

# The rotchiffre package

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## Abstract

This package implements chiffres ROT13 with its variants ROT5, ROT18, and ROT47.

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# 1 Documentation

## 1.1 Motivation

In the newsgroup `comp.text.tex` there was a discussion [1] about package `fontspec`. Stephan Hennig provided an example to implement ROT13 as OpenType feature [2]. And Robin Fairbairns requested a CTAN upload [3] ☹.

But I think it would be not fair to the users of old T<sub>E</sub>X engines without OpenType support that they will not be able to decrypt texts generated by the new package ☹. Therefore I have written this package that implements ROT13 even for ini-T<sub>E</sub>X. Also other variants ROT5, ROT18, ROT47 are provided.

## 1.2 Usage

```
\EdefRot {<type>} {<cmd>} {<text>}
```

The `<text>` is expanded and sanitized. All tokens are letters with catcode 12 (other with the exception of the space token that has character code 32 (0x20) and catcode 10 (space). This follows T<sub>E</sub>X's convention of `\string` and `\meaning`.

The chiffre type is specified by `<type>` it takes a number. For example, ROT13 is specified by 13. The selected chiffre is applied to `<text>` and the result is stored in macro `<cmd>`.

The following table lists the supported rotation chiffres.

| chiffre      | from    | to          |
|--------------|---------|-------------|
| <b>ROT13</b> | A-Z     | N-Z A-M     |
|              | a-z     | n-z a-m     |
| <b>ROT5</b>  | 0-9     | 5-9 0-4     |
| <b>ROT18</b> | A-Z 0-9 | S-Z 0-9 A-R |
|              | a-z     | n-z a-m     |
| <b>ROT47</b> | !-~     | P-~ !-0     |

In case of ROT47 the range is the ASCII range from character codes 33 (0x21) ‘!’ upto 126 (0xFE) ‘~’.

The specifications of the algorithms are taken from the description in Wikipedia [4, 5], ROT18 is further specified by “computerfreak” [6].

### 1.2.1 Examples

The famous English pangram [7] is converted by

```
\EdefRot{13}\result{The quick brown fox jumps over the lazy dog}
```

The result is stored in macro `\result` with the following contents:

```
Gur dhvpx oebja sbk whzcf bire gur ynml qbt
```

Command names are converted to strings before. Therefore the text should not contain T<sub>E</sub>X markup, example:

```
\EdefRot{13}\result{\texttt{Hello}\par\textit{World}}
\result → Uryyb\nqinapr \cne@qrnguplpyrf \@ar Jbeyq
```

But macros can be used that contain text. They are expanded.

```

\newcommand{\Name}{Heiko}
\newcommand{\Email}{heiko.oberdiek at gmail.com}
\EdefRot{13}\result{Hello \Name\space<\Email>}
\result → Uryyb Urvxb <urvxb.boreqvr x ng tbbtyrznvy.pbz>

```

## 2 Implementation

```
1 (*package)
```

### 2.1 Reload check and package identification

Reload check, especially if the package is not used with L<sup>A</sup>T<sub>E</sub>X.

```

2 \begingroup\catcode61\catcode48\catcode32=10\relax%
3 \catcode13=5 % ^~M
4 \endlinechar=13 %
5 \catcode35=6 % #
6 \catcode39=12 % '
7 \catcode44=12 % ,
8 \catcode45=12 % -
9 \catcode46=12 % .
10 \catcode58=12 % :
11 \catcode64=11 % @
12 \catcode123=1 % {
13 \catcode125=2 % }
14 \expandafter\let\expandafter\x\csname ver@rotchiffre.sty\endcsname
15 \ifx\x\relax % plain-TeX, first loading
16 \else
17 \def\empty{}%
18 \ifx\x\empty % LaTeX, first loading,
19 % variable is initialized, but \ProvidesPackage not yet seen
20 \else
21 \expandafter\ifx\csname PackageInfo\endcsname\relax
22 \def\x#1#2{%
23 \immediate\write-1{Package #1 Info: #2.}%
24 }%
25 \else
26 \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
27 \fi
28 \x{rotchiffre}{The package is already loaded}%
29 \aftergroup\endinput
30 \fi
31 \fi
32 \endgroup%

