

AXEL Platine Terminal

Ethernet TCP/IP Models

-- ADDENDUM --

ALPHA-GUI TERMINAL

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NOTES

The alpha-GUI terminal is the AX3000 TCP/IP Platine Terminal model 65 equipped with alpha-GUI firmware ('ALG' option). In this document we assume that the AX3000 has been fitted with this firmware.

This addendum deals only with the use of the graphics revamping. We assume that the reader is already familiar with the AX3000 set-up procedures. For more information, please read the *AX3000 TCP/IP - User's Manual*.

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1 - PRESENTATION

The 'AGR' firmware offers alpha-GUI support for the AX3000 TCP/IP Platine Terminal model 65. This mode is called 'alpha-GUI' because the AX3000 processes text information (video attributes, colours, cursor location, etc.) and displays it in graphical mode.

This allows:

- running software generally used on dumb terminals
- colouring pure monochrome software
- revamping colour or monochrome software by associating graphical attributes (shadow, 3D effects, etc.) with display criteria.

2 - DEFINITIONS AND VOCABULARY

The AX3000 offers revamping features which act both on characters and on the background. This chapter describes each of these features.

2.1 - Character Revamping

The character revamping (semi-graphics character are not included) acts on the character 'style' and on the underline attribute:

- **style:** the following styles are available:
 - **normal:** no graphics style is applied.
 - **shadowed:** the character shadow, displayed in black 'under' the character, is shifted 1 pixel to the right and to the bottom:

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- **raised:** this 3D effect, displayed in white 'under' the character, is shifted 1 pixel to the left and to the top:

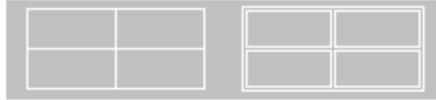
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- **unchanged:** the style applied is the style used by the previous character.
- **underline:** the available values are:
 - **no:** the character is not underlined.
 - **yes:** an underline is displayed with the same colour as the character.
 - **unchanged:** the underline attribute (yes or no) is the underline attribute used by the previous character.

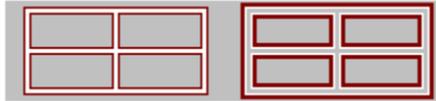
2.2 - Semi-Graphics Character Revamping

A specific revamping is available for semi-graphics characters. Only the 'style' can be tuned:

- **style**: the following styles are available:
 - **std**: the character appearance is not modified



- **1**: semi-graphics appear as 'pipes'



- **2**: semi-graphics are shadowed (see shadow definition above)



2.3 - Background Revamping

The background revamping acts on the 'shade' and on the 'style':

- **shade**: the available values are:
 - **no**: the background colour is not modified.
 - **yes**: the background colour is lightened
 - **unchanged**: the shade attribute (yes or no) is the shade attribute used by the previous character.
- **style**: the following styles are available:
 - **none**: no graphics style is applied.
 - **3D out**: the 3D effect is obtained by displaying black lines on the right and on the bottom and white line on the left and on the top:



As shown above, the 3D out style is joined for neighbouring characters of a line (no vertical line between A and X). This is not the case for neighbouring characters on different lines (a black and a white horizontal line separate these characters).

- **3D in**: the 3D effect is obtained by displaying white lines on the right and on the bottom and black line on the left and on the top:



As shown above, the 3D in style is joined for neighbouring characters on a line (no vertical line between A and X). This is not the case for neighbouring characters on different lines (a black and a white horizontal line separates these characters).

- **unchanged**: the style is the style used by the previous character.

3 - THE TWO AX3000 REVAMPING MODES

Two revamping modes are offered by the AX3000:

- 'on attributes': for purely monochrome software
- 'on colours': for colour software

The revamping mode setting is performed through the AX3000 Set-Up. Press **<Ctrl><Alt><Esc>** to enter the set-up. Select **[Configuration]→[Terminal]→[Session X]** (where X is the session number).

A dialog box is displayed. Within this box:

- first, select 'Graphics Revamping' and press <spacebar> to get either 'on attributes' value or 'on colours' value.
- then, select 'Revamping Settings' and press <spacebar> to get the associated dialog box.

