RGB^TechWriter

2. INSTALLATION

2.1 System Requirements

     RGB^TechWriter runs on IBM PC, XT, AT, PS/2, or compatible
computers equipped with an 80-column monitor and DOS 2.0 or
higher. 149 KB of free memory is required to run the program,
but a minimum of 207 KB is recommended and 271 KB is needed to
reach the full text capacity. Because RGB^TechWriter uses color
to represent special character attributes (like subscripts), the
full benefit of the program can only be realized when used with a
color monitor. RGB^TechWriter communicates directly with the
video memory, so only adapter cards that are compatible with IBM
video adapters (CGA, EGA, MCGA, VGA) will function properly.

2.2 Diskette System

     If your system does not have a fixed disk, then this section
is for you. Otherwise, proceed to section 2.3. The first thing
you should do is make a working copy of your RGB^TechWriter
diskette and store the original in a safe place. Start by
formatting a new diskette. Be sure to include the DOS system
files, and give the disk an appropriate volume label. The
details can be found under the "FORMAT" command in your DOS
manual. You must use DOS version 2.0 or later.

     Only two RGB^TechWriter files need to be copied to your
disk. The first is the executable program, TW.EXE. If, for
example, you have placed the original disk in drive A: and your
new working disk in drive B:, type

copy a:tw.exe b:

The second file will have the name TW.DAT and is created
according to section 2.4. You may want to copy additional files
to your working disk. An AUTOEXEC.BAT file is useful, especially
if you have a battery-backup clock or have written a program to
load an alternate character set to your printer. The DOS
utilities FORMAT and CHKDSK are useful for initializing and
monitoring the disks you use for saving text.

2.3 Fixed Disk System

     Setting up RGB^TechWriter on a system with a fixed disk is
somewhat more involved than for diskettes, but the extra speed
with which the program loads and recovers files is well worth the
effort. The procedure described here uses directory paths to
create a nice environment for keeping track of the large number
of files you can store on a fixed disk.

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     Start by creating a special subdirectory to contain the
RGB^TechWriter program files. Call this directory TW. Start by
switching to the root directory of the fixed disk (usually drive
C:), by typing

C:
cd \

Now create the new directory by typing

md tw

which stands for "make directory TW." Place the original
RGB^TechWriter disk in drive A: and copy the main program into
the TW directory:

copy a:tw.exe \tw

One more file will have to be copied into this directory. It
will be called TW.DAT and directions for creating it are given in
section 2.4.

     You may want to create several additional directories as a
way of categorizing your files. You might want to have a
subdirectory called LETTERS, one called PAPERS, one called LISTS,
etc. for saving the text files you create with RGB^TechWriter.
You will also want to create directories for your executable
program files. A subdirectory called DOS will put that long list
of DOS files neatly in one place. If you are a programmer, a
separate subdirectory for each language is a good idea. In fact,
the only files which can't be sorted into a subdirectory are the
system files COMMAND.COM, CONFIG.SYS, and AUTOEXEC.BAT. Note
that the latter two of these are optional files for tailoring
your system environment.

     The only catch to putting all of your files in
subdirectories is in gaining access to them. Normally, DOS only
looks in the "current" directory when you try to execute a
program. Thus you might place yourself in your LETTERS
subdirectory by typing

cd \letters

which means "change directory to the LETTERS directory within the
main (root) directory." But if you tried to start RGB^TechWriter
by typing TW, DOS wouldn't find it because it's in a different
directory. There is a clever way around this problem, however.
The PATH command within DOS allows you to specify a list of
subdirectories you would like DOS to search if it doesn't find
the program you want in your current directory. If you have
executable program files in the directories TW, DOS, BASIC, and
PASCAL, you need to give DOS the following command:

path \tw;\dos;\basic;\pascal

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Now when you type TW from the LETTERS directory, DOS will find
TW.EXE in the \TW directory. This command is most conveniently
included within the AUTOEXEC.BAT file so that it gets taken care
of automatically each time the system is turned on.

2.4 Printer Selection

     RGB^TechWriter can drive any printer provided that it allows
the computer to adjust the vertical distance skipped when a
carriage return is encountered. RGB^TechWriter uses this
"vertical motion index" mechanism for superscripts, subscripts,
underlining, and fractional line spacing. The RGB^TechWriter
disk contains data files for several printers. There are many
other printers that are compatible, but only those in Table 2.1
have been tested. Furthermore, every one of the printers shown
is capable of producing some special characters even though the
printer data files supplied may not provide the necessary
character definition codes.