```

Package identification:

```

33 \begingroup\catcode61\catcode48\catcode32=10\relax%
34 \catcode13=5 % ^~M
35 \endlinechar=13 %
36 \catcode35=6 % #
37 \catcode39=12 % '
38 \catcode40=12 % (
39 \catcode41=12 % )
40 \catcode44=12 % ,
41 \catcode45=12 % -
42 \catcode46=12 % .
43 \catcode47=12 % /
44 \catcode58=12 % :
45 \catcode64=11 % @
46 \catcode91=12 % [
47 \catcode93=12 % ]
48 \catcode123=1 % {
49 \catcode125=2 % }

```

```

50 \expandafter\ifx\csname ProvidesPackage\endcsname\relax
51   \def\x#1#2#3[#4]{\endgroup
52     \immediate\write-1{Package: #3 #4}%
53     \xdef#1{#4}%
54   }%
55 \else
56   \def\x#1#2[#3]{\endgroup
57     #2[#{#3}]%
58     \ifx#1\undefined
59       \xdef#1{#3}%
60     \fi
61     \ifx#1\relax
62       \xdef#1{#3}%
63     \fi
64   }%
65 \fi
66 \expandafter\x\csname ver@rotchiffre.sty\endcsname
67 \ProvidesPackage{rotchiffre}%
68 [2010/11/12 v1.0 Provides ROT13, ROT5, ROT18, ROT47 (HO)]%

```

## 2.2 Catcodes

```

69 \begingroup\catcode61\catcode48\catcode32=10\relax%
70 \catcode13=5 % ^~M
71 \endlinechar=13 %
72 \catcode123=1 % {
73 \catcode125=2 % }
74 \catcode64=11 % @
75 \def\x{\endgroup
76   \expandafter\edef\csname RotCh@AtEnd\endcsname{%
77     \endlinechar=\the\endlinechar\relax
78     \catcode13=\the\catcode13\relax
79     \catcode32=\the\catcode32\relax
80     \catcode35=\the\catcode35\relax
81     \catcode61=\the\catcode61\relax
82     \catcode64=\the\catcode64\relax
83     \catcode123=\the\catcode123\relax
84     \catcode125=\the\catcode125\relax
85   }%
86 }%
87 \x\catcode61\catcode48\catcode32=10\relax%
88 \catcode13=5 % ^~M
89 \endlinechar=13 %
90 \catcode35=6 % #
91 \catcode64=11 % @
92 \catcode123=1 % {
93 \catcode125=2 % }
94 \def\TMP@EnsureCode#1#2{%
95   \edef\RotCh@AtEnd{%
96     \RotCh@AtEnd
97     \catcode#1=\the\catcode#1\relax
98   }%
99   \catcode#1=#2\relax
100 }
101 \TMP@EnsureCode{42}{12}% *
102 \TMP@EnsureCode{43}{12}% +
103 \TMP@EnsureCode{45}{12}% -
104 \TMP@EnsureCode{46}{12}% .
105 \TMP@EnsureCode{47}{12}% /
106 \TMP@EnsureCode{60}{12}% <
107 \TMP@EnsureCode{62}{12}% >
108 \TMP@EnsureCode{91}{12}% [

```

```

109 \TMP@EnsureCode{93}{12}% ]
110 \TMP@EnsureCode{96}{12}% ‘
111 \edef\RotCh@AtEnd{\RotCh@AtEnd\noexpand\endinput}

```

## 2.3 Loading resources

```

112 \begingroup\expandafter\expandafter\expandafter\endgroup
113 \expandafter\ifx\csname RequirePackage\endcsname\relax
114   \input infwarerr.sty\relax
115   \input ltxcmds.sty\relax
116   \input pdfescape.sty\relax
117 \else
118   \RequirePackage{infwarerr}[2010/04/08]%
119   \RequirePackage{ltxcmds}[2010/03/01]%
120   \RequirePackage{pdfescape}[2010/03/01]%
121 \fi

```

## 2.4 \EdefRot as robust macro

The main macro `\EdefRot` is made robust if  $\varepsilon$ -TeX or L<sup>A</sup>TeX are present.

