



Terminal Commands for CDS Attributes **by Marvin Johnson RN, MS**

Users primarily interact with the MAGIC system using one of the following methods:

1. Esprit color terminal
2. Terminal that emulates an Esprit
3. Software that emulates an Esprit (e.g., Meditech Remote Workstation)

The term “Esprit terminal” is used throughout this article to refer to any of the above methods. This article describes commands frequently used by the author while developing Customer Defined Screen (CDS) Attributes. While not a complete reference, this article should provide the reader with a practical “working knowledge” of terminal commands.

NPR Macros for Terminal Commands

NPR includes several intrinsic macros designed to simplify many of the terminal commands described in this article. Unfortunately, many NPR macros are now considered “illegal syntax” while using customer programming tools like the *CDS Attribute Editor* or the *NPR Report Writer*. Fortunately, we can still write our own MAGIC code to provide the same functionality as these “illegal” macros. Please refer to my article *NPR Intrinsic Macros* for a list of common NPR macros that can still be used.

Color Palettes

Esprit terminals support the use of 16 color palettes that define background and foreground colors. A user may have custom palettes defined in the *E/E Colors* routine. However, the 4.xx workstation does not allow for user specific palettes. Instead, colors are determined by the computer’s Windows color scheme as illustrated in *Chart 1.0*.

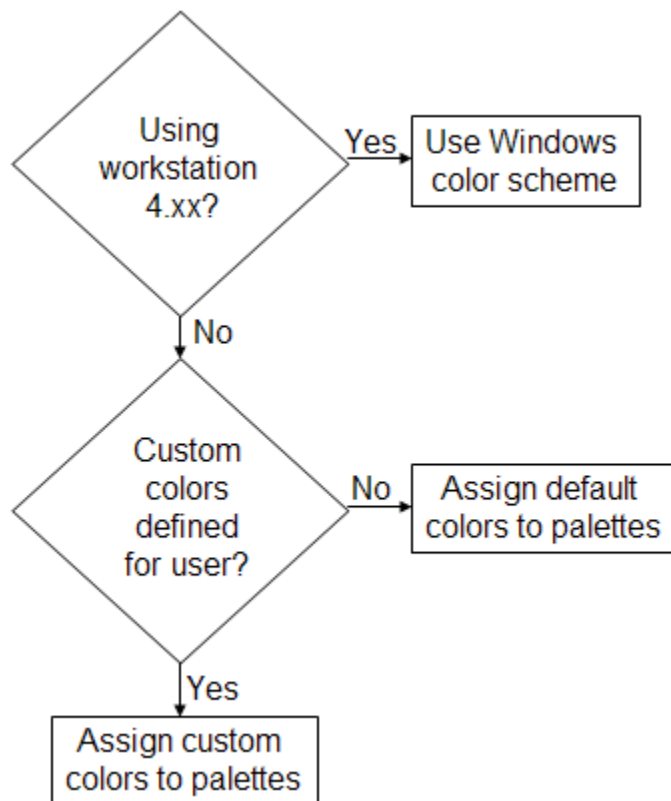
Palette Selection

Select a palette (numbered 0-15) using the following syntax:

D(1,palette)^#

Once a palette is defined, the terminal will use this palette’s background and foreground colors until a new palette is chosen or the active window is closed.

Chart 1.0 – How Palette Colors Are Determined



Window Handling

Esprit terminals use bordered windows to organize the display. All terminal commands are executed within the current active window.

Open a new window centered to display:

D(23,6,height,width,palette)^#

Open new window at row and column:

D(23,2,row,col,height,width,palette)^#

Close active window:

D(23,0)^#

Display Text on Screen

This section describes some of the common commands for sending text to the display.

Text at cursor position: *"Text" ^#*

Move cursor to position: *P(row,col)^#*,

Text at specified position: *P(row,col,"Text")^#*

Move cursor to next line: *N("")^#*

Move cursor to next line and send text: *N("Text")^#*

Clear contents of active window: *T("")^#*

Clear contents of active window and send text: *T("Text")^#*

The *N* and *P* commands will also accept the following suffixes:

- “L” clears line left of current cursor position
- “S” clears line left of current cursor position plus lines below

For example, the command $P(6,1, \text{“Capitas Solutions”})L^{\#}$ will display “Capitas Solutions” at row 6, column 1, and clear any text already to the right of this position.

User Input

Input up to 255 characters: $\#^{\text{VAR}}$

Restrict input to n characters: $\#n^{\text{VAR}}$

Get a single character. User does not have to hit <Return>: $\#S^{\text{VAR}}$

Get input without echoing (for secure data like passwords): $\#T^{\text{VAR}}$ - or - $\#T[n]^{\text{VAR}}$

Wait for the user to press <Return>: $\#0$

Cursor

Turn Off: $D(14,0)^{\#}$ Turn On: $D(14,1)^{\#}$

Horizontal Line

Draw line border to border at current row: $D(4,0)^{\#}$

Draw line at current row and specify width: $D(4,3,width)^{\#}$

Vertical Line

Draw line border to border at current column: $D(4,1)^{\#}$

Box

Draw box starting at current cursor position: $D(4,2,height,width)^{\#}$

Note: use a height of 0 to draw a horizontal line or a width of 0 to draw a vertical line.

Erase Region

Erase display at cursor position of height and width: $D(5,1,height,width)^{\#}$

Example CDS Attributes

Example 1 - Password Entry

Attribute:

IFE=%MIS.zcus.capitas.examples.M.password(0)

Macro code:

```
; Open new 3x25 window, centered, using palette 1
D(23,6,3,25,1)^#,
; Ask user for password
N("Password ")^#,
; Get non-echoed password
#T[8]^PASSWORD,
; Close window
D(23,0)^#,
; Reveal the password
@W.return("The password is "_PASSWORD),
1^END;
```

Example 2 - Survey of Favorite Pet

Attribute:

IFE=%MIS.zcus.capitas.examples.M.pet(0)

Macro code:

```
; Open new 6x40 window using palette 1
D(23,2,4,1,6,40,1)^#,
; Menu text
N("What is your favorite pet?")^#,
N(" 1. Dog")^#,
N(" 2. Cat")^#,
N(" 3. Hamster")^#,
N(" 4. Fish")^#,
N(" Choice: ")^#,
; Get choice
DO{'OK #S^CH,IF{CH<7 1^OK}},
; Tell them you like their pet selection
IF{CH=1 "dog";
  CH=2 "cat";
  CH=3 "hamster"
  CH=4 "fish"}^CHOICE,
T("A "_CHOICE_" is a great pet!")^#,
N("Press <Return>")^#,
#0,
; Close Window
D(23,0)^#,
1^END;
```

