Algol Revived

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AlgolRevived is a revival of the (photo)font Algol by Adrian Frutiger whose sole use was for printing ALGOL code in a manual. It is not meant to be a general purpose text font—the spacing is not optimized for that, being designed instead for printing computer code, where each letter should be distinct and text ligatures are banished. It seems to work well with the listings package, designed for exactly that purpose. Unusually for such a font, it is not monospaced, though perhaps this is no longer the issue it was in the days of FORTRAN.

Nonetheless, if you don’t object to a typewritten appearance, I think the font doesn’t really look as bad as you might think it should. (This document uses it as its main text font.)

Both opentype and type1 fonts are provided, along with LaTeX support files. Most characters in the T1 encoding are provided, except for f-ligatures and the Sami characters Eng, eng. There are no kerning tables, and the spacing is not uniform so that even without hyphenation, lines spread out quite well.

Usage with fontspec:
The package provides algolrevived.fontspec, with contents:

\defaultfontfeatures[algolrevived]
{
  Extension = .otf,
  UprightFont = AlgolRevived ,
  BoldFont = AlgolRevived-Medium ,
  BoldItalicFont = AlgolRevived-MediumSlanted ,
 ItalicFont = AlgolRevived-Slanted ,
}

which allows you to set up your preamble using simply

... 
\usepackage{fontspec} 
\setmainfont{algolrevived} % for use as main font
%\setmonofont{algolrevived} % for use as typewriter font only
...
Usage with LaTeX

The package offers OT1, LY1, T1 and TS1 encodings, and sets T1 as the default. To change to LY1, you will need something like

\usepackage{a/l.Vargo/l.Varrevived}  
%\usepackage[tt]{a/l.Vargo/l.Varrevived} for just typewriter  
\usepackage[LY1]{fontenc}

The package has two rather different modes, one intended for use as main text and the other intended for use as a typewriter font defining \ttdefault for use with Typewriter Text and Verbatim text environments such as \texttt and \verb. In the example above, algolrevived becomes the default Roman font, with the following features, details of which are described in more detail later in this document.

- Hyphenation is enabled but may be turned off with the option nohyphens;
- the asterisk character renders as the high asterisk *. The low asterisk is available using \textasteriskcentered, like ∗;
- lining figures do not have a slashed zero: 0123456789;
- there is a compoundwordmark in the T1 encoding, and there are capitalwordmark and ascenderwordmark in the TS1 encoding;
- the TS1 encoding is quite complete and has many additional symbols that are not part of the standard TS1 encoding;
- oldstyle figures are available—they may be made the default using the option osf or oldstyle, or from the TS1 encoding;
- inferior and superior figures are provided along with a \textfrac macro;
- a \textcircmacro is provided.

Usage as Typewriter Font

The option tt to algolrevived changes the mode to Typewriter with different behavior.

- Hyphenation is suppressed;
- the asterisk is low in this case, with the same effect as \textasteriskcentered.
- \ttdefault is set to AlgOLrevived-TLF-TT—in particular, oldstyle figure settings are ignored;
- the default lining figure zero is slashed—you may change this using the option nozeroslash;
- the figure style macros such as \textosf and the \textcircmacro remain available.
## AlgolRevived-tlf-t1.tfm:

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
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</tr>
</tbody>
</table>

| `8` | `9` | `A` | `B` | `C` | `D` | `E` | `F` |
Package options and macros:
The option scaled=.95 or scale=.95 renders at 95% of the default size. Option tt species typewriter. The macros {\sfigures 9} (same effect as \textsu{9}) render the figure as a superscript, $^9$, and similarly with \infigures, \textinf for inferior figures. (Note that the usual macro \textin is being used for the “belongs to” glyph, $\in$, added as a non-standard part of textcomp.)

The macro \textcircled that may be used to construct a circled version of a single letter or numeral using \textbigcircle for the encircling glyph. The argument is always constructed from uppercased letters and numerals, so, in effect, you can only construct circled uppercase: \textcircled{M} and \textcircled{m} have the same effect, namely $\odot$. Circled numerals are also available: \textcircled{0}... produces $\odot$...

• \textlf{} and {\lfstyle } give lining figures, as do \texttlf{} and {\tlfstyle };
• \textosf{} and {\osfsty } give proportional oldstyle figures as do \texttosf{} and {\tosfsty };
• \textfrac{3}{4} uses superior and inferior figures to make the fraction $\nicefrac{3}{4}$, and an optional argument is available for the whole number part: \textfrac[2]{31}{32} renders as $2\nicefrac{31}{32}$. The spacing may be tinkered with by redefining the macro \textfrac and by setting the two options foresolidus and aftsolidus which modify the spacing around the fraction solidus.