☺: the **<Ctrl><Alt><Shift><C>** keystroke may be used to access directly the revamping environment without entering the AX3000 Set-Up. Use this keystroke only from an active telnet session.

Note: this shortcut is not available when the AX3000 Set-Up is protected by a password.

3.1 - 'On Attributes' Mode

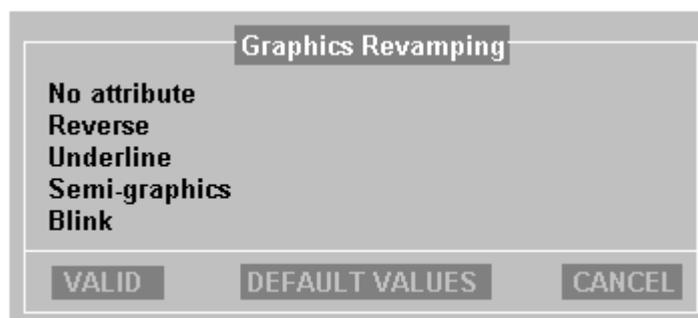
This mode is dedicated to monochrome software. It offers:

- first a colouring function: associating foreground and background colours with monochrome attributes (these attributes are called criteria)
- then a revamping function: associating graphics styles with these criteria.

The available criteria are:

- normal: no video attribute
- reverse: reverse video attribute
- underline: underline attribute
- semi-graphics: semi-graphics character whatever the video attribute is
- blink: blink attribute

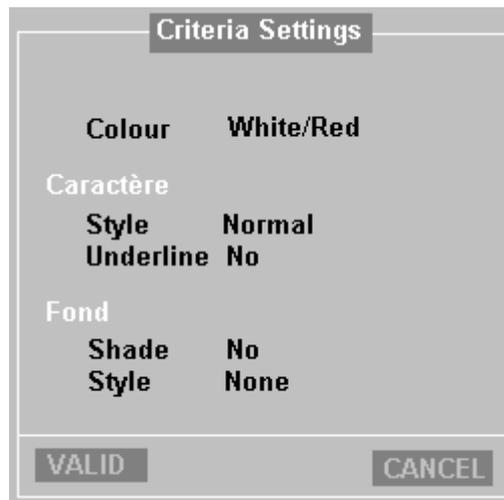
The revamping dialog box is:



Notes:

- The 'Default Values' button offers 5 predefined settings given as examples.
- A criteria setting can be copied by using <F2> and <F3>.

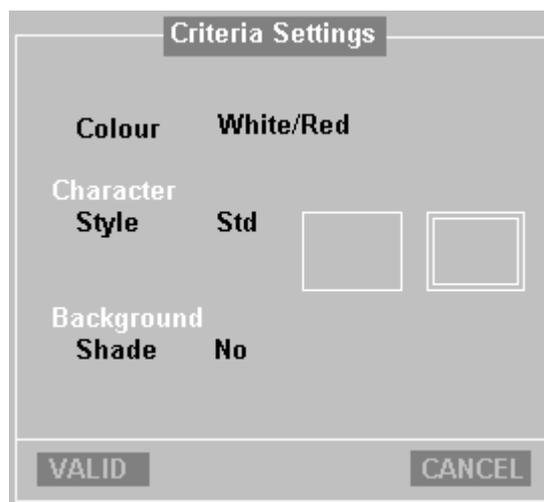
When **'Normal'**, **'Reverse'**, **'Underline'** and **'Blink'** criteria are selected, the following dialog box is displayed:



The meaning of each parameter is:

- **Colour**: foreground and background colours associated with this criteria. This selection is performed through a colour chart. 16 foreground colours and 16 background colours are available. A 17th background and foreground colour is available: the 'unchanged colour'. This colour, like the unchanged style, allows the current colour to be kept.
Example: if the "red/white" colour is associated with 'reverse', reverse video characters will be displayed in red, background white. if the "blue/unchanged" colour is associated with 'reverse', reverse video characters will be displayed in blue, without modification of the current background colour.
- **Style**: available values: normal, shadowed, raised or unchanged (see chapter 2.1)
- **Underline**: available values: yes, no or unchanged (see chapter 2.1)
- **Shade**: available values: yes, no or unchanged (see chapter 2.3)
- **Style**: available values: none, 3D out, 3D in or unchanged (see chapter 2.3)

