*** Errata ***

Manual, p. 13 - The example which reads:

```
display 1b 52 53 1b 53 20 (ENTER)
```

should read:

```
display 1b 52 23 1b 53 20 (ENTER)
```

*** Additional information - HiRes ***

HiRes will accept parameters from 0 to 15 (ASCII codes from hex 20 to hex 2F) for the foreground and background colors. A code from hex 24 to hex 2F is equivalent to the code from 20 to 23 which differs from that code by a multiple of four. This modification allows the use of the color value specified in the OS-9 Commands manual, which ranges from 0 to 15, as the parameter to HiRes.
(See p. 13)

The display command sends out a linefeed before it sends out the codes you give it. Because of this, the command "display 1b 43" moves the cursor down a line and then creates a window boundary above that line, which is below the display command. The line where you typed the display command will be at the bottom of the upper window.

If you would like the line where you type the display command to end up at the top of the lower window, type "display 9 1b 43". This moves the cursor back up to that line before creating the window boundary. (See p. 16)

If the cell width is 1 pixel, there are 256 columns on the screen. In this case GetStat code 132 returns A=255. (See p. 22)

*** Additional information - CSEdit ***

There is not enough memory to run CSEdit and copy at the same time; therefore, the procedure given in the manual for using the "Shell Command" option to copy a character set before overwriting it will only work if you enter pass-through mode. To do this:

1. Give the "Shell command" option to CSEdit.
2. Enter a carriage return for the shell command. You will get an "OS9:" prompt.
3. Enter the command "display 1c e 12". The display will revert to the standard 32 by 16 mode.
4. Enter the copy command.
5. Hold down the CLEAR key and type the BREAK key, to terminate the shell. CSEdit will automatically terminate pass-through mode.

NOTE: If you attempt to use the "display" command to terminate pass-through mode in the above example, the display module will load where the screen was allocated, and OS-9 will be unable to allocate the screen.

ALSO NOTE: Even the above procedure may not work, if using a character set larger than "Stdcs" with HiRes, or if anything extra is loaded into memory. (See p. 25)

*** Additional information - X commands ***

The X commands do not have the extensive diagnostic error messages that most operating systems have for determining the cause of a problem in reading or writing a file. In order to help you determine what the cause of a problem might be, the following list relates some of the common symptoms to their possible causes.

Symptom	Possible causes
System hangs	No disk in drive Wrong type of disk Unformatted disk
"Unable to open read"	File does not exist Wrong type of disk Directory damaged
"Disk read error"	Disk damaged Wrong type of disk
"Unable to open write"	Disk full File already exists Wrong type of disk Disk damaged
"Disk write error"	Disk full Disk damaged Wrong type of disk
"File system error"	Bad granule map (RS)
XDIR: Mixed-up results	Wrong type of disk
XLIST: Crazy behavior	Non-text file

Xcopy has the capability of doing a single-drive copy. In this mode xcopy will prompt you to insert the "source disk", which is the disk the file is being copied from, and the "destination disk", which is the disk the file is being copied to. To use this feature add the option "-s" to the xcopy command line, either before or after the file names. For example:
"xcopy -s FLEX%0.DATA.TXT RS%1:DATA/DAT".

When xcopy creates a Disk BASIC file, it uses the file extension to determine the file type and the ASCII flag. If the extension is "BIN", the file