The sty file requires textcomp so there is no need to load it separately. Textcomp adds the following glyphs. (The mathematical symbols in the otherwise vacant slots in positions 192 and up were mostly borrowed from the STIX math fonts, which use the same SIL OFL as this package. The names below were in those cases are the same as the STIX names, prefixed by "text".)
 AlgolRevived-ts1.tfm:

<table>
<thead>
<tr>
<th>(\text{\textasciicircum} 0)</th>
<th>(\text{\textasciicircum} 1)</th>
<th>(\text{\textasciicircum} 2)</th>
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<th>(\text{\textasciicircum} C) (C)</th>
<th>(\text{\textasciicircum} D) (D)</th>
<th>(\text{\textasciicircum} E) (E)</th>
<th>(\text{\textasciicircum} F) (F)</th>
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<td>(\text{\textasciicircum} E) (E)</td>
<td>(\text{\textasciicircum} F) (F)</td>
</tr>
</tbody>
</table>
List of LaTeX macros to access the TS1 symbols in text mode:

0 \textcapitgrave
1 \textcapitacute
2 \textcapitcircumflex
3 \textcapittilde
4 \textcapitdieresis
5 \textcapithungarumlaut
6 \textcapitring
7 \textcapitcaron
8 \textcapitbreve
9 \textcapitmacron
10 \textcapitdotaccent
11 \textcapitcedilla
12 \textcapitlogonek
13 \textquotestraightbase
18 \textquotestraightdblbase
21 \texttwelveudash
22 \textthreequartersemidash
23 \textcapitalcompwordmark
24 \textleftarrow
25 \textrightarrow
26 \textt % tie accent, skewed right
27 \textaltie % skewed right
28 \textnewtie % tie accent centered
29 \textnewtie % ditto
31 \textascendercompwordmark
32 \textblank
36 \textdollar
39 \textquotesingle
42 \texttasteriskcentered
45 \textdblhyphen
47 \textfractionsolidus
48 \textzerooldstyle
49 \textoneoldstyle
50 \texttwooldstyle
49 \textthreeoldstyle
50 \textfouroldstyle
51 \textfiveoldstyle
52 \textsixoldstyle
53 \textsevenoldstyle
54 \texteightoldstyle
55 \textnineoldstyle
60 \texangle
61 \textminus
62 \texttriangle
77 \textmho
79 \textbigcircle
\textquill
\textcent
\textsterling
\textcurrency
\textyen
\textbrokenbar
\textsection
\textascii decades
\textcopyright
\textordfeminine
\textcopynot
\textcircledP
\textregistered
\textasciimacron
\textdegree
\textpm
\texttwosuperior
\textthreesuperior
\textmu
\textparagraph
\textperiodcentered
\textreference
\textonesuperior
\textordmasculine
\textsurd
\textonequarter
\textonehalf
\textthreequarters
\texteuro
\textprime
\textdprime
\textleftrightarrow
\textuparrow
\textleftarrow
\textrightarrow
\textdownarrow
\textupdownarrow
\textforall
\textcomplement
\textpartial
\textexists
\textnexists
\textemptyset
\textincrement
\textnabla
\textin \textnotin \texttimes \textsmal/Var \text/Varin \textni \textnni \textsmal/Var \text/Varsetminus \textl/Varargebu \textl/Vararet \textl/Varand \textl/Varor \textcap \textcup \textco/l.Var\textoneq \texteqco/l.Var\texton \textneq \textequiv \textneqiv \textl/Var\texteq \textgeq \textsubset \textsupset \textnsubset \textnsupset \textsubseteq \textsupseteq \textnsubseteq \textnsupseteq \textsqsubset \textsqsubset \textsqsupset \textsqsubseteq \textsqcap \textdiv \textsqcup

For example, typing in \textcoloneq B results in A\ne B.

Package Details

The package is laid out a bit differently from the typical one, and it may help some to know a few details.

There are six \textit{fd} files corresponding to each of the text encodings OT1, T1, LY1, and two for TS1, the text companion encoding. These are:

LY1AlgolRevived-Inf.f\text{d}
LY1AlgolRevived-Sup.f\text{d}
LY1AlgolRevived-0sF.f\text{d}
LY1AlgolRevived-TLF.f\text{d}
The last two have essentially identical effect, each pointing to tfm files of the form AlgolRevived-ts1.tfm, AlgolRevived-Medium-ts1.tfm and so on. These were all crafted with afm2tfm because otftotfm had repeated problems with distinguishing dollar from dollaroldstyle and cent from centoldstyle. To get the compound word marks right involved modifying the afm files after each edit to make their heights correct, then running afm2tfm with the -v option to get a virtual font which would register those heights correctly.

Each of the text font encodings have essentially the same structure, so I'll limit my remarks mainly to T1. All except the -TT were generated by autoinst.

The -Inf and -Sup are for the inferior and superior letters respectively, while -TLF and OsF are for the two normal figure styles you might choose from in text mode. The -TT case is more interesting, having been generated by afm2tfm because autoinst and otftotfm don't give you much help with making the changes needed for a Typewriter font as distinct from a normal text font. For T1 and LY1 encoded fonts, the main difference, aside from lacking f-ligatures and the like, is that the asterisk is low in Typewriter and high in normal text. However, for OT1, there are sixteen additional changes required in order to match the typewriter encoding used in cmtt.

Each of the -TT fd files points to tfm files with names like AlgolRevived-t1tt.tfm with no figure style mentioned, because the figure style there is always TLF. That is, T1AlgolRevived-OsF-TT.fd and T1AlgolRevived-TLF-TT.fd have essentially identical contents, but both are required to be there to conform to the LaTeX font selection scheme. There is in all cases a 0 or 1 in the name, signifying the slashed zero (1) or the unslashed 0 (0).