



ConT_EXt

title : ConT_EXt User Module
subtitle : Framework for Letters
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Constants and Variables

```
1 \writestatus{loading}{Context User Module / Framework for Letters}
```

```
2 \unprotect
```

I use a few extra constants and variables in my module.

```
3 \startconstants          all
4
      graphic: graphic
      head: head
      foot: foot
backaddress: backaddress
      topmark: topmark
      botmark: botmark
      cutmark: cutmark
      endmark: endmark
      usermark: usermark
      foldmark: foldmark
      extension: extension
      interface: interface
backgroundimage: backgroundimage
      whitespace: whitespace
      optimize: optimize
```

```
\stopconstants
```

```
5 \startvariables          all
6
      letter: letter
secondpage: secondpage
backaddress: backaddress
      foot: foot
      topmark: topmark
      botmark: botmark
      cutmark: cutmark
      endmark: endmark
reference: reference
      option: option
      address: address
foldmark: foldmark
      usermark: usermark
      opening: opening
      closing: closing
      layer: layer
letternext: letternext
lettermain: lettermain
      special: special
      notation: notation
      inside: inside
```

```
\stopvariables
```

Before we start the real module let us introduce two namespaces for the style and content setup commands.

Framework for Letters

```
7  \def\????ld{@@@ld} % LetterData
   \def\????ls{@@@ls} % LetterStyle
   \def\????lv{@@@lv} % LetterValue

8  \startmodule[letter]

9  \setupmodule
   [\c!style=,           % default letter style
    \c!extension=,       % default letter extension
    \c!interface=default] % default letter interface
```

Setup commands

`\setuplett..`

The layout for the first page could be set with the `firstpage` key and the layout for the second and all following pages with the `secondpage` key. You could use any key and value from `\setuplayout` to set your own letter layout.

```
\setupletterstyle [...1...] [...2...]

1 firstpage secondpage
2 inherits from \setuplayout
```

The header and footer texts for the letter is set with the `header` and `footer` keys, the text itself I written as argument as one of the three keys. The command itself has no option to use different texts for odd and even pages (if you really want this in a letter) but you could solve this with the macro `\doifoddpagelse`, I will give you a short example below.

```
\setupletterstyle [...1...] [...2...]

1 header footer
2 lefttext    = TEXT
  middletext  = TEXT
  righttext   = TEXT
```

This setups could produce sometimes a unwanted result is you use a doublesided layout, because the values for `lefttext` and `righttext` change on odd and even pages their position, e.g. `righttext` will always go to the outer margin and `lefttext` to the inner margin. Let's you want the pagenumber always on the right side you could use the following code, you could adapt it to your own needs without problems.

```
\setupletterstyle
[header]
[lefttext=\doifoddpagelse\donothing\pagenumber,
 righttext=\doifoddpagelse\pagenumber\donothing]

10 \def\setupletterstyle
    {\dotripleempty\dosetupletterstyle}

11 \def\dosetupletterstyle[#1][#2][#3]%
    {\ifthirdargument
      \dodosetupletterstyle[#1][#2][#3]%
    \else\ifsecondargument
      \dodosetupletterstyle[#1][#2][]%
    \else
      \dodosetupletterstyle[\v!option][#1][]%
    \fi\fi}

12 \def\dodosetupletterstyle[#1][#2][#3]%
    {\processallactionsinset
     [#1]
     [ \v!firstpage=>{\definelayouth[\v!letter\v!firstpage][#2]},
       \v!secondpage=>{\definelayouth[\v!letter\v!secondpage][#2]},
       \v!header=>{\dosetupletterheader[#2][#3]},
```

```
\v!footer=>\{\dosetupletterfooter[#2] [#3]},
\v!option=>\{\getparameters[\????ls\v!option] [#2]},
\v!foldmark=>\{\dododosetupletterstyle[\v!topmark,\v!botmark,\v!cutmark] [#2] [#3]},
\s!unknown=>\{\dododosetupletterstyle[#1] [#2] [#3]}}
```