                        TABLE 2.1
                 Printer Configuration Files

Printer   Data File Name   Special Character Support

AT&T 473   ATT473. *   Partial built-in char. set
DEC LN03 Laser   DECLN03.   Built-in tech. char. set
Diablo 630   DIABLO   Scientific printwheel
Epson RX-80   EPSON80.RX *   Dot graphics
HP LaserJet   HPLJ.   None provided
HP LaserJet   HPLJ.ME   Math Elite font cartridge
HP ThinkJet   HPTJ.   None provided
IBM Graphics Printer   IBMGP.   None provided
IBM Proprinter   IBMPRO.   Partial built-in char. set
Okidata 92 (Original)   OKI92.OKI   Downloadable (OKIDLCG)
Okidata 192 (for IBM)   OKI192.IBM   Downloadable (OKIDLCG)
Texas Instruments 855   TI855. *   None provided
Texas Instruments 855   TI855.GM *   Greek/Math font cartridge
Toshiba P341   TOSH341. *   None provided

* Includes user-supplied configuration data

     Select the configuration file which most closely corresponds
to your printer. Copy this file to your RGB^TechWriter working
disk under the name TW.DAT. If, for example, the original disk
is in drive A:, your working disk is in drive B:, and you
selected the Okidata 192, you would type

copy a:oki192.ibm b:tw.dat

If you have installed RGB^TechWriter on a fixed disk, type

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copy a:oki192.ibm c:\tw\tw.dat

     All of the printers listed use a parallel interface except
for the laser printers, which can use a serial interface.
RGB^TechWriter always prints to the parallel port, but the MODE
command in DOS can be used to redirect this signal to a serial
port. Details on redirecting parallel output to the serial port
are contained in your DOS manual.

     If you need to alter the codes sent to your printer, section
6 describes how to modify the file TW.DAT.

2.5 Default Parameters

     In addition to containing the codes specific to your
printer, the file TW.DAT contains parameters which affect the
editing environment. RGB^TechWriter is initially configured with
the following default parameters:

Maximum text length set for 62768 characters,
Files are saved on drive A:,
Print 10 characters per inch,
Single line spacing (6 lines per inch),
1 inch margin on all four sides,
Page numbering in upper right corner.

If you would like for the program to start up with different
initial values, you can change the default parameters by
modifying the file TW.DAT as described in section 6. In
particular, you will probably want to change the default drive to
B: for a two-diskette system, or to C: for a fixed-disk system.
If you are short on memory, you may want to decrease the maximum
text length.

2.6 Using Borland's Lightning Dictionary

     RGB^TechWriter does not come equipped with a built-in
spelling checker, but it works very well with Turbo Lightning, a
spelling checker and Thesaurus available from Borland
International. This section describes how to install Lightning
so that it works with RGB^TechWriter. If you do not have this
product, proceed to section 2.7 to test your installation.

     If you have a two-diskette system, follow the instructions
provided with Lightning to create a diskette containing the
Lightning dictionaries. It is not necessary to put the Lightning
files on the same diskette with your RGB^TechWriter program.
When you run Lightning with RGB^TechWriter, you will first load
Lightning from drive A: as described in the Lightning
documentation. Replace the Lightning diskette with your
RGB^TechWriter diskette and load RGB^TechWriter with your data
diskette in drive B:. Once RGB^TechWriter has started, you can

remove its diskette from drive A: and replace it with your
Lightning diskette. Lightning needs to have access to its on-
disk dictionaries whenever you ask it to look up the spelling of
a word. RGB^TechWriter is fully memory resident, so you won't
need to replace the RGB^TechWriter diskette until you are ready
to exit RGB^TechWriter and return to DOS.

     If you have a fixed-disk system, follow the instructions
provided with Lightning to create a subdirectory containing the
Lightning Dictionaries. It is not necessary to put these in the
same directory with your RGB^TechWriter program. If you include
the name of the subdirectory containing the Lightning files in
your PATH command (See section 2.3), then you can invoke
RGB^TechWriter with Lightning using the following batch file,
which you might name TWL.BAT:

```
light
envi a
tw
```

This batch file invokes Lightning, sets the environment for
RGB^TechWriter, and finally starts RGB^TechWriter. This assumes
that you have set up RGB^TechWriter as environment choice "a",
but you could use any choice from "a" through "m".

     Unfortunately, none of the predefined environment choices
provided on the Lightning diskette is fully compatible with
RGB^TechWriter. The remainder of this section describes how to
set up the Lightning environment to work correctly with
RGB^TechWriter. Change your disk and directory to where your
Lightning files are stored. Invoke Lighting by typing LIGHT.
Next start RGB^TechWriter by typing TW. If you have a diskette
system, you will of course need to put your RGB^TechWriter
diskette in drive A: first. The RGB^TechWriter introductory
screen should appear. If you have a diskette system, put the
Lightning diskette back in drive A:. Now hit the INS key and
specify the drive which contains the Lighting files. Finally,
enter the RGB^TechWriter editing mode by hitting the E key.

