

# ACRO

vo.3a 2012/06/27

Typeset Acronyms

Clemens NIEDERBERGER

<https://bitbucket.org/cgnieder/acro/>  
contact@mychemistry.eu

English documentation

**ACRO** not only allows you to create acronyms in a simple way but also lets you add them to different classes of acronyms. Lists can be created of separate classes wherever you want the list to appear.

**ACRO** also provides an option **single** which ignores acronyms that are used only once in the whole document.

As an experimental feature **ACRO** also offers the option **sort** which automatically sorts the list created by `\printacronyms`.

## Contents

	4.2. Resetting . . . . .	6
	4.3. Labels . . . . .	7
<b>1. Licence and Requirements</b>	<b>2</b>	
<b>2. About</b>	<b>2</b>	
<b>3. Basics</b>	<b>2</b>	
3.1. Creating New Acronyms . . .	2	
3.2. Using the Acronyms – the Commands . . . . .	3	
3.3. Plural Forms . . . . .	4	
3.4. Alternative Short Forms . . .	5	
3.5. Extra Information for the List Entry . . . . .	5	
<b>4. Additional Commands and Possi- bilities</b>	<b>6</b>	
4.1. Using Classes . . . . .	6	
	<b>5. Printing the List</b>	<b>7</b>
	<b>6. Customization</b>	<b>8</b>
	6.1. General Options . . . . .	8
	6.2. Options Regarding Acronyms	9
	6.3. Options Regarding the List . .	9
	<b>7. hyperref Support</b>	<b>11</b>
	<b>A. All Acronyms Used in this Docu- mentation</b>	<b>11</b>
	<b>References</b>	<b>12</b>
	<b>Index</b>	<b>13</b>

## 1. Licence and Requirements

**ACRO** is placed under the terms of the LaTeX Project Public License, version 1.3 or later (<http://www.latex-project.org/lppl.txt>). It has the status “maintained.”

**ACRO** loads and needs the following packages: `expl3`,<sup>1</sup> `xparse`,<sup>2</sup> `xtemplate`<sup>3</sup> and `l3keys2e`.<sup>4</sup>

## 2. About

Acronyms and initialisms are abbreviations formed from the initial components in a phrase or a word. These components may be individual letters (as in CEO) or parts of words (as in Benelux and Ameslan). There is no universal agreement on the precise definition of the various terms nor on written usage. [Wik]

After WIKIPEDIA told us what acronyms are and we won’t confuse them with units or other kinds of abbreviations – why would we need another package for them? There are several already: `acronym`<sup>5</sup> [Oet10], `acromake`<sup>6</sup> [Tho95], `acroterm`<sup>7</sup> [Vos10], the abbreviations package `abbrevs`<sup>8</sup> [Swio1] (the current version 1.4 has a bug,<sup>9</sup> though), the nomenclature package `nomenc`<sup>10</sup> [Vey+05], and of course the mighty glossaries<sup>11</sup> [Tal11]. So there is really no *need* for a new package.

On the other hand `acronym`, the best of the acronym specific packages, has one or two shortcomings and sometimes using glossaries seems a bit of an overkill (or simply inconvenient as one has to run `makeglossaries` or `makeindex`, then). So **ACRO** stands somewhere in between (but much closer to `acronym`).

The main reason for the existence of **ACRO** is a question on {TeX}.SE,<sup>12</sup> though, which intrigued me and in consequence led to **ACRO** and it’s option `single`.

**ACRO** has many similarities with the `acronym` package. In fact, quite some macros have the same name and meaning.<sup>13</sup>

## 3. Basics

### 3.1. Creating New Acronyms

Acronyms are created with the command `\DeclareAcronym` that can only be used in the preamble.