Setup of the layers and their frames.

```

13 \def\dododododosetupletterstyle[#1][#2][#3]%
    {\def\dododododosetupletterstyle##1%
      {\doifelsenothing{#3}
        {\ExpandSecondAfter\doifinsetelse{##1}\letter!list!sections
          {\dodododododosetupletterstyle[##1][\v!option][#2]}
          {\dodododododosetupletterstyle[##1][\v!layer,\v!frame,\v!option][#2]}}
        {\dodododododosetupletterstyle[##1][#2][#3]}}}%
    \processcommacommand[#1]\dododododosetupletterstyle}

14 \def\dododododododosetupletterstyle[#1][#2][#3]%
    {\def\dodododododododosetupletterstyle##1%
      {\processaction
        [##1]
        [\v!layer=>\dododododododosetupletterstyle[#1][\v!layer\v!a,\v!layer\v!b][#3],
         \v!layer\v!a=>\setuplayer[#1][#3],
         \v!layer\v!b=>\getparameters[\????ls#1\v!layer][#3],
         \v!frame=>\getparameters[\????ls#1\v!frame][#3],
         \v!option=>\getparameters[\????ls#1][#3],
         \s!unknown=>\getparameters[\????ls#1##1][#3]]}%
      \processcommalist[#2]\dodododododododosetupletterstyle}

```

Setup for the header and footer texts.

```

15 \newtoks\letter!toks!header
    \newtoks\letter!toks!footer

16 \def\dosetupletterheader[#1][#2]%
    {\letter!toks!header\emptytoks
     \doifelse{nothing}{#2}
       {\letter!toks!header{\setupheader[\v!text][#1]}}
       {\letter!toks!header{\setupheader[#1][#2]}}}

17 \def\dosetupletterfooter[#1][#2]%
    {\letter!toks!footer\emptytoks
     \doifelse{nothing}{#1}
       {\letter!toks!footer{\setupfooter[\v!text][#1]}}
       {\letter!toks!footer{\setupfooter[#1][#2]}}}

```

`\setupletter` The `\setupletter` macro could be used from a interface, I define only the macro and nothing else. You could also redefine the macro later because it is not used from the raw interface.

```

18 \def\setupletter
    {\dodoubleempty\dosetupletter}

19 \def\dosetupletter[#1][#2]%
    {\ifsecondargument
      \dodosetupletter[#1][#2]%
      \else\iffirstargument

```

```

        \dodosetupletter[\v!option][#1]%
    \fi\fi}

20 \def\dodosetupletter[#1][#2]%
    {\def\dododosetupletter##1%
        {\getparameters[\????ld##1][#2]}%
        \processcommalist[#1]\dodosetupletter}

```

A few extra macros to test for content of the letter values, don't rely on them at the moment because they could change or I will remove, rename, rewrite etc. them.

```

21 \def\doiflettervalue#1#2%
    {\doiftextelse{\lettervalue{#1}{#2}}
        \firstofoneargument
        \gobbleoneargument}

22 \def\doifelselettervalue#1#2%
    {\doiftextelse{\lettervalue{#1}{#2}}
        \firstoftwoarguments
        \secondoftwoarguments}

```


Interface, Style and Extension files

`\useletter..` This module provides different types of files beside the main module.

`\useletter..`
`\useletter..` Two of them could be used by the user while the third is only used in this file but you're free to use but you should really now what you do.

Each of the files has it's own file extension, you have to use if you want to create such a file, this has the advantage to use the same name for a collection of macros.

```
23 \def\letter!suffix!style    {nls}
    \def\letter!suffix!extension{nle}
    \def\letter!suffix!interface{nli}
```

Let us begin now to talk about the different types of files.

letter interface

The letter interface provides the connection between the user and the inner macros, it is possible to write a letter without a interface but you will loose many of the nice features. The features itself are defined within the interface and try to help the user to write a letter in a simpler than the raw interface.

I want to show you the difference between the default interface and the raw backend with a simple example, just a opening, the content and a closing text.