     Call up the Lightning menu by hitting Shift-F8. Select the
Environment option by hitting the Enter key. Move the green bar
to an application you don't own and don't plan to acquire. I'll
assume you chose letter "A". Now hit function key F2 to edit
this environment. The first thing to do is set the name, which
is choice A. In response to the query, type RGB^TechWriter.
Your selection has now been renamed. Hit F2 again to set up the
particulars so that they will work with RGB^TechWriter. Table
2.2 shows how the list should look when you have made all of the
necessary changes. To enter a "None", just hit the Enter key.

     When you get to selection P, specify that Lightning should
look on the screen (option E). Follow the instructions, using
the "Insert" label in the upper-right corner of the screen.

TABLE 2.2
RGB^TechWriter Environment for Lightning

```
B: RGT                                    (Right arrow key 1)
C: None                                   (Right arrow key 2)
D: LFT                                    (Left arrow key 1)
E: None                                   (Left arrow key 2)
F: None                                   (Left arrow key 3)
G: BKS                                    (Backspace key 1)
H: None                                   (Backspace key 2)
I: DEL                                    (Delete key 1)
J: None                                   (Delete key 2)
K: INS                                    (Insert toggle 1)
L: INS                                    (Insert toggle 2)
M: Screen                                 (Get word from)
N: 002                                    (Piping delay)
O: ON                                     (Auto proof)
```

     Escape your way back up to the top-line Lightning menu. You
have completed the environment change, but there's one more item
to attend to. Lightning, by default, uses certain function keys
which also have meaning to RGB^TechWriter. To avoid conflicts,
it is necessary to reassign the "hot keys" for Lightning. Do
this by selecting the Options choice. As long as you avoid
duplicating RGB^TechWriter functions, you can set the hot keys
any way you like. A configuration which has proven to be very
convenient is given in Table 2.3.

TABLE 2.3
Lightning "Hot Keys"

```
A: ON                                     (Auto proof)
B: ON                                     (Confirm window)
C: ShftF1                                 (Main menu hot key)
D: PLS                                    (Last bad word hot key)
E: ShftF4                                 (Check word hot key)
F: MIN                                    (Screen check hot key)
G: ShftF3                                 (Review screen hot key)
H: ShftF2                                 (Thesaurus hot key)
I: CtrlF1                                 (Toggle auto proof hot key)
```

     Escape back to the top-line menu and select the Setup
choice. If you have not already set up your dictionaries, do so
now. Then save all of the changes you have made by selecting
choice D. For now on, you can call up the Lightning menu using
Shift-F1, instead of Shift-F8. Whenever you hear Lightning
"Beep" at you, you can have it check the spelling of the
suspected word simply by hitting the large "+" key by the numeric
keypad. If you want to check the entire screen, hit the "-" key
by the numeric keypad. If you have a keyboard with 12 function
keys, you may want to install keys 11 and 12 for this purpose,
instead.

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     Once you have built up a respectable auxiliary dictionary
(including some obvious dictionary omissions like
"RGB^TechWriter"), you will find that Lightning and
RGB^TechWriter were meant for each other!

2.7 Running RGB^TechWriter for the First Time

     It's finally time to try out RGB^TechWriter. If you have a
diskette system, insert your RGB^TechWriter diskette in drive A:
and a formatted data disk in drive B:. If you have a fixed disk
you should change to the TW directory by typing

cd \tw

Examine the directory by typing

dir

     You should have at least the two files TW.EXE and TW.DAT.
If not, you have not completed the instructions in sections 2.2
through 2.4. You may have more files if you copied other files
from the RGB^TechWriter distribution diskette. Start the program
by typing

tw

     It will take a few seconds for the program to load into
memory. If you do not have enough free memory to run
RGB^TechWriter, you will be told so and returned to DOS. If the
program cannot find the file TW.DAT, it will warn you and proceed
to use a default printer specification. If this happens, go back
and make certain that you have selected a printer configuration
file in accordance with the installation instructions of section
2, and have given it the name TW.DAT. When the program is ready,
an introductory screen is displayed. This screen contains the
copyright and distribution notices. It also tells you which disk
drive and path are set up as the default. If this is where you
have your RGB^TechWriter files, then just hit the Enter key. If
not, hit the Ins key and type in the correct drive letter,
followed by a colon; then hit the Enter key.

     The screen you see at this time is the "File Screen Menu."
The commands listed at the top of the page are selected by
hitting the appropriate letter key. It is not necessary to hold
down the shift key or hit the Enter key.

