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**********************************
*          RGB^TechWriter        *
*                                *
*     Scientific Text Processor  *
*                                *
*          Version 2.23          *
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Installation and User's Guide

August 1989

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RGB^TechWriter

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RGB^TechWriter

1. INTRODUCTION

What is the "RGB^TechWriter Scientific Text Processor?"

     RGB^TechWriter is a personal computer word processor
specifically designed to make technical typing involving complex
symbolic expressions fast, easy, and accurate. RGB^TechWriter
works best with 80-column (RGB-type) color displays.

How does RGB^TechWriter handle equations better?

     Equations involve characters with special attributes. Some
characters need to be superscripted, some subscripted, and some
represent Greek or other special symbols not found on the
typewriter keyboard. RGB^TechWriter handles this problem by
using the color of the character as it appears on the screen to
convey the additional information. This insures that an exact
correspondence is maintained between columns on the screen and on
the printed page. This makes it easy to, for example, line up
the numerator and denominator of a complicated expression. Other
word processors require that this information be provided in the
form of additional control characters which are inserted into the
text. These control characters take up space on the screen but
not on the page, making alignment nearly impossible. Some other
word processors use graphics mode to paint the special characters
on the screen as they will appear on the page. This is a nice
feature, but very slow. By using color instead, RGB^TechWriter
makes editing much faster.

How does RGB^TechWriter compare for normal text?

     All of the screen and text-memory manipulations performed by
RGB^TechWriter are written directly in assembler language for the
fastest possible operation. You can page through a document at
the rate of 5 screen pages per second on a standard PC (10 per
second on the PC/AT or PS/2!). Text entry is fast enough to
allow paragraph reformatting to be done automatically after every
keystroke and still keep up with typing in excess of 120 words
per minute. Many of the features found in office word processors
are available, including page numbering, headers and footers,
search and replace, line centering, horizontal scrolling for
lines up to 255 characters, bold printing, underlining, right-
justification, and the ability to move blocks of text. In
addition, RGB^TechWriter offers fractional line spacing, page-
break control, and the ability to create files in either
RGB^TechWriter format or standard (ASCII) format. If you are a
programmer, you will find that RGB^TechWriter is a good editor
for writing source code in structured languages like Pascal.

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RGB^TechWriter

How else does RGB^TechWriter support technical typing?

     RGB^TechWriter provides sophisticated treatment for figures
and tables you may wish to include in your text. You can type a
table (or figure) immediately after the paragraph in which it is
first referenced. When you print the document, the table will be
inserted at that point if there is room for the entire table to
fit on the current page. If there isn't enough room, the table
is temporarily skipped and the current page is filled out with
the text that comes after the table. The table is then printed
at the top of the following page.

Will RGB^TechWriter work with my printer?

     RGB^TechWriter was originally written out of frustration
over the inability of existing word processors to take full
advantage of special printer capabilities. All of
RGB^TechWriter's printer command codes are contained in a
separate data file. Data files are provided on the distribution
diskette for several common printers. If your printer is not
listed, you can create your own data file using any ASCII text
editor (including RGB^TechWriter), provided you understand your
printer's control codes, and your printer supports continuously-
variable vertical line spacing (vertical motion index). The data
file also contains "alternate character definitions" that allow
you to translate special characters (which appear in color on the
screen) into a string of as many as 80 bytes (characters) to be
sent to the printer.

RGB^TechWriter can't be everything to everyone, can it?

     RGB^TechWriter does have some limitations. Individual files
are limited to 62,768 characters, about 20 pages of single-spaced
text. Longer documents can usually be broken into several
sections, each in a separate file. Some features found elsewhere
but not currently implemented in RGB^TechWriter include automatic
footnoting, index generation, file linking, double columns, mail
merge, and proportionally-spaced fonts. RGB^TechWriter does not
come equipped with a built-in spelling checker, but it works well
with Borland's Turbo Lightning, for which installation
instructions are provided.

How can I be sure that RGB^TechWriter won't bomb out on me?

     No program is entirely free of bugs, but before
RGB^TechWriter was released to the public, it was used on a
regular basis by several dozen people for over a year without
discovering any bugs that could cause text to disappear. During
this proof period, six graduate theses in science and engineering
and several journal publications full of equations were composed
entirely using RGB^TechWriter.

RGB^TechWriter

What if I have files created using another word processor?

    RGB^TechWriter can both read and create files having the
standard DOS ASCII format. Unfortunately, the ASCII standard
does not allow for special character attributes like Greek,
boldface, superscripts, subscripts, or underlining. ASCII files
also have a "hard" carriage return at the end of every line, not
just at the end of paragraphs. Nevertheless, if your former word
processor can create ASCII files (most do), then you have a way
to transfer all of that text into RGB^TechWriter. Once you have
read the ASCII file, you can remove the extra carriage returns,
add special character attributes, and save it as an
RGB^TechWriter file.

Is RGB^TechWriter easy to learn?

    Yes! This is one of the program's strong points. Of course
it helps if you have been exposed to computer word processing
before, but even first-timers can become proficient after only a
few hours of practice. All of RGB^TechWriter's functions are
summarized in on-screen menus that can be called up with a single
keystroke. After your first session, you probably won't even
need to refer to the documentation until you want to try
something fancy.

RGB^TechWriter

                        RECENT UPDATE INFORMATION

The essential elements of each update following Version 2.12 are
summarized here so that if you have been using an earlier version
of RGB^TechWriter, you will know what changes to expect. These
changes have already been incorporated in the documentation.

2/87 Version 2.13
Text length is now tested to prevent an entry of 0. The CTRL-F7
function now moves the cursor to the last line in the equation
instead of the first. A minor adjustment to the right-
justification routine was made to improve micro-justification.
Some of the alternate character definitions at the end of the
file OKI192.IBM were corrected.

8/87 Version 2.14
A period at the start of a line followed by a numeral is no
longer treated as a dot command. The stall and delay factors now
represent time delays measured in milliseconds. File names no
longer include a drive specifier.

9/87 Version 2.15
Function Shift-F8 now searches for repeated words.

10/87 Version 2.16
Memory allocation was updated to work properly with DOS 3.3.

11/87 Version 2.17
Fixed bugs in the repeated-word function and memory allocation.

2/89 Version 2.18
Text editing of underlined regions retains the underline.

3/89 Version 2.19
A new print feature facilitates double-sided printing. Equation
numbers are no longer underlined.

3/89 Version 2.20
A bug that affected the ^P function was fixed.

5/89 Version 2.21
Fixed a bug affecting only the very first character in the file.

6/89 Version 2.22
Fixed bugs involving line breaks at hyphens, zero spacing in
tables, tables more than a page long, and residual highlighted
characters after block move/delete.

8/89 Version 2.23
Fixed a bug causing failure to print text on rare occasions.

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