The example with the default interface looks like:

```
\startletter
  [opening=Hello User,
   closing=Good luck with your own interface]
I will show you how you could write a letter with my letter module
and the difference between the default and the raw interface. The raw
interface is should be only used by a high level interface and not the
user but you're free to do it.
\stopletter
```

The same example with the raw interface looks like:

```
\startsetups[letter:opening]
Hello User
\stopsetups

\startsetups[letter:content]
I will show you how you could write a letter with my letter module
and the difference between the default and the raw interface. The raw
interface is should be only used by a high level interface and not the
user but you're free to do it.
\stopsetups

\startsetups[letter:closing]
Good luck with your own interface
\stopsetups
```

The interface itself is loaded with the `\useletterinterface` command but you could also use the optional argument for `\usemodule` to load it. The first is only used in this file but it makes sense to use it also in a wrapper file for your own interface.

```
\useletterinterface [...,*,...]

* IDENTIFIER
```

```
24 \def\useletterinterface
    {\dosing\argument\douseletterinterface}

25 \def\douseletterinterface[#1]%
    {\def\dodouseletterinterface##1%
     {\readfile{##1.\letter!suffix!interface}\donothing\donothing}%
     \processcommalist[#1]\dodouseletterinterface}
```

letter extension

The second filetype this module supports are letterextensions, you could use it to save macros and other values you want to use in many without the need to put it always in the real letter.

A few reasons for a letterextension file are:

- The letter head from your company,
- your own macro for the reference line,
- labels you need in different files (see `label.nle`),
- ...

The syntax to load a letterextension file is the same as for a interface and you could also argument for `\usemodule`.

```
\useletterextension [...,*,...]

* IDENTIFIER
```

```
26 \def\useletterextension
    {\dosing\argument\douseletterextension}

27 \def\douseletterextension[#1]%
    {\def\dodouseletterextension##1%
     {\readfile{##1.\letter!suffix!extension}\donothing\donothing}%
     \processcommalist[#1]\dodouseletterextension}
```

letter styles

After I mentioned above how to load a interface and extension I will now come to the most important extension for the module.

Letter styles are used to change the layout of the letter, set the values for layers and enable and disable common options. Although it is possible to do all these things in the letter itself it is better to save often used settings in a extra file you could load on demand and share between your letters.

You could load a style file in the same way as the other two files, the first is `\useletterstyle` and the second the optional argument for `\usemodule`.

```
\useletterstyle [...,*,...]
```

```
* IDENTIFIER
```

```
28 \def\useletterstyle
    {\dosingleargument\douseletterstyle}

29 \def\douseletterstyle[#1]%
    {\def\dodouseletterstyle##1%
     {\readfile{##1.\letter!suffix!style}\donothing\donothing}%
     \processcommalist[#1]\dodouseletterstyle}
```

`\lettersty..` The two commands `\letterstylevalue` and `\lettervalue` could be used to access the values for the keys used in the letterstyle settings and the letter values for information.