► `\DeclareAcronym*{<id>}{<short>,<pl>}[<alt.>]{<long>,<pl>}{<extra>}[<class>] %`  
can be used only in preamble

► `\DeclareAcronymFormat{<id>}{<format>} %` can be used only in preamble

Although this command has quite a number of arguments. In the simplest case you’ll only need three:

---

<sup>1</sup> CTAN: `expl3`   <sup>2</sup> CTAN: `xparse`   <sup>3</sup> CTAN: `xtemplate`   <sup>4</sup> CTAN: `l3keys2e`   <sup>5</sup> CTAN: `acronym`   <sup>6</sup> CTAN: `acromake`   <sup>7</sup> CTAN: `acroterm`   <sup>8</sup> CTAN: `abbrevs`   <sup>9</sup> see <http://tex.stackexchange.com/q/59840/5049> for solutions.   <sup>10</sup> CTAN: `nomenc`   <sup>11</sup> CTAN: `glossaries`   <sup>12</sup> <http://tex.stackexchange.com/q/59449/5049>

<sup>13</sup> Not in the sense of `\meaning!`

```

1 % preamble
2 \DeclareAcronym{test}{ST}{Some Test}

```

This creates the acronym “ST” with the ID “test” and the long form “Some Test”. The other arguments will be described later in this document.

`\DeclareAcronymFormat` lets you assign a special format to an acronym. Maybe small caps:

```

1 % preamble:
2 \DeclareAcronym{ot}{ot}{Other Test}
3 \DeclareAcronymFormat{ot}{\scshape}

```

The short form now looks like this: OT.

### 3.2. Using the Acronyms – the Commands

Acronyms are used with with one of the following commands:

- ▶ `\ac` → basic command; the first output is different from subsequent ones.
- ▶ `\Ac` → same as `\ac` but capitalizes the first letter of the long form.
- ▶ `\acs` → short form; the actual acronym.
- ▶ `\acl` → long form; the meaning of the acronym.
- ▶ `\Acl` → same as `\acl` but capitalizes first letter.
- ▶ `\aca` → alternative short form as specified in the [`<short>`] argument of `\DeclareAcronym`; if it hasn’t been specified this is identical to `\acs`.
- ▶ `\acf` → first form; output like the first time `\ac` is output.
- ▶ `\Acf` → same as `\acf` but capitalizes first letter.
- ▶ `\acp` → plural form of `\ac`;
- ▶ `\acsp` → plural form of `\acs`;
- ▶ `\aclp` → plural form of `\acl`;
- ▶ `\Aclp` → same as `\aclp` but capitalizes first letter.
- ▶ `\acap` → plural form of `\aca`;
- ▶ `\acfp` → plural form of `\acf`;

- `\Acfp` → same as `\acfp` but capitalizes first letter.

If an acronym is used the first time with `\ac` its output is different from subsequent uses. To be clear on this: the first time! If the acronym has been used with *any* of the output commands before it is *not* the first time any more.

```

1 % preamble: \DeclareAcronym{cd}{cd}{Compact Disc}
2 % \DeclareAcronymFormat{cd}{\scshape}
3 first time: \ac{cd} \\
4 second time: \ac{cd} \\
5 short: \acs{cd} \\
6 alternative: \aca{cd} \\
7 first again: \acf{cd} \\
8 long: \acl{cd} \\
9 short plural: \acsp{cd} \\
10 long plural: \aclp{cd}

```

```

first time: Compact Disc (CD)
second time: CD
short: CD
alternative: CD
first again: Compact Disc (CD)
long: Compact Disc
short plural: CDs
long plural: Compact Discs

```

### 3.3. Plural Forms

If an acronym is defined in the standard way `ACRO` uses an ‘s’ that’s appended to both the short and the long form when one of the plural commands is used. However, that is not always the best solution. For one thing not all acronyms may have a plural form. Second, the plural form especially of the long forms may be formed differently. And third, other languages can have other plural endings.

