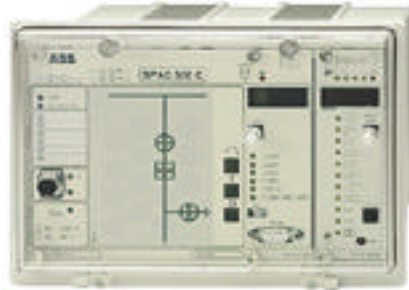


SPAC 320 C



Contents for How to Use the Simulator Program

This manual describes the various items you see in the simulation program. To choose a Help Topic, click on the underlined topic to view the text.

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Other functions

Toolbar



Exit button

Exit simulator program



Power Switch button

Simulates the switching on/off of the power supply to the SPAC 320 C relay



Factory Settings button

Change all settings to the defaults set when the relay is shipped from the factory.
WARNING: Selecting this option results in the loss of all current settings.



Factory settings button

Disabled when power supply is OFF



Simulate current and voltage injection

This window allows the simulation of current or voltage injection into the relay. Select the required module for which the current or voltage is to be injected.
Inject preset current command button
Simulates the one time (static) injection of the input current into selected input of the relay.



Simulate Current Injection

Disabled when power supply is off or when display is not in main menu



Forced Activation

Enable the force activation mode. This will place the user at Register 0.



Forced Activation

Disabled when power supply is off or during initial test routine.



Circuit Supervision

Energizing Current Circuit Monitoring function and **Trip circuit supervision** function monitor the input energizing currents and resistance of trip circuit respectively.



Circuit Supervision

Disable when power supply is off or during initial test routine.



Show Interlocking Diagram Allow user to defines under which circumstances.



Show Interlocking Diagram Disable when power supply is off.



Power/Energy measurement The power supply module SPGU240A1 or SPGU48B2 are used to provide auxiliary voltage supply needed. A green LED indicator Uaux on the front panel is lit when this power supply module is in operation.



Power/Energy measurement Disable when power/energy is off.



Change Simulator Colour This option allows the user to change the colour of the various relay items like the LED, Dipswitches, etc..



Change Simulator Speed The scrolling speed of the LEDs can be controlled using this option



Copy button Copy selected area to the clipboard. Upon selecting this option, the cursor is restricted to the SPAC 320 C relay area.
To select the required area

- Press and hold left mouse button at top left hand corner of required area.
- Move mouse to bottom right hand corner of required area. (a rectangle box is display to show the selected area)
- Release the mouse button.

Not e: Click once anywhere to cancel the copy command



View Clipboard This button will launch the clipboard viewer. It allows the user to view the items copied to the clipboard.



Print Simulator Window This function sends the current screen image to the printer attached.



SPAC 320 C manual button Show SPAC 320 C manual



Help on Simulator

Displays the help manual on how to use this simulation program



Getting Started Tutorial

A step by step guide on how to use the program



About

Display program information, version number and copyright information.

Menu Commands - File

View Clipboard -	Display the contents of the clipboard
Copy to Clipboard -	<p>Copy selected area to the clipboard. Upon selecting this option, the cursor is restricted to the SPAC 320 C relay area. <i>To select the required area</i></p> <ul style="list-style-type: none">• Press and hold left mouse button at top left hand corner of required area.• Move mouse to bottom right hand corner of required area. (a rectangle box is display to show the selected area)• Release the mouse button. <p>Note: Click once anywhere to cancel the copy command</p>
Print Simulator Window -	Print the contents of the SPAC 320 C window
Print Setup -	Change the printer configuration
Exit -	Stop running the simulator program

Menu Commands - Options

- Clear All Registers -** Resets all readings in registers (1 to 9) to zero
- Simulate current or voltage injection -** This window allows the simulation of current or voltage injection into the relay.
Select the required module for which the current or voltage is to be injected.
Inject preset current command button –
Simulates the one time (static) injection of the input current into selected input of the relay.
- Forced Output Activation -** Places the simulator in the *Forced Output Activation* position (i.e. "forced" trip mode).
Note: In the relay, this position is reached by running through the relay positions to position zero (with the reset button) and then pressing the program button down for more than 5 seconds
- Circuit supervision -** **Energizing Current Circuit Monitoring** function and **Trip circuit supervision** function monitor the input energizing currents and resistance of trip circuit respectively.
- Show interlocking diagram -** Allow user to defines under which circumstances.
- Power Energy measurement -** The power supply module SPGU240A1 or SPGU48B2 are used to provide auxiliary voltage supply needed. A green LED indicator Uaux on the front panel is lit when this power supply module is in operation.
- Change configuration -** This function allows users to change the minute board.
- Turn on off power switch -** Simulates the switching on/off of the power supply to the SPAC 320 C relay

Menu Commands - Preferences

Show Toolbar/Show Status Bar -	Displays/removes the toolbar on the screen depending on whether it is currently removed/shown respectively.
Change LED colours -	<p>Change the colours of the background and LED's to suit individual screens and preferences</p> <p>Click on the appropriate box to change the corresponding colour</p> <p>Click on the "Apply changes to Simulator" button to confirm the changes made</p> <p>Click on the "Apply default colours" button to set all colours to permanently set defaults</p> <p>Click on the "Cancel all color changes" button to cancel all changes made</p>
Change simulator speed -	<p>Change the speed at which the simulator works. This allows for adaptations to individual hardware configurations. When this option is selected, the following window is shown</p> <p>Use the left mouse button to click on the left (or right) arrow to increase (or decrease) the simulation speed. Alternatively, click (and hold) the flashing box on the slide and drag it to the required position.</p> <p>Click OK to confirm the changes made or click CANCEL to ignore any changes</p>
Change background -	Changes the background colour of the window.
Change to default settings -	<p>Change all settings to the defaults set when the relay is shipped from the factory.</p> <p>WARNING: Selecting this option results in the lost of all current settings.</p>
Change to Customized Settings -	<p>All settings are automatically saves to file when:</p> <ol style="list-style-type: none">1. Power is turned off2. Program exits <p>These (current) settings are also automatically loaded when the program is restarted.</p> <p>Another (separate) set of settings can be saved by using the SAVE AS CUSTOMISED SETTINGS option. This allows the user to keep a set of preferred initialization settings, which can be, reload at any time using the CHANGE TO CUSTOMISED SETTINGS option.</p> <p>Selecting this option results in the lost of all current settings.</p>
Save as Customized Settings -	All settings are automatically saves to file when:

1. Power is turned off
2. Program exits

These (current) settings are also automatically loaded when the program is restarted.

Another (separate) set of settings can be saved by using the SAVE AS CUSTOMISED SETTINGS option. This allows the user to keep a set of preferred initialization settings, which can be, reload at any time using the CHANGE TO CUSTOMISED SETTINGS option. Selecting this option results in the lost of all current settings.

Menu Commands - Help

Help on simulator -	See this help window
Show SPAC 320 C manual -	Show the online manual
How to use help -	Learn how to use this help window
Getting started tutorial -	Runs the tutorial on some basic functions
About SPAC 320 C -	Information about the simulator and system resources