgrades of the package paying only the postal expedition fee and disk-media price.

The price for a ARTIC registration is

- 42,000 Lit. if you live in ITALY
- 25 US\$ or 35 DM otherwise.

To register, fill the OrderForm in (a file named OrderForm is shipped with the demo version) and send it along with the money at this address:

Alessandro Garoli
Via A. Volta 7
12100 CUNEO
ITALY

(Please fill ALL the fields in the Orderform !)

Money can be included in different ways:

- * IF you live in ITALY: con vaglia postale ordinario.
- * Postal Money Order.
- * EuroCheque.
- * CASH (Remeber: hide well the money !!)

1.22 future

Future Improvements

Further development of ARTIC depends mainly on the number of registered users. Improvements will include:

- * Faster Compression routines. (Is it possible ?? :->)
- * Other internal methods.
- * possibly your suggestions

1.23 upgrades

How to Upgrade from older versions

If you already are a member of the small ARTIC community, you can get the new versions of the program in two ways:

E-MAIL : if you can use an E-mail address i can send you there the program for FREE. The only drawback is that i HAVE to encrypt the file with PGP, so I need your public PGP key. Send me your key via E-mail and you'll get the upgrade. (If you never used PGP, you can find it on Aminet in the directory: util/crypt)

NORMAL : AAARRRRGGGHH ! Not very Handy :-(In this case you'll have to MAIL send me US\$ 5 for the postal expedition, envelope,disk... in a letter with your name, your CPU type and the version you have.

(If you live in ITALY you can send me only Lit. 5000)

As for my address is concerned, well you should know it by now :-)

1.24 credits

Credits

Many Thanks and Greetings should go to:

* My "very own" BetaTesters

- Armando "Sigi" Marcello
- Benedettini Alessandro
- Cortassa Diego
- Dutto "Giassai!" Fabrizio
- Fornier Marco
- Musso Marco

for their sleepless nights, testing and bug reporting ARTIC on different models and kickstarts.

* - Stéphane Gamondes
- Douglas Bullard
- Riccardo Feresi

for their useful suggestions.

* The REGISTERED users for their support. Thank You !! ;-)

* Urban Dominik Mueller,
Bryan Ford,
and the others XPK sublibrary authors.

* Stefan Stuntz
for his WONDERFUL MUI :-)

* The Amiga for being the best Computer for real programmers ever!