For this reason `\DeclareAcronym` provides additional arguments:

- `\DeclareAcronym{<id>}{<short>,<plural ending>}{<long>,<plural ending>}`
- `\DeclareAcronym*{<id>}{<short>,<plural ending>}{<long>,<plural form>}`

These arguments are optional. If they’re not used, the default setting is ‘s’. If you use the starred version long form will be replaced by the specified plural form when necessary. A given short plural will still be appended.

```

1 % preamble:
2 % \DeclareAcronym{cd}{\textsc{cd}}{Compact Disc}
3 % \DeclareAcronymFormat{cd}{\scshape}
4 % \DeclareAcronym{ny}{NY,}{New York,}
5 % \DeclareAcronym{sw}{SW}{Sammelwerk,e}
6 % \DeclareAcronym*{mp}{MP}{Member of Parliament,Members of Parliament}
7 \acsp{cd}, \aclp{cd} \\
8 \acsp{ny}, \aclp{ny} \\
9 \acsp{sw}, \aclp{sw} \\
10 \acsp{mp}, \aclp{mp}

```

CDs, Compact Discs  
 NY, New York  
 SWs, Sammelwerke  
 MPs, Members of Parliament

### 3.4. Alternative Short Forms

For some acronyms it might be useful to have alternative forms. For this `\DeclareAcronym` has another optional argument:

► `\DeclareAcronym{<id>}{<short>}[<alternative>]{<long>}`

```

1 % preamble \DeclareAcronym{jpg}{JPEG}[JPG]{Joint Photographic Experts
  Group}
2 default: \acs{jpg} \\
3 alt.: \aca{jpg}

default: JPEG
alt.: JPG

```

The alternative form uses the same plural ending as the default short form and is formatted in the same way.

### 3.5. Extra Information for the List Entry

Of course you can print a list of acronyms where their meaning is explained. Sometimes it can be useful to add additional information there. This is done with another optional argument to `\DeclareAcronym`:

► `\DeclareAcronym{<id>}{<short>}{<long>}{<extra>}`

These information will only be displayed in the list. See section 5 for the impact of the following example.

```

1 % preamble:
2 % \DeclareAcronym{nato}{nato}{North Atlantic Treaty Organization}{\
   textit{deutsch}: Organisation des Nordatlantikvertrags}
3 % \DeclareAcronymFormat{nato}{\scshape}
4 The \ac{nato} is an intergovernmental military alliance based on the
5 North Atlantic Treaty which was signed on 4 April 1949. \ac{nato}
6 headquarters are in Brussels, Belgium, one of the 28 member states
7 across North America and Europe, the newest of which, Albania and
8 Croatia, joined in April 2009.

```

The North Atlantic Treaty Organization (NATO) is an intergovernmental military alliance based on the North Atlantic Treaty which was signed on 4 April 1949. NATO headquarters are in Brussels, Belgium, one of the 28 member states across North America and Europe, the newest of which, Albania and Croatia, joined in April 2009.

## 4. Additional Commands and Possibilities

### 4.1. Using Classes

The acronyms of **ACRO** can be divided into different classes. This doesn't change the output but allows different acronym lists, see section 5. For this `\DeclareAcronym` has an optional argument:

► `\DeclareAcronym{<id>}{<short>}{<long>}[<class>]`

```

1 % preamble:
2 % \DeclareAcronym{la}{LA,}{Los Angeles,}[city]
3 % \DeclareAcronym{ny}{NY,}{New York,}[city]
4 \acl{la} (\acs{la}) \\\
5 \acl{ny} (\acs{ny})

```

Los Angeles (LA)  
New York (NY)

This might be useful if you can and want to divide your acronyms into different types, technical and grammatical ones, say, that shall be listed in different lists.

### 4.2. Resetting

If you want for some reason to fool **ACRO** into thinking that an acronym is used for the first time you can call this command:

► `\acresetall`

```
1 \acresetall
2 \ac{ny}
```

New York (NY)

Beware that this command acts *globally* and effects *all* acronyms!

### 4.3. Labels

The first usage of an acronym sets a label `\label{ac:<id>}`, regardless which command has been used to typeset it. This label is used to create the page numbers in the list (see section 5 for details) but can also be used for other references if needed.