`\EdefRot`

```

122 \ltx@ifundefined{protected}{%
123   \ltx@ifundefined{DeclareRobustCommand}{%
124     \def\RotCh@temp{\def\EdefRot##1}%
125   }{%
126     \def\RotCh@temp{\DeclareRobustCommand*\EdefRot[1]}%
127   }%
128 }{%
129   \def\RotCh@temp{\protected\def\EdefRot##1}%
130 }
131 \RotCh@temp{%
132   \RotCh@GetNumber{#1}%
133   \ltx@ifundefined{RotCh@rot@romannumeral\RotCh@number}{%
134     \@PackageError{rotchiffre}{%
135       Unknown chiffre ROT\RotCh@number
136     }\@ehc
137     \EdefSanitize
138   }{%
139     \RotCh@rot
140   }%
141 }

```

`\RotCh@GetNumber` If  $\varepsilon$ -TeX is active, then the chiffre number can be an expression supported by `\numexpr`.

```

142 \ltx@ifundefined{numexpr}{%
143   \def\RotCh@GetNumber#1{%
144     \edef\RotCh@number{\number#1}%
145   }%
146 }{%
147   \def\RotCh@GetNumber#1{%
148     \edef\RotCh@number{\the\numexpr#1\relax}%
149   }%
150 }

```

## 2.5 Set \lccode on a range of characters

`\RotCh@count`

```
151 \countdef\RotCh@count=255 %
```

`\RotCh@count@end`

```
152 \countdef\RotCh@count@end=2 %
```

RotCh@RangeIgnore

```
153 \def\RotCh@RangeIgnore{%
154   \RotCh@loop{%
155     \lccode\RotCh@count=\ltx@zero
156   }%
157 }
```

\RotCh@RangeSet

```
158 \ltx@ifundefined{numexpr}{%
159   \countdef\RotCh@count@temp=4 %
160   \def\RotCh@RangeSet#1{%
161     \RotCh@loop{%
162       \RotCh@count@temp=\RotCh@count
163       \advance\RotCh@count@temp #1 %
164       \lccode\RotCh@count=\RotCh@count@temp
165     }%
166   }%
167 }{%
168   \def\RotCh@RangeSet#1{%
169     \RotCh@loop{%
170       \lccode\RotCh@count=\numexpr\RotCh@count#1\relax
171     }%
172   }%
173 }
```

\RotCh@loop

```
174 \def\RotCh@loop#1#2#3{%
175   \RotCh@count=#2 %
176   \RotCh@count@end=#3 %
177   \def\RotCh@action{#1}%
178   \RotCh@@loop
179 }%
```

RotCh@@loop

```
180 \def\RotCh@@loop{%
181   \RotCh@action
182   \ifnum\RotCh@count<\RotCh@count@end
183     \advance\RotCh@count\ltx@one
184     \expandafter\RotCh@@loop
185   \fi
186 }
```

## 2.6 Chiffres

### 2.6.1 ROT13

\RotCh@rot@xiii

```
187 \def\RotCh@rot@xiii{%
188   \RotCh@RangeIgnore{0}{64}%
189   \RotCh@RangeSet{+13}{65}{77}%
190   \RotCh@RangeSet{-13}{78}{90}%
191   \RotCh@RangeIgnore{91}{96}%
192   \RotCh@RangeSet{+13}{97}{109}%
193   \RotCh@RangeSet{-13}{110}{122}%
194   \RotCh@RangeIgnore{123}{255}%
195 }
```

### 2.6.2 ROT5

\RotCh@rot@v

```
196 \def\RotCh@rot@v{%
```

```

197 \RotCh@RangeIgnore{0}{47}%
198 \RotCh@RangeSet{+5}{48}{52}%
199 \RotCh@RangeSet{-5}{53}{57}%
200 \RotCh@RangeIgnore{58}{255}%
201 }