When **'Semi-graphics'** criteria is selected, the following dialog box is displayed:



The meaning of each parameter is:

- **Colour**: see definition above
- **Style**: available values: std, 1 or 2 (see chapter 2.2)
- **Shade**: available values: yes, no or unchanged (see chapter 2.3)

3.2 - 'On Colours' Mode

This mode, only available with ANSI emulation family, is dedicated to colour software. The graphics revamping is based on both:

- a static criteria (semi-graphics characters)
- and 16 dynamic criteria (based on foreground and background colours)

For these 2 criteria, the AX3000 Set-Up allows:

- to remap initial colours. Often colours of text-based software are not suitable for a graphics mode (for instance, grey or cyan are well dedicated for background)
- to associate graphics styles (see chapter 1).

The revamping dialog box is:

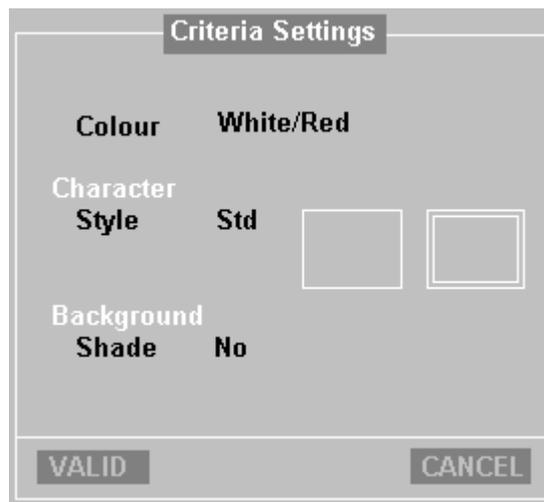


Within this box, 17 criteria are available (semi-graphics + 16 dynamic criteria).

Notes:

- Use the 'Reset' button to delete all the criteria settings. Use <F4> to delete only the current criteria.
- Criteria settings can be copied by using <F2> and <F3>.

When '**Semi-graphics**' criteria is selected, the following dialog box is displayed:



The meaning of each parameter is:

- **Colour:** possible remapping of the foreground and background colours associated with semi-graphics characters. This selection is performed through a colour chart. 16 foreground colours and 16 background colours are available. A 17th background and foreground colour is available: the 'Unchanged' colour. This colour, like the unchanged style, allows the current colour to be kept.
Example: if the "red/white" colour is associated, semi-graphics characters will be displayed in red, background white. if the "blue/Unchanged" colour is associated, semi-graphics characters will be displayed in blue, without modification of the current background colour.
- **Style:** available values: std, 1 or 2 (see chapter 2.2)
- **Shade:** available values: yes, no or unchanged (see chapter 2.3)

To add a dynamic criteria, select the entry (from 1 to 16) and press <spacebar>. The following dialog box appears:



The meaning of each parameter is:

- **Initial Colour:** this criteria is defined by the foreground and background colours. This selection is performed through a colour chart. 16 foreground colours and 16 background colours are available. A 17th background and foreground colour is available as the 'Don't Care' colour. This colour setting allows the use of the background and/or foreground colour as the criteria setting.

- **Colour:** possible remapping of the foreground and background colours associated with this criteria. This selection is performed through a colour chart. 16 foreground colours and 16 background colours are available. A 17th background and foreground colour is available as the 'Unchanged' colour. This colour, like the unchanged style, allows the current colour to be kept.