## 5. Printing the List

Printing the whole list of acronyms is easy: just place `\printacronyms` wherever you want the list to be.

- `\printacronyms{<list of classes>}[<excluded classes>]` → the first *optional* (!) argument `{<list of classes>}` takes a comma-separated list of the classes of acronyms that should in the list. If the argument is left out, *all* acronyms are printed. In the optional argument `[<excluded classes>]` classes can be specified that shall not be included into the list.

```
1 \acsetup{hyperref=false,extra-style=comma}
2 \printacronyms[city]
3 \acsetup{list-name=City Acronyms}
4 \printacronyms{city}
```

### Acronyms

**CD** Compact Disc

**JPEG** Joint Photographic Experts Group

**MP** Member of Parliament

**NATO** North Atlantic Treaty Organization, *deutsch*: Organisation des Nordatlantikvertrags

**SW** Sammelwerk

**ST** Some Test

### City Acronyms

**LA** Los Angeles

**NY** New York

You can see that the default layout is a description list with a `section*` title. Both can be changed, see section 6.

The command `\printacronyms` needs two  $\LaTeX$  runs. This is a precaution to avoid error messages with a possibly empty list. But since almost all documents need at least two runs and often are compiled much more often than that, this fact shouldn't cause too much inconvenience.

## 6. Customization

### 6.1. General Options

There are a few options which change the general behaviour of `ACRO`. Underlined values are used if no value is given.

- ▶ `single` = true|false Default: false  
If set to true an acronym that's used only once in a document will only print the long form and will not be printed in the list.
- ▶ `hyperref` = true|false Default: false  
If set to true the short forms of the acronyms will be linked to their list entry.
- ▶ `only-used` = true|false Default: true  
This option is true as default. It means that only acronyms that are actually used in the document are printed in the list. If false, all acronyms defined with `\DeclareAcronym` will be written in the list.
- ▶ `macros` = true|false Default: false  
If set to true this option will create a macro `\<id>` for each acronym as a shortcut for `\ac{<id>}`. Already existing macros will *not* be overwritten.
- ▶ `strict` = true|false Default: false  
If set to true and the option `macros` = true is in effect then already existing macros will be overwritten.
- ▶ `sort` = true|false Default: false  
If set to true the acronym list will be sorted automatically. The entries are sorted by their ID ignoring upper and lower case. This option needs the experimental package `l3sort` (from the `l3experimental`<sup>14</sup> bundle) and can only be set in the preamble.

All options of this and the following sections can be set up either as package options or via the setup command:

- ▶ `\acsetup{<options>}` set up `ACRO` anywhere in the document. Or separate package loading from setup.

---

<sup>14</sup> CTAN: l3experimental



```

1 % with \acsetup{macros}; remember I used \acresetall before
2 we could have used these before: \nato, \ny

```

we could have used these before: North Atlantic Treaty Organization (NATO), NY

## 6.2. Options Regarding Acronyms

The options described in this section all influence the layout of one of the possible output forms of the acronyms.

- ▶ **short-format** = <format> (initially empty)  
Sets a format for all short forms. For example **short-format** = `\scshape` would print all short forms in small caps.
- ▶ **long-format** = <format> (initially empty)  
The same for the long forms.
- ▶ **extra-format** = <format> (initially empty)  
The same for the extra information.
- ▶ **first-style** = default|footnote|square|short|reversed Default: default  
The basic style of the first appearance of an acronym.
- ▶ **extra-style** = plain|comma|paren|bracket Default: plain  
Defines the way the extra information is printed in the list.
- ▶ **plural-ending** = <tokenlist> Default: s  
With this option the default plural ending can be set.

```

1 % (Keep in mind that we're in
2 % a minipage here!)
3 \acsetup{first-style=footnote}      NYa
4 \acf{ny} \\\                       New York [NY]
5 \acsetup{first-style=square}       NY
6 \acf{ny} \\\                       NY (New York)
7 \acsetup{first-style=short}
8 \acf{ny} \\\                       a New York
9 \acsetup{first-style=reversed}
10 \acf{ny}

```

## 6.3. Options Regarding the List

- ▶ **page-ref** = none|plain|comma|paren Default: none  
The style with which the page number of the first appearance of the acronym in the text is displayed.