```

### 2.6.3 ROT18

\RotCh@rot@xviii

```

202 \def\RotCh@rot@xviii{%
203 \RotCh@RangeIgnore{0}{47}%
204 \RotCh@RangeSet{+25}{48}{57}%
205 \RotCh@RangeIgnore{58}{64}%
206 \RotCh@RangeSet{+18}{65}{72}%
207 \RotCh@RangeSet{-25}{73}{82}%
208 \RotCh@RangeSet{-18}{83}{90}%
209 \RotCh@RangeIgnore{91}{96}%
210 \RotCh@RangeSet{+13}{97}{109}%
211 \RotCh@RangeSet{-13}{110}{122}%
212 \RotCh@RangeIgnore{123}{255}%
213 }

```

### 2.6.4 ROT47

\RotCh@rot@xlvi

```

214 \def\RotCh@rot@xlvi{%
215 \RotCh@RangeIgnore{0}{32}%
216 \RotCh@RangeSet{+47}{33}{79}%
217 \RotCh@RangeSet{-47}{80}{126}%
218 \RotCh@RangeIgnore{127}{255}%
219 }

```

## 2.7 \RotCh@rot with big char support

Some modern T<sub>E</sub>X engines support characters with more than eight bits (codes greater as 255). LuaT<sub>E</sub>X and X<sub>Ǝ</sub>T<sub>E</sub>X are detected by the caret notation that is extended by these engines.

```

220 \begingroup
221 \catcode0=9 %
222 \catcode'\^=7 %
223 \catcode'\^^=12 %
224 \def\x{^^^^0000}%
225 \expandafter\endgroup
226 \ifx\x\ltx@empty

```

\RotCh@toks

```

227 \toksdef\RotCh@toks=0 %

```

\RotCh@rot

```

228 \long\def\RotCh@rot#1#2{%
229 \EdefSanitize#1{#2}%
230 \begingroup
231 \csname RotCh@rot@romannumeral\RotCh@number\endcsname
232 \RotCh@toks={}%
233 \expandafter\RotCh@SplitSpace#1 \@nil
234 \expandafter\endgroup
235 \expandafter\def\expandafter#1\expandafter{%
236 \the\RotCh@toks
237 }%
238 }%

```

`\RotCh@SplitSpace`

```
239 \def\RotCh@temp#1{%
240 \def\RotCh@SplitSpace##1 ##2\@nil{%
241 \RotCh@Add##1\relax
242 \ifx\relax##2\relax
243 \expandafter\ltx@gobble
244 \else
245 \RotCh@toks\expandafter{\the\RotCh@toks#1}%
246 \expandafter\ltx@firstofone
247 \fi
248 {%
249 \RotCh@SplitSpace##2\@nil
250 }%
251 }%
252 }%
253 \RotCh@temp{ }%
```

`\RotCh@Add`

```
254 \def\RotCh@Add#1{%
255 \ifx#1\relax
256 \else
257 \ifnum'#1>126 %
258 \RotCh@toks\expandafter{\the\RotCh@toks#1}%
259 \else
260 \lowercase{%
261 \RotCh@toks\expandafter{\the\RotCh@toks#1}%
262 }%
263 \fi
264 \expandafter\RotCh@Add
265 \fi
266 }%

267 \else
```

## 2.8 `\RotCh@rot` without big char support

`\RotCh@rot`

```
268 \long\def\RotCh@rot#1#2{%
269 \EdefSanitize#1{#2}%
270 \begingroup
271 \csname RotCh@rot@romannumeral\RotCh@number\endcsname
272 \lowercase\expandafter{\expandafter\endgroup
273 \expandafter\def\expandafter#1\expandafter{#1}}%
274 }%
275 }%

276 \fi

277 \RotCh@AtEnd%
278 </package>
```