type is "machine-language program" and the ASCII flag is 0. Otherwise, the ASCII flag is hex FF (indicating ASCII) and the file type is "BASIC program" if the extension is "BAS", "Text Editor source file" if the extension is "TXT", and "BASIC data file" otherwise.

```
StdCS - Standard Character Set
     4w by 7h char, 5w by 8h cell
     default: 51 col by 24 row, black on buff
     maximum: 64 col by 27 row, 2-color only
     maximum code: $7F

CS2/wb5124 - White on Black, 51 by 24
     4w by 7h char, 5w by 8h cell
     default: 51 col by 24 row, buff on black
     maximum: 64 col by 27 row, 2-color only
     maximum code: $7F
     * this is just an "inverse-video" version
     * of StdCS

CS2/bw4224 - Black on White, 42 by 24
     4w by 7h char, 6w by 8h cell
     default: 42 col by 24 row, black on buff
     maximum: 64 col by 27 row, 2-color only
     maximum code: $7F
     * this is StdCS with the cell size modified
     * for a 42-character line

CS2/bw6419 - Black on White, 64 by 19
     3w by 7h char, 4w by 10h cell
     default: 64 col by 19 row, black on buff
     maximum: 85 col by 27 row, 2-color only
     maximum code: $7E
     * an alternative to StdCS for more characters
     * per line

CS2/bw8524 - Black on White, 85 by 24
     3w by 7h char, 3w by 8h cell
     default: 85 col by 24 row, black on buff
     maximum: 85 col by 27 row, 2-color only
     maximum code: $7E
     * although difficult to read, this might be
     * useful for layout-checking purposes or some
     * word-processing applications

CS2/Heath - Heath H-19 character set
     7w by 9h char, 7w by 9h cell
     default: 36 col by 21 row, black on buff
     maximum: 36 col by 21 row, 2-color only
     maximum code: $7E
     * this character set simulates the character
     * set of the Heath H-19 terminal

CS2/bw3216 - Black on White, 32 by 16
     7w by 9h char, 8w by 12h cell
     default: 32 col by 16 row, black on buff
     maximum: 36 col by 21 row, 2-color only
     maximum code: $7E
     * this is Heath with the cell size modified

CS2/HeathG - Heath H-19 Graphics character set
     8w by 10h char, 8w by 10h cell
     default: 32 col by 19 row, black on buff
     maximum: 32 col by 19 row, 2-color only
     maximum code: $7F
     * this character set simulates the graphics
     * mode of a Heath H-19 terminal

CS2/tv950 - Televideo 950 character set
     7w by 9h char, 7w by 9h cell
     default: 36 col by 21 row, black on buff
     maximum: 36 col by 21 row, 2-color only
```

```
     maximum code: $7E
     * this character set simulates the character
     * set of the Televideo 950 terminal

CS2/tv950G - Televideo 950 Graphics character set
     7w by 9h char, 7w by 9h cell
     default: 36 col by 21 row, black on buff
     maximum: 36 col by 21 row, 2-color only
     maximum code: $8E
     * this character set simulates the character
     * set of the Televideo 950 terminal, with the
     * graphics characters added on

CS2/Roman - Roman Bold character set
     8w by 12h char, 10w by 16h cell
     default: 25 col by 12 row, black on buff
     maximum: 32 col by 16 row, 2-color only
     maximum code: $7E
     * this is a fancy one, with serifs, etc.

CS2/mi82a - Microline 82A character set
     6w by 9h char, 6w by 9h cell
     default: 42 col by 21 row, black on buff
     maximum: 42 col by 21 row, 2-color only
     maximum code: $BF
     * a simulation of the text and graphics
     * characters of the Microline 82a printer

CS2/gr8x8 - Animation Graphics character set
     8w by 8h char, 8w by 8h cell
     default: 32 col by 24 row, black on buff
     maximum: 32 col by 24 row, 2-color only
     maximum code: $7F
     * this upper-case-only character set with
     * interesting graphics characters in place of
     * the lower-case letters might suggest some
     * possibilies for games and animation

CS2/BigCS - Big Character Set
     8w by 14h char, 10w by 16h cell
     default: 25 col by 12 row, black on buff
     maximum: 32 col by 13 row, 2-color only
     maximum code: $7E
     * this is a big, bold character set.  easy
     * to read.

CS2/AplCS - APL Character Set
     5w by 7h char, 6w by 8h cell
     default: 42 col by 24 row, black on buff
     maximum: 51 col by 27 row, 2-color only
     maximum code: $7E
     * this character set, with the overstrike
     * capabity of HiRes, could be used as part of
     * an APL implementation or possibly to make
     * the Color Computer an APL terminal

CS2/bw12864 - Black on White, 128 by 64
     2w by 2h char, 2w by 3h cell
     default: 128 col by 64 row, black on buff
     maximum: 128 col by 96 row, 2-color only
     maximum code: $7E
     * although this character set is not
     * readable, it may be useful for checking
     * out the format of a printed listing, since
     * nearly a whole printed page will fit on
     * the screen.
```

```
CS2/SmallCS - one pixel each character set
     1w by 1h char, 1w by 1h cell
     default: 256 col by 192 row, black on buff
     maximum: 256 col by 192 row, black on buff
     maximum code: $7E
     * this character set might be useful for
     * checking out the format of 132-column
     * printer listings or line-printer art, or
     * just sheer tomfoolery.

CS4/dwcs - Double Width Character Set
     8w by 7h char, 10w by 8h cell
     default: 25 col by 24 row, black on buff
     maximum: 32 col by 27 row, 4-color compatible
     maximum code: $7E
     * a "double-width mode" for StdCS, or a dense
     * four-color character set.

CS4/BlueYellow - Blue on Yellow character set
     8w by 14h char, 10w by 16h cell
     default: 25 col by 12 row, blue on yellow
     maximum: 32 col by 13 row, 4-color ONLY
     maximum code: $7E
     * This is a 4-color character set similar
     * to BigCS.  It may be modified for any
     * color combination.  If foreground and
     * background colors are changed to 0 and 3
     * it may be used in 2-color mode.  Remember
     * that the graphics mode/colorset is only
     * taken from the module when HiRes is
     * initialized.

CS4/OrangeBuff - Orange on Buff character set
     6w by 7h char, 8w by 8h cell
     default: 32 col by 24 row, orange on buff
     maximum: 42 col by 27 row, 4-color compatible.
     * the densest four-color character set.  May
     * be modified for other color combinations.
```