- `page-name` = <page name> Default: p.  
The “name” of the page label.
  
- `list-type` = `table`|<list> Default: description  
This option let’s you choose how the list is printed. <list> can be any valid list like `itemize` or `description`.
  
- `list-style` = `list`|`tabular`|`longtable`|`extra-tabular`|`extra-longtable`|  
`extra-tabular-rev`|`extra-longtable-rev` Default: `list`  
 If you choose `list-type` = `table` you have to specify which kind of table should be used. If you choose `longtable`, `extra-longtable` or `extra-longtable-rev` you have to `\usepackage{longtable}` in your preamble. The values `extra-longtable` and `extra-longtable-rev` put the extra information in a column of its own.
  
- `list-header` = `chapter`|`chapter*`|`section`|`section*`|`subsection`|`subsection*` Default: `section*`  
The header type of the list.
  
- `list-name` = <list name> Default: Acronyms  
The name of the list. This is what’s written in the list-header.
  
- `list-table-width` Default: `.7\linewidth`  
This has only an effect if you chose `list-type` = `table`. The second column (or the third if you choose one of the `-rev` styles) of the table is a p column whose width can be specified with this option.
  
- `list-caps` = `true`|`false` Default: `false`  
Print the first letters of the long form capitalized.

If you for example have loaded `enumitem`<sup>15</sup> you can define a custom list for the acronym list:

```

1 % preamble:
2 % \usepackage{enumitem}
3 \newlist{acronyms}{description}{1}
4 \newcommand*\addcolon[1]{#1:}
5 \setlist[acronyms]{labelwidth=3em,leftmargin=3.5em,noitemsep,
6   itemindent=0pt,font=\addcolon}
7 \acsetup{list-type=acronyms,hyperref=false,extra-style=comma}
8 \printacronyms

```

---

<sup>15</sup> CTAN: `enumitem`

## Acronyms

<b>CD:</b>	Compact Disc
<b>JPEG:</b>	Joint Photographic Experts Group
<b>LA:</b>	Los Angeles
<b>MP:</b>	Member of Parliament
<b>NATO:</b>	North Atlantic Treaty Organization, <i>deutsch:</i> Organisation des Nordatlantikvertrags
<b>NY:</b>	New York
<b>SW:</b>	Sammelwerk
<b>ST:</b>	Some Test

## 7. hyperref Support

The option `hyperref = true` adds internal links from all short (or alternative) forms to their respective list entries. You should use this option with care: if you don't use `\printacronyms` anywhere this option will result in loads of `hyperref`<sup>16</sup> warnings. Also printing several lists can result in warnings if don't clearly separate the lists into different classes. If an acronym appears in more than one list there will also be more than one `hypertarget` for this acronym.

### A. All Acronyms Used in this Documentation

```
1 \acsetup{
2   list-type   = table,
3   list-style  = longtable,
4   list-header = subsection*,
5   extra-style = comma,
6   page-ref   = comma,
7   list-name   = All Acronyms}
8 \printacronyms
```

## All Acronyms

CD	Compact Disc, p. 4
JPEG	Joint Photographic Experts Group, p. 5
LA	Los Angeles, p. 6
MP	Member of Parliament, p. 5
NATO	North Atlantic Treaty Organization, <i>deutsch:</i> Organisation des Nordatlantikvertrags, p. 6
NY	New York, p. 5

---

<sup>16</sup> CTAN: hyperref

SW      Sammelwerk, p.5  
ST      Some Test, p.3

```
1 \acsetup{  
2   list-type   = table,  
3   list-style  = longtable,  
4   list-header = subsection*,  
5   page-ref    = comma,  
6   list-name   = City-Acronyms}  
7 \printacronyms{city}
```