## 3 Test

### 3.1 Catcode checks for loading

```
279 (*test1)
280 \catcode'\{=1 %
281 \catcode'\}=2 %
282 \catcode'\#=6 %
283 \catcode'\@=11 %
284 \expandafter\ifx\csname count@\endcsname\relax
```



```

285 \countdef\count@=255 %
286 \fi
287 \expandafter\ifx\csname @gobble\endcsname\relax
288 \long\def\@gobble#1{%
289 \fi
290 \expandafter\ifx\csname @firstofone\endcsname\relax
291 \long\def\@firstofone#1{#1}%
292 \fi
293 \expandafter\ifx\csname loop\endcsname\relax
294 \expandafter\@firstofone
295 \else
296 \expandafter\@gobble
297 \fi
298 {%
299 \def\loop#1\repeat{%
300 \def\body{#1}%
301 \iterate
302 }%
303 \def\iterate{%
304 \body
305 \let\next\iterate
306 \else
307 \let\next\relax
308 \fi
309 \next
310 }%
311 \let\repeat=\fi
312 }%
313 \def\RestoreCatcodes{}
314 \count@=0 %
315 \loop
316 \edef\RestoreCatcodes{%
317 \RestoreCatcodes
318 \catcode\the\count@=\the\catcode\count@\relax
319 }%
320 \ifnum\count@<255 %
321 \advance\count@ 1 %
322 \repeat
323
324 \def\RangeCatcodeInvalid#1#2{%
325 \count@=#1\relax
326 \loop
327 \catcode\count@=15 %
328 \ifnum\count@<#2\relax
329 \advance\count@ 1 %
330 \repeat
331 }
332 \def\RangeCatcodeCheck#1#2#3{%
333 \count@=#1\relax
334 \loop
335 \ifnum#3=\catcode\count@
336 \else
337 \errmessage{%
338 Character \the\count@\space
339 with wrong catcode \the\catcode\count@\space
340 instead of \number#3%
341 }%
342 \fi
343 \ifnum\count@<#2\relax
344 \advance\count@ 1 %
345 \repeat
346 }

```

```

347 \def\space{ }
348 \expandafter\ifx\csname LoadCommand\endcsname\relax
349 \def\LoadCommand{\input rotchiffre.sty\relax}%
350 \fi
351 \def\Test{%
352 \RangeCatcodeInvalid{0}{47}%
353 \RangeCatcodeInvalid{58}{64}%
354 \RangeCatcodeInvalid{91}{96}%
355 \RangeCatcodeInvalid{123}{255}%
356 \catcode'\@=12 %
357 \catcode'\=0 %
358 \catcode'\%=14 %
359 \LoadCommand
360 \RangeCatcodeCheck{0}{36}{15}%
361 \RangeCatcodeCheck{37}{37}{14}%
362 \RangeCatcodeCheck{38}{47}{15}%
363 \RangeCatcodeCheck{48}{57}{12}%
364 \RangeCatcodeCheck{58}{63}{15}%
365 \RangeCatcodeCheck{64}{64}{12}%
366 \RangeCatcodeCheck{65}{90}{11}%
367 \RangeCatcodeCheck{91}{91}{15}%
368 \RangeCatcodeCheck{92}{92}{0}%
369 \RangeCatcodeCheck{93}{96}{15}%
370 \RangeCatcodeCheck{97}{122}{11}%
371 \RangeCatcodeCheck{123}{255}{15}%
372 \RestoreCatcodes
373 }
374 \Test
375 \csname @@end\endcsname
376 \end
377 </test1>