Examples:

- initial colour: "blue/yellow", colour "red/white": any blue characters on a yellow background are now displayed in red on white.
- initial colour: "blue/yellow", colour "red/unchanged": any blue characters on a yellow background are now displayed in red without background colour modification.
- initial colour: "blue/Don't Care", colour "red/white": any blue characters whatever the background colour are now displayed in red on white.
- **Style:** available values: normal, shadowed, raised or unchanged (see chapter 2.1)
- **Underline:** available values: yes, no or unchanged (see chapter 2.1)
- **Shade:** available values: yes, no or unchanged (see chapter 2.3)
- **Style:** available values: none, 3D out, 3D in or unchanged (see chapter 2.3)

4 - GIF FILE VIEWER

GIF files (256-colour bitmap) can be displayed on the AX3000.

4.1 - The axgif Daemon

The GIF viewer is not embedded in the AX3000. This viewer is provided by Axel as a Unix daemon: **axgif**. This daemon is totally "transparent" for Unix software.

Installing:

Copy the axgif daemon into /usr/bin.

Using:

Before launching your software, run the axgif daemon.

Examples:

```
# axgif
```

The Axel daemon runs a shell (sh). To exit this shell (and the axgif daemon) enter 'exit'.

```
# axgif -p myprg
```

The Axel daemon run 'myprg'. When this program is exited, the axgif daemon is killed.

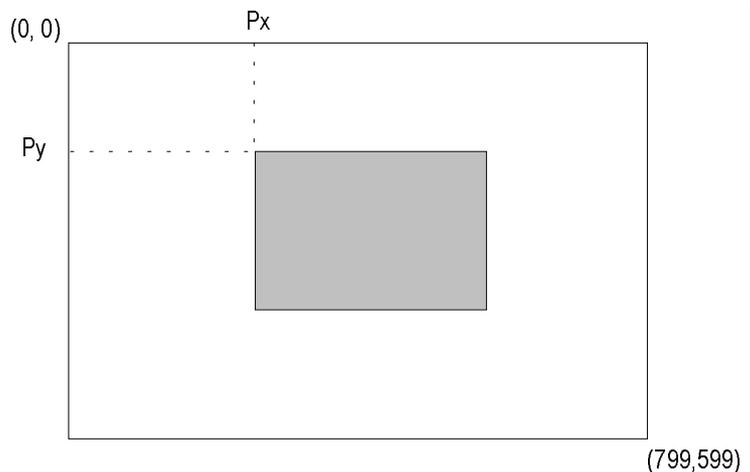
For more information, enter the 'axgif -h' command.

4.2 - Displaying GIF files

The following ANSI escape sequence is needed to display GIF files:

```
Esc [ > 1 ; Px ; Py g
```

Note: Px and Py are the addresses of the upper-left corner of the bitmap as shown below:



The following script shell displays logo.gif at (10,10).

```
echo "\033[>1;10;10g\c"
old=`stty -g`
stty -opost nl0 bs0 cr0 ff0 vt0 tab0
cat logo.gif
stty $old
```

5 - TECHNICAL INFORMATION

5.1 - Graphics Mode

Graphics mode specification:

- The AX3000 mode is 800x600 pixels, 256 colours.
- The character matrix is 22x10 pixels
- The default VGA frequency is 72 Hertz.

5.2 - Alpha-GUI Specifications

The alpha-GUI mode has the following limitations:

- maximum of 4 concurrent sessions available
- only 80-column mode supported
- currently only support for ANSI emulation family and WYSE emulation
- scrolling speed is lower
- blinking attribute not supported

Alpha-GUI mode does support the underline attribute (which is not supported by a colour text VGA monitor).

5.3 - Trouble Shooting

Care must be taken with the VGA monitor. The default VGA frequency used by the AX3000 is 72 Hertz. If the VGA monitor does not support this frequency, the vertical sync will be lost. To fix this problem, either use a more modern monitor or perform following operation:

Enter the AX3000 Set-Up (**<Ctrl><Alt><Ecs>**) and press **<F12>**. The VGA frequency is set to 56 Hertz and the display becomes visible (this emergency procedure modifies the VGA frequency only during the set-up stage).

Then select the **[Configuration]**→**[Advanced]**→**[Tunings]** menu. Within the dialog box, select the 'Scan frequency' parameter and press **<spacebar>** to enter the associated dialog box. A frequency value can be selected among the 3 available (56, 60 and 72 Hertz).

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