`\lettervalue`

The rest of module contains only internal macros and other settings, you don't need them as a normal user but you look at the default.

```
30 \def\letterstylevalue#1#2%
    {\csname\????ls#1#2\endcsname}

31 \def\lettervalue#1#2%
    {\csname\????ld#1#2\endcsname}

32 \def\letter!list!marking
    {\v!topmark,\v!botmark,\v!cutmark,\v!endmark,\v!usermark}

33 \def\dodefinedletterlayer[#1]%
    {\doifelse{#1}\v!foldmark
     {\def\dododefinedletterlayer##1{\dodefinedletterlayer[##1]}%
      \processcommacommand[\letter!list!marking]\dododefinedletterlayer}
     {\dodefinedletterlayer[#1]}}

34 \def\dododefinedletterlayer[#1]%
    {\setvalue{\????ls\v!option#1}{\v!yes}%
     \presetlocalframed[\????ls#1\v!frame]%
     \definelay
     [#1]
     [\c!width=\paperwidth,
      \c!height=\paperheight]%
     \setupletterstyle
     [#1][\v!option]
     [\c!symbol=,
      \c!offset=\zeropoint,
      \c!leftmargin=\zeropoint,
      \c!rightmargin=\zeropoint]%
     \setupletterstyle
     [#1][\v!frame]
     [\c!frame=\v!off,
      \c!align=\v!right,
      \c!offset=\zeropoint,
```

```

\c!strut=\v!yes]%
\setupletterstyle
[#1] [\v!layer]
[\c!state=\v!start,
\c!offset=\zeropoint,
\c!preset=\v!left\v!top]}

35 \def\dosetletterlayer[#1]%
    {\doifinsetelse{#1}{\v!topmark,\v!botmark,\v!cutmark,\v!endmark,\v!usermark}
    {\doifelsenothing{\letterstylevalue{#1}\c!symbol}
    {\dodosetletterlayer[#1] [\setups{letter:#1}]}
    {\dodosetletterlayer[#1] [\letterstylevalue{#1}\c!symbol]}}
    {\dodosetletterlayer[#1] [\setups{letter:#1}]}

36 \def\dodosetletterlayer[#1] [#2]%
    {\setlayer[#1]
    {\localframed[\????ls#1\v!frame]
    {\loadaptleftskip {\letterstylevalue{#1}\c!leftmargin}%
    \loadaptrightskip{\letterstylevalue{#1}\c!rightmargin}%
    \doattributes{\????ls#1}\c!style\c!color{#2}}}}

37 \let\letter!list!sections\empty

38 \def\dodefinellettersection[#1]%
    {\appendtocommalist{#1}\letter!list!sections
    \setupletterstyle
    [#1]
    [\v!option]
    [\c!before=,
    \c!after=,
    \c!align=,
    \c!leftmargin=\zeropoint,
    \c!rightmargin=\zeropoint,
    \c!style=,
    \c!color=]}

39 \def\dosetlettersection[#1]%
    {\begingroup
    \edef\@@lettersection{#1}%
    \doifelsenothing{\letterstylevalue\@@lettersection\c!before}
    \endgraf
    {\letterstylevalue\@@lettersection\c!before}%
    \loadaptleftskip {\letterstylevalue\@@lettersection\c!leftmargin}%
    \loadaptrightskip{\letterstylevalue\@@lettersection\c!rightmargin}%
    \doifsomething{\letterstylevalue\@@lettersection\c!align}
    {\setupalign[\letterstylevalue\@@lettersection\c!align]}%
    \dostartattributes{\????ls#1}\c!style\c!color\empty
    \setups[letter:#1]%
    \dostopattributes
    \doifelsenothing{\letterstylevalue\@@lettersection\c!after}
    \endgraf
    {\letterstylevalue\@@lettersection\c!after}%
    \endgroup}

```

Placement of the content

Enable the layouts for the first and second page.

```
40 \startsetups[letter:layout]
41   \setuplayout[\v!letter\v!firstpage]
42   \appendtoks\setuplayout[\v!letter\v!secondpage]\to\everyaftershipout
43 \stopsetups
```

Header for the first page, you could use it to place the logo from your company or your own address and name.

```
44 \defineletterlayer[\v!head]
45 \startsetups[letter:place:head]
46   \dosetletterlayer[\v!head]
47 \stopsetups
```

Address

```
48 \defineletterlayer[\v!address]
49 \startsetups[letter:place:address]
50   \dosetletterlayer[\v!address]
51 \stopsetups
```

Could be used to place a backaddress above the normal address.

```
52 \defineletterlayer[\v!backaddress]
53 \startsetups[letter:place:backaddress]
54   \dosetletterlayer[\v!backaddress]
55 \stopsetups
```

Reference line

```
56 \defineletterlayer[\v!reference]
57 \startsetups[letter:place:reference]
58   \dosetletterlayer[\v!reference]
59 \stopsetups
```

Footer block, you could use it to place information about your company but take care set **repeat=yes** if you want to place it on every page, you should disable the footer for the second and following pages inb this case.

```

60 \defineletterlayer[\v!foot]
61 \startsetups[letter:place:foot]
62   \dosetletterlayer[\v!foot]
63 \stopsetups

```

Two additional layers from Hans Hagen's own letter module, it provide for users who used `m-letter.tex` and want to switch to my module.

I need they also for my pragma letter interface.

```

64 \defineletterlayer[\v!lettermain]
65 \startsetups[letter:place:lettermain]
66   \dosetletterlayer[\v!lettermain]
67 \stopsetups
68 \defineletterlayer[\v!letternext]
69 \startsetups[letter:place:letternext]
70   \dosetletterlayer[\v!letternext]
71 \stopsetups

```

Letterhead, american only

```

72 \definelettersection[\v!letter\v!head]
73 \startsetups[letter:place:\v!letter\v!head]
74   \dosetlettersection[\v!letter\v!head]
75 \stopsetups

```

Date Line, american only

```

76 \definelettersection[\v!date\v!line]
77 \startsetups[letter:place:\v!date\v!line]
78   \dosetlettersection[\v!date\v!line]
79 \stopsetups