```

## 3.2 Macro tests

### 3.2.1 Preamble

```

378 (*test2)
379 \catcode'\{=1 %
380 \catcode'\}=2 %
381 \catcode'\#=6 %
382 \catcode'\^=7 %
383 \font\rmfont=ec-lmтт10\relax
384 \rmfont
385 \showboxbreadth=10000 %
386 \showboxdepth=10000 %
387 \errorcontextlines=10000
388 \begingroup\expandafter\expandafter\expandafter\endgroup
389 \expandafter\ifx\csname RequirePackage\endcsname\relax
390 \input rotchiffre.sty\relax
391 \else
392 \RequirePackage{rotchiffre}[2010/11/12]%
393 \RequirePackage{ifluatex}[2010/03/01]%
394 \RequirePackage{ifxetex}[2010/09/12]%
395 \fi
396 \catcode'\@=11 %
397 \begingroup\expandafter\expandafter\expandafter\endgroup
398 \expandafter\ifx\csname @onelevel@sanitize\endcsname\relax
399 \begingroup\expandafter\expandafter\expandafter\endgroup
400 \expandafter\ifx\csname detokenize\endcsname\relax
401 \def\strip@prefix#1->{%
402 \def@onelevel@sanitize#1{%
403 \edef#1{%
404 \expandafter\strip@prefix\meaning#1%

```

```

405     }%
406 }%
407 \else
408   \def\@onelevel@sanitize#1{%
409     \edef#1{%
410       \detokenize\expandafter{#1}%
411     }%
412   }%
413 \fi
414 \fi
415 \def\msg#\{\immediate\write16}
416 \def\empty{}
417 \begingroup
418   \def\x#1{%
419     \def\space{#1}%
420     \def\spacesII{#1#1}%
421     \def\spacesIII{#1#1#1}%
422     \def\spacesIV{#1#1#1#1}%
423   }%
424 \expandafter\endgroup\x{ }
425 \def\PrintStr#1#2{%
426   \begingroup
427     \@onelevel@sanitize#2%
428     \msg{#1: [#2]}% hash-ok
429   \endgroup
430 }
431 \def\CheckResult{%
432   \PrintStr{Result}\StrResult
433   \ifx\StrExpect\StrResult
434     \msg{==> Ok}%
435   \else
436     \begingroup
437       \edef\x{\endgroup
438         \errmessage{Test failed (\chiffre)!}%
439       }\x
440   \fi
441 }
442 \long\def\test#1#2{%
443   \msg{}%
444   \begingroup
445     \setbox0=\hbox{%
446       \edef\StrInput{#1}%
447       \@onelevel@sanitize\StrInput
448       \PrintStr{ Input}\StrInput
449       \edef\StrExpect{#2}%
450       \@onelevel@sanitize\StrExpect
451       \PrintStr{Expect}\StrExpect
452       \action{#1}%
453       \CheckResult
454     }%
455     \ifdim\wd0=0pt %
456     \else
457       \showbox0 %
458     \fi
459   \endgroup
460 }
461 \def\cmd#1{%
462   \msg{* CMD: ROT#1}%
463   \def\chiffre{ROT#1}%
464   \def\action{\EdefRot{#1}\StrResult}%
465 }
466 \def\TestIgnore#1{%

```

```

467 \test{#1}{#1}%
468 }
469 \begingroup
470 \lccode'\P='\\%
471 \lccode'\B='\\%
472 \lccode'\H='\\#%
473 \lowercase{\endgroup
474 \def\PercentChar{P}%
475 \def\BackslashChar{B}%
476 \def\HashChar{H}%
477 }
478 \def\TestIf{%
479 \TestIgnore{%
480 \space!"\HashChar$\PercentChar&'()*+,-./%
481 ;<=>?@%
482 [\BackslashChar]~_%
483 \string{|\string}\string~%
484 }%
485 }
486 \begingroup
487 \catcode0=12 %
488 \lccode'A=1 %
489 \lccode'B=2 %
490 \lccode'C=3 %
491 \lccode'D=4 %
492 \lccode'E=5 %
493 \lccode'F=6 %
494 \lccode'G=7 %
495 \lccode'H=8 %
496 \lccode'I=9 %
497 \lccode'J=10 %
498 \lccode'K=11 %
499 \lccode'L=12 %
500 \lccode'M=13 %
501 \lccode'N=14 %
502 \lccode'O=15 %
503 \lccode'P=16 %
504 \lccode'Q=17 %
505 \lccode'R=18 %
506 \lccode'S=19 %
507 \lccode'T=20 %
508 \lccode'U=21 %
509 \lccode'V=22 %
510 \lccode'W=23 %
511 \lccode'X=24 %
512 \lccode'Y=25 %
513 \lccode'Z=26 %
514 \lccode'a=27 %
515 \lccode'b=28 %
516 \lccode'c=29 %
517 \lccode'd=30 %
518 \lccode'e=31 %
519 \lccode'f=127 %
520 \lccode'g=128 %
521 \lccode'h=129 %
522 \lccode'y=254 %
523 \lccode'z=255 %
524 \lowercase{\endgroup
525 \def\TestC{%
526 \TestIgnore{%
527 ^^@ABCDEFGHIJKLMNQRSTUvwxyz%
528 }%