Start by creating a simple file from scratch. Simply hit the E key to begin editing your new file, which starts out as nothing more than a single blank space. As soon as you hit the E key you will be moved into the "Editing Mode." The screen is blank except for a title line at the top and a menu line at the bottom. The first thing to learn is how to get help. When in the editing mode, just hit function key F1, as indicated at the bottom of the screen. Do this now. You will be presented with a concise description of all of the keys and commands. This will usually be enough to remind you of what to do. If you need more information, complete descriptions are in the documentation. To go back to editing, hit the Esc key. Do so now.

Your cursor should now be situated in the upper-left corner on line 1, column 1, as indicated in the upper-right corner of the screen. Now type yourself a message. Anything will do, but make it at least two lines long. Don't hit the Enter key at the end of the first line. RGB^TechWriter will "wrap" the cursor back to the start of the next line at the appropriate time. If you make a mistake while typing, use the backspace key to erase the mistake and try it again. When you have finished this "paragraph," hit the Enter key. You will see a small yellow dot at the end of your text which reminds you that there is a "hard" carriage return at that point. These hard carriage returns keep the paragraphs separate. One is created every time you hit the Enter key, and you can delete them just like any other character using the delete key or the backspace key.

Let's edit your text by inserting an additional sentence right in the middle of your paragraph. To get to the middle, use the cursor-arrow keys to move the cursor until it is situated where you want to enter more text. Now type another sentence. You will notice that the previous text moves over to make way for the new text as you type. What's more, the words are continuously shuffled around to make sure that no line exceeds the allowed line length. Let's suppose now that you want to split your paragraph into two separate paragraphs at the point where your cursor is now located. It's easy...just hit the Enter key. If you want to have a blank line between the paragraphs, just hit the Enter key again.

You should now have two separate paragraphs, each terminated by a yellow dot, and you may have chosen to add a blank line between them. Let's move the second paragraph to the beginning of the text. To do this, move the cursor to the beginning of the second paragraph. Hit function key F8. The colors at the cursor location will be inverted to blue on white, and the word MARK at the bottom of the screen will be highlighted. Move the cursor to the beginning of the line which comes immediately after the end of the second paragraph and hit function key F8 again. The entire second paragraph should now be highlighted. Move the cursor to where you want to move the marked paragraph. Because we want this paragraph at the beginning of the text, the fastest way to get there is to use Ctrl-PgUp to move immediately to the

start of the text. Now move the marked block of text by hitting
function key F9.

     Rearrange the text until it meets with your approval. Now,
let's save it. You can get back to the File Screen Menu by
hitting function key F10, as shown at the bottom of the screen.
Do so now. We want to save the file, so hit the S key. You will
be asked for a file name. You can use any name with up to 8
letters or numbers. Do not add a three-letter extension, as
RGB^TechWriter will automatically add .TWF (for RGB^TechWriter
File). Your file will be saved to disk as soon as you hit the
Enter key when you finish typing the file name. Let's make
certain that it was saved. First, clear the text in memory by
hitting the C key. Now hit the E key to see that the text has
been blanked. Return to the File Screen Menu using F10. Now get
your file back off of the disk by hitting the G key and entering
the file name. It is not necessary to enter the ".TWF"
extension, but remember to hit the enter key when you finish
typing the file name. Once your file is in memory, you can edit
it by hitting the E key.

     Get yourself back to the File Screen Menu. Let's print out
your file. First hit the P key. You are given a choice of
printing to the screen, printer, or disk. Let's start with the
screen, so hit S. We want to start at the beginning, so just hit
the Enter key to acknowledge this. Likewise, we want to print to
the end. Press Enter once again to indicate that you want to
print all of the pages, not just the odd or even ones (This would
allow you to print double-sided documents using both the front
and back side of the paper). Finally, press Enter one more time
to indicate that you only want to see one copy. Your text will
be displayed on the screen, and will scroll off as it goes. If
you need to stop the action, use Crtl-S, Crtl-NumLock, or Pause.
Be careful that you do NOT accidentally hit Ctrl-C or Ctrl-Break.

     Turn on your printer. Now hit the P key to print the text,
but this time hit P again to select the printer. Hit the Enter
key for each of the options presented. If your printer has
separate data and correspondence quality modes, you will have to
make this selection. A message should appear that your text is
being printed. When it is done, you should have a printed copy
of your text. If you do not, then you have either selected the
wrong file for TW.DAT (see section 2.4), or your printer is not
on the list (see section 6). You can stop the printing to
screen, printer, or disk at any time while it is in progress by
hitting the P key again.

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        With this introduction you should be able to investigate the
contents of other files. Specifically, you may want to alter the
default parameters stored in the file TW.DAT, as described
briefly in section 2.5 and in detail in section 6. Use the R -
Revise File command to save the changes you make. You also may
find it informative to check out the file GUIDE7.TWF which
illustrates several of the more advanced features of
RGB^TechWriter, and is provided as a test to see if your printer
is set up properly for full compatibility.

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