```

Reference Line, american only

```

80 \definelettersection[\v!reference\v!line]
81 \startsetups[letter:place:\v!reference\v!line]
82   \dosetlettersection[\v!reference\v!line]

```

```

83  \stopsetups
    Special Notation, american only
84  \definelettersection[\v!special\v!notation]
85  \startsetups[letter:place:\v!special\v!notation]
86    \dosetlettersection[\v!special\v!notation]
87  \stopsetups
    Inside Address, american only
88  \definelettersection[\v!inside\v!address]
89  \startsetups[letter:place:\v!inside\v!address]
90    \dosetlettersection[\v!inside\v!address]
91  \stopsetups
    Title
92  \definelettersection[\v!title]
93  \startsetups[letter:place:\v!title]
94    \dosetlettersection[\v!title]
95  \stopsetups
    Subject
96  \definelettersection[\v!subject]
97  \startsetups[letter:place:\v!subject]
98    \dosetlettersection[\v!subject]
99  \stopsetups
    Opening
100 \definelettersection[\v!opening]
101 \startsetups[letter:place:\v!opening]
102   \dosetlettersection[\v!opening]
103 \stopsetups
    Letter content
104 \definelettersection[\v!content]
105 \startsetups[letter:place:\v!content]

```

```

106   \begingroup
107   \doifsomething\@@@{\soptionindenting{\setupindenting[\@@@{\soptionindenting}}
108   \dosetlettersection[\v!content]
109   \endgroup
110   \stopsetups

```

Closing

```

111   \definelettersection[\v!closing]
112   \startsetups[letter:place:\v!closing]
113   \dosetlettersection[\v!closing]
114   \stopsetups

```

Appendices

```

115   \definelettersection[\v!appendices]
116   \startsetups[letter:place:\v!appendices]
117   \dosetlettersection[\v!appendices]
118   \stopsetups

```

Fold- and cutmarks, you enable and disable all of them independant from any other or disable all marks with just one command.

```

119   \defineletterlayer[\v!foldmark]
120   \startsetups[letter:place:foldmark]
121   % Upper foldmark
122   \startlocalsetups[letter:place:topmark]
123   \dosetletterlayer[\v!topmark]
124   \stoplocalsetups
125   % Lower foldmark
126   \startlocalsetups[letter:place:botmark]
127   \dosetletterlayer[\v!botmark]
128   \stoplocalsetups
129   % Cutmark
130   \startlocalsetups[letter:place:cutmark]

```



```

131     \dosetletterlayer[\v!cutmark]
132 \stoplocalsetups
133 % Endmark, a relict from the typewriter area
134 \startlocalsetups[letter:place:endmark]
135     \dosetletterlayer[\v!endmark]
136 \stoplocalsetups
137 % Free mark, you could use it to place your own symbols
138 \startlocalsetups[letter:place:usermark]
139     \dosetletterlayer[\v!usermark]
140 \stoplocalsetups
141 \doif\@@@lsoptiontopmark \v!yes{\setups[letter:place:topmark]}
\doif\@@@lsoptionbotmark \v!yes{\setups[letter:place:botmark]}
\doif\@@@lsoptioncutmark \v!yes{\setups[letter:place:cutmark]}
\doif\@@@lsoptionendmark \v!yes{\setups[letter:place:endmark]}
\doif\@@@lsoptionusermark \v!yes{\setups[letter:place:usermark]}
142 \stopsetups
Background graphic:
143 \defineoverlay
[\v!graphic] % choose a better name!
[\doifsomething\@@@lsoptionbackgroundimage
{\overlayfigure{\@@@lsoptionbackgroundimage}}]
144 \def\letter!list!backgrounds
{\v!color,\v!letternext,\v!lettermain,\v!head,\v!foot,%
\v!backaddress,\v!graphic,\v!address,\v!reference,%
\v!topmark,\v!botmark,\v!cutmark,\v!endmark,\v!usermark}
Settings at the begin of every letter.
145 \startsetups[letter:initialize]
146 \@@@lsoptionbefore
147 \setsubpagenumber
[\c!number=\@@@lsoptionpagenumber,
\v!way=\v!by\v!text,
\v!state=\@@@lsoptionstate]
148 \resetsubpagenumber
149 \beginngroup