```

```

529 }%
530 \def\TestZ{%
531   \TestIgnore{^^@}%
532 }%
533 }

```

### 3.2.2 ROT13

```

534 \cmd{13}
535 \test{%
536   0123456789%
537   ABCDEFGHIJKLMNOPQRSTUVWXYZ%
538   abcdefghijklmnopqrstuvwxyz%
539 }{%
540   0123456789%
541   NOPQRSTUVWXYZABCDEFGHIJKLM%
542   nopqrstuvwxyzabcdefghijklm%
543 }
544 \TestI
545 \TestC
546 \test{}{}
547 \test{A}{N}
548 \test{N}{A}
549 \test{ }{ }
550 \test{0a}{0n}
551 \test{\spacesIV}{\spacesIV}
552 \test{{}}{}}
553 \test{\par}{\noexpand\cne}

```

### 3.2.3 ROT5

```

554 \cmd{5}
555 \test{%
556   0123456789%
557   ABCDEFGHIJKLMNOPQRSTUVWXYZ%
558   abcdefghijklmnopqrstuvwxyz%
559 }{%
560   5678901234%
561   ABCDEFGHIJKLMNOPQRSTUVWXYZ%
562   abcdefghijklmnopqrstuvwxyz%
563 }
564 \TestI
565 \TestC

```

### 3.2.4 ROT18

```

566 \cmd{18}
567 \test{%
568   ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789%
569   abcdefghijklmnopqrstuvwxyz%
570 }{%
571   STUVWXYZ0123456789ABCDEFGHIJKLMNQR%
572   nopqrstuvwxyzabcdefghijklm%
573 }
574 \TestI
575 \TestC

```

### 3.2.5 ROT47

```

576 \cmd{47}
577 \test{%
578   !"\HashChar$\PercentChar&'()*+,-./%
579   0123456789%
580   ;;<=>?@%
581   ABCDEFGHIJKLMNOPQRSTUVWXYZ%
582   [\BackslashChar]^_`%

```

```

583 abcdefghijklmnopqrstuvwxyz%
584 \string{|\string}\string~%
585 }{ %
586 PQRSTUVWXYZ%
587 [\BackslashChar]^_ '%
588 abcdefghijklmnopqrstuvwxyz%
589 \string{|\string}\string~%
590 !"\HashChar$\PercentChar&'()*+,-./%
591 0123456789%
592 :;<=>?@%
593 ABCDEFGHIJKLMNOP%
594 }
595 \TestZ
596 \TestC

```

### 3.2.6 Big chars

```

597 \chardef\temp=0 %
598 \begingroup\expandafter\expandafter\expandafter\endgroup
599 \expandafter\ifx\csname XeTeXrevision\endcsname\relax
600 \begingroup\expandafter\expandafter\expandafter\endgroup
601 \expandafter\ifx\csname RequirePackage\endcsname\relax
602 \input ifluatex.sty\relax
603 \else
604 \RequirePackage{ifluatex}[2010/03/01]%
605 \fi
606 \begingroup\expandafter\expandafter\expandafter\endgroup
607 \expandafter\ifx\csname luatexversion\endcsname\relax
608 \else
609 \chardef\temp=1 %
610 \fi
611 \else
612 \chardef\temp=1 %
613 \fi
614 \ifcase\temp
615 \csname @@end\expandafter\endcsname\expandafter\end
616 \fi

617 \msg{* Big chars}
618 \cmd{5}
619 \test{}{}
620 \test{ }{ }
621 \test{ 0 1 }{ 5 6 }
622 \begingroup
623 \lccode'A=300 %
624 \lccode'B=1000 %
625 \lccode'C=10000 %
626 \lowercase{\endgroup
627 \TestIgnore{ABC}%
628 \TestIgnore{x A By zC xAy AxB}%
629 }%

630 \csname @@end\endcsname\end
631 </test2>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/oberdiek/rotchiffre.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/rotchiffre.pdf](#) Documentation.

<sup>1</sup>[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

**Bundle.** All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](#)

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

## 4.2 Bundle installation

**Unpacking.** Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

**Script installation.** Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

## 4.3 Package installation

**Unpacking.** The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain T<sub>E</sub>X:

```
tex rotchiffre.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
rotchiffre.sty          → tex/generic/oberdiek/rotchiffre.sty
rotchiffre.pdf          → doc/latex/oberdiek/rotchiffre.pdf
test/rotchiffre-test1.tex → doc/latex/oberdiek/test/rotchiffre-test1.tex
test/rotchiffre-test2.tex → doc/latex/oberdiek/test/rotchiffre-test2.tex
rotchiffre.dtx          → source/latex/oberdiek/rotchiffre.dtx
```

If you have a `docstrip.cfg` that configures and enables `docstrip`’s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

## 4.4 Refresh file name databases

If your T<sub>E</sub>X distribution (teT<sub>E</sub>X, miK<sub>T</sub>E<sub>X</sub>, ...) relies on file name databases, you must refresh these. For example, teT<sub>E</sub>X users run `texhash` or `mktexlsr`.

## 4.5 Some details for the interested

**Attached source.** The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk rotchiffre.pdf unpack_files output .
```

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The .dtx chooses its action depending on the format:

**plain T<sub>E</sub>X:** Run docstrip and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{rotchiffre.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

**Generating the documentation.** You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfL<sup>A</sup>T<sub>E</sub>X:

```
pdflatex rotchiffre.dtx
makeindex -s gind.ist rotchiffre.idx
pdflatex rotchiffre.dtx
makeindex -s gind.ist rotchiffre.idx
pdflatex rotchiffre.dtx
```

## 5 References

- [1] Stephan Hennig et. al.: *fontspec: no ligatures with Times New Roman*; newsgroup `comp.text.tex`, [news:4cdbed27\\$0\\$6765\\$9b4e6d93@newsspool3.arcor-online.net](mailto:news:4cdbed27$0$6765$9b4e6d93@newsspool3.arcor-online.net), 2010-11-11.  
[http://groups.google.com/group/comp.text.tex/browse\\_thread/thread/6266f98e998ce333/d7b32e9dcc610c87](http://groups.google.com/group/comp.text.tex/browse_thread/thread/6266f98e998ce333/d7b32e9dcc610c87)
- [2] Stephan Hennig: *Re: fontspec: no ligatures with Times New Roman*; newsgroup `comp.text.tex`, [news:4cdc2abe\\$0\\$6762\\$9b4e6d93@newsspool3.arcor-online.net](mailto:news:4cdc2abe$0$6762$9b4e6d93@newsspool3.arcor-online.net), 2010-11-11.  
<http://groups.google.com/group/comp.text.tex/msg/d7b32e9dcc610c87>
- [3] Robin Fairbairns: *Re: fontspec: no ligatures with Times New Roman*; newsgroup `comp.text.tex`, [news:qf4obmua0v.fsf@sxp10.cl.cam.ac.uk](mailto:news:qf4obmua0v.fsf@sxp10.cl.cam.ac.uk), 2010-11-12.  
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[http://en.wikipedia.org/wiki/The\\_quick\\_brown\\_fox\\_jumps\\_over\\_the\\_lazy\\_dog](http://en.wikipedia.org/wiki/The_quick_brown_fox_jumps_over_the_lazy_dog)



## 6 History

[2010/11/12 v1.0]

- First version.

## 7 Index

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