## City-Acronyms

LA    Los Angeles, p.6  
NY    New York, p.5

## References

- [Oet10]    Tobias Oetiker. *acronym – An Acronym Environment for  $\text{\LaTeX}$  2 $\epsilon$* . Version 1.36. Sept. 8, 2010. URL: <http://www.ctan.org/pkg/acronym>.
- [Swi01]    Matt Swift. *abbrevs*. Version 1.4. Sept. 8, 2001. URL: <http://www.ctan.org/pkg/abbrevs>.
- [Tal11]    Nicola L.C. Talbot. *glossaries*. Version 3.01. Apr. 12, 2011. URL: <http://www.ctan.org/pkg/glossaries>.
- [Tho95]    Paul A. Thompson. *acromake*. Version na. July 16, 1995. URL: <http://www.ctan.org/pkg/acromake>.
- [Vey+05]    Boris Veytsman, Bernd Schandl, Lee Netherton, and C.V. Radhakrishnan. *nomenc1 – A Package to Create a Nomenclature*. Version 4.2. Sept. 22, 2005. URL: <http://www.ctan.org/pkg/nomenc1>.
- [Vos10]    Jakob Voss. *acroterm*. Version 0.1. Nov. 19, 2010. URL: <http://www.ctan.org/pkg/acroterm>.
- [Wik]      Wikipedia. *Acronym and initialism*. URL: <http://en.wikipedia.org/wiki/Acronyms> (visited on 06/21/2012).

## Index

Section titles are indicated **bold**, packages sans serif, commands `\brown` and options `yellow`.

### Symbols

`\<id>` ..... 8

### A

abbrevs ..... 2  
`\Ac` ..... 3  
`\ac` ..... 3 f., 8  
`\aca` ..... 3  
`\acap` ..... 3  
`\Acf` ..... 3  
`\acf` ..... 3  
`\Acfp` ..... 4  
`\acfp` ..... 3 f.  
`\Acl` ..... 3  
`\acl` ..... 3  
`\Aclp` ..... 3  
`\aclp` ..... 3  
`\acp` ..... 3  
`\acresetall` ..... 6  
acromake ..... 2  
acronym ..... 2  
acroterm ..... 2  
`\acs` ..... 3  
`\acsetup` ..... 8  
`\acsp` ..... 3  
**Additional Commands** ..... 6 f.  
    classes ..... 6  
    labels ..... 7  
    resetting ..... 6

### B

**Basics** ..... 2–6  
    alternative forms ..... 5  
    extra information ..... 5  
    new acronyms ..... 2  
    plural forms ..... 4  
    using acronyms ..... 3

### C

**Customization** ..... 8–11  
    acronyms ..... 9  
    general options ..... 8  
    list ..... 9

### D

`\DeclareAcronym` ..... 2–6, 8  
`\DeclareAcronymFormat` ..... 2 f.

### E

enumitem ..... 10  
expl3 ..... 2  
`extra-format` ..... 9  
`extra-style` ..... 9

### F

`first-style` ..... 9

### G

glossaries ..... 2

### H

`hyperref` ..... 8, 11  
hyperref ..... 11, 13  
**hyperref support** ..... 11

### L

l3experimental ..... 8  
l3keys2e ..... 2  
l3sort ..... 8  
`\linewidth` ..... 10  
`list-caps` ..... 10  
`list-header` ..... 10  
`list-name` ..... 10  
`list-style` ..... 10  
`list-table-width` ..... 10  
`list-type` ..... 10  
`long-format` ..... 9

### M

`macros` ..... 8

<b>N</b>	
nomenc1 .....	2
<b>O</b>	
only-used .....	8
<b>P</b>	
page-name .....	10
page-ref .....	9
plural-ending .....	9
\printacronyms .....	1, 7 f., 11
Printing the List .....	7 f.
<b>S</b>	
\scshape .....	9
short-format .....	9
single .....	1 f., 8
sort .....	1, 8
strict .....	8
<b>X</b>	
xparse .....	2
xtemplate .....	2