```

```

150   \page
151   \setuppagenumbering
      [\c!alternative=\@@@!soptionalternative,
       \c!location=] % use the header and footer option instead
152   \the\letter!toks!header
      \the\letter!toks!footer
153   \setupbackgrounds
      [\v!page]
      [\c!background=\letter!list!backgrounds,
       \c!backgroundcolor=\@@@!soptionbackgroundcolor]
154   \doifsomething\@@@!soptionbodyfont{\switchtobodyfont[\@@@!soptionbodyfont]}
155   \doifsomething\@@@!soptionwhitespace{\setupwhitespace[\@@@!soptionwhitespace]}
156   \stopsetups
      Settings at the end of every letter.
157   \startsetups[letter:finish]
158   \page
159   \setuplayout[\v!reset]
160   \endgroup
161   \resetsubpagenumber
162   \@@@!soptionafter
163   \stopsetups
      Place the letter.
164   \startsetups[letter:place]
165   \setups[letter:initialize] % Settings at the begin
      \setups[letter:layout]   % Page layout
      \setups[letter:reset]    % Reset layers
      \setups[letter:layer]    % Place layers
      \setups[letter:sequence] % Place content
      \setups[letter:finish]   % Settings at the end
166   \stopsetups
      Reset the layer content.
167   \def\letter!list!layers
      {\v!topmark,\v!botmark,\v!cutmark,\v!endmark,\v!usermark,\v!letternext,\v!lettermain}
168   \def\doresetletterlayer#1%
      {\resetlayer[#1]}

```

```

169 \startsetups[letter:reset]
170   \processcommacommand[\letter!list!layers]\doresetletterlayer
171   \setuplayer[\v!letternext][\c!state=\v!continue]
172 \stopsetups
173 \startsetups[letter:layer]
174   \doif\@@@lsoptionmarking \v!yes{\setups[letter:place:foldmark]}
175   \doif\@@@lsoptionhead \v!yes{\setups[letter:place:head]}
176   \doif\@@@lsoptionbackaddress\v!yes{\setups[letter:place:backaddress]}
177   \doif\@@@lsoptionaddress \v!yes{\setups[letter:place:address]}
178   \doif\@@@lsoptionreference \v!yes{\setups[letter:place:reference]}
179   \doif\@@@lsoptionfoot \v!yes{\setups[letter:place:foot]}
180   \doif\@@@lsoptionlettermain \v!yes{\setups[letter:place:lettermain]}
181   \doif\@@@lsoptionletternext \v!yes{\setups[letter:place:letternext]}
182 \stopsetups
183 Place the letter content.
184 \let\letter!order!sections\letter!list!sections
185 \def\doflushlettersection#1%
186   {\setups[letter:place:#1]}
187 \startsetups[letter:sequence]
188   \executeifdefined{\v!letter\s!start\c!optimize\@@@lsoptionoptimize}\donothing
189   \processcommacommand[\letter!order!sections]\doflushlettersection
190   \executeifdefined{\v!letter\s!stop \c!optimize\@@@lsoptionoptimize}\donothing
191 \stopsetups

```


Default values

Default settings for the option values of the letter.

```

181 \setupletterstyle
    [\v!option]
    [\c!marking=\v!yes,
     \c!endmark=\v!no,
     \c!usermark=\v!no,
     \c!backaddress=\v!no,
     \c!indenting=,
     \c!whitespace=,
     \c!backgroundcolor=\v!white,
     \c!backgroundimage=,
     \c!before=,
     \c!after=,
     \c!header=\v!reset,
     \c!footer=\v!reset,
     \c!pagenumber=1,
     \c!bodyfont=,
     \c!optimize=\v!no,
     \c!alternative=\v!singlesided,
     \c!state=\v!stop]

182 \useletterinterface[\currentmoduleparameter\c!interface]
    \useletterstyle    [\currentmoduleparameter\c!style]
    \useletterextension[\currentmoduleparameter\c!extension]

183 \stopmodule

184 \protect \endinput

```

Framework for Letters

```
\letterstylevalue 9  
\lettervalue 9  
  
\setupletter 4  
\setupletterstyle 3
```

```
\useletterextension 7  
\useletterinterface 7  
\useletterstyle 7
```