After the SoftPanel application has been successfully installed and licensed it will startup and display the main workbench area. Please refer to the "Installation And Licensing Instructions For The SAS SoftPanel.pdf" document for a complete

description of the licensing options. The workbench area is where the individual SoftPanels will be displayed once they have been created. If this is the first time the SoftPanel has been run there will be no control panels present on the workbench (Figure 01).

🐺 SAS	MultiPane	I EX			
File	About				
-			direction and the	a fire fire	
Status:	Lonnected	Server Adr: 10.0.0.140:1250	Contig File:	MultiPanel.saspcx	

Before the SoftPanel application can be configured to add panels to the workbench, the SAS SoftPanel Admin utility must have been run and at least one User Group must have been created. The User Groups created by the Admin utility specify which system resources a particular SoftPanel will have access to. These system resources include switcher outputs that may be controlled, button templates that may be assigned to the panel, and display lists of system source and destination channels that may be selected by panel users during operation.

In order to add a SoftPanel to the workbench (or re-configure an existing SoftPanel) select "File/Setup Options" and enter the information to log in to the SAS Server Module that the SoftPanel will communicate with to access the switcher (The

Server Module must be running to do this). The I.P Address will be the I.P. Address of the computer where the SAS Server Module is installed. The I.P. Port will be the port the SAS Server Module uses to communicate with the SAS Router Control Software. This value is 1250 by default and can be changed by selecting "File/Setup" on the SAS Server Module and setting the "Client I.P. Port" value as desired. The password is specified by the SoftPanel Admin utility and is "SASDefault" by default (Same as the Router Control Software default).

Password
SAS Server Module I.P. Address
10.0.0.140
SAS Server Module I.P. Port
1250
OK Cancel

The SoftPanel setup dialog (see Figure 03) is where the SoftPanels are created, destroyed and configured for desired operation. To create a new SoftPanel click the "Create New Panel" button and choose the desired options from the "Edit Panel Options" pane. A good first step in creating a new SoftPanel would be to select the desired SoftPanel type by using the "Panel Type" drop down control (this because other available options depend on the type of panel selected).

Panel Type	Panel Type Description
Standard SOC Alpha Panel	Single Output Control panel selects sources from a display list for a single switcher output.
Standard XY Alpha Panel	Allows the operator to select the output to be controlled and select sources from a display
	list for that output.
User Programmed Button Panel	Single Output Control panel that uses hot punch buttons for source selection to a single
	switcher output (display list selection is optionally available).
Opto/Relay Association Alpha Panel	Allows an association between an Opto and a Relay to be established such that the Relay
	will follow the state of the Opto.

Figure 01

Figure 02

Once the panel type has been chosen set the remaining options in the "Edit Panel Options" pane as necessary for the desired panel operation (see Table 02). Note that as soon as any of the panel options have been changed the user will be required to either save or cancel the changes before a different panel may be selected or the setup dialog box can be closed.

Panel Edit Controls	Edit Panel Options		
Select Panel To Edit	Panel Name	Output To Control	
Monitor Control panel	Monitor Control panel	Monitor [0001]	
	Display Output Controlled	User Group	
Create New Panel	Display Panel Name	Engineering [005]	
Delete Current Panel	Panel Type	Button Template	
	Standard SOC Alpha Panel 🛛	No Template Specified	
	🕑 Enable Alpha Source Select	Number Of Buttons	
	💽 Enable Preset Exchange		
	Enable Take / Sum Option		
	Enable Opto / Relay Test Buttons	🔽 Enable Gain Control Fader	
	🔄 🗹 AutoTake Mode	Max Gain Min Gain	
Panel Configuration File In Use	✓ Xpoint Changes Set Unity Gain	+10db 🔽 -10db	
MultiPanel.saspcx	Save Save As	Cancel Changes	

Figure 03

Option Name

Option Description

Option Name	Option Description
Panel Name	A name describing the panel's function for your reference.
Display Output Controlled	Optionally display the switcher output channel controlled on SOC type panels.
Display Panel Name	Optionally display the Panel Name on the panel.
Panel Type	Specifies the base type of the panel (see Table 01).
Enable Alpha Source Select	This option will make a display list type of source selection available on the button panels in addition to the programmable hot punch buttons.
Enable Preset Exchange	If checked the panel swaps the currently active source into preset when a Take command is issued. This allows an easy back and forth swap between two sources.
Enable Take / Sum Option	For pushbutton type SOC panels allow the user to specify if the source selection buttons should sum sources on and build a mix or perform take/replace operations.
Enable Opto / Relay Test Buttons	Optionally provide test buttons to activate the selected opto or relay for Opto / Relay Association panels.
Auto Take Mode	This option causes a switcher crosspoint control command to be issued by the panel as soon as a source is selected from a display list. If this option is not active the panel user will need to click the "Take" button once a source has been selected.
Xpoint Changes Set Unity Gain	If checked the panel will issue a command to set the output that the panel is controlling to unity gain whenever a crosspoint change is made from the panel.
Output To Control	Specifies the switcher output that an SOC type panel will control.
User Group	Selects the User Group that will govern the switcher resources available to the panel. This needs to be set before a button template can be selected or an Output to be controlled can be chosen.
	The user group is defined in the Admin utility to specify which system resources may be controlled or selected by the panel. The system resources include switcher inputs and outputs, display lists, button templates, relays and optos.
Button Template	Select the button template that will define what each button does on an SOC type User Programmed Button panel. The Button Templates are configured with the SAS SoftPanel Admin utility.
Number Of Buttons	The number of buttons the panel should display (16 buttons is max).
Enable Gain Control Fader	This option adds a small gain adjustment fader (and level readout) to the panel that allows gain adjustment of the output the panel is controlling. <i>Note that if the level readout turns red the current gain value is outside the range of the panel fader.</i>
Max Gain and Min Gain	Sets the range of control for the optional gain fader.

Once the desired options have been set click the "Save" button to save the configuration to the current "Panel Configuration File" (shown as MultiPanel.saspcx in Figure 3) or "Cancel to cancel any changes made. This single file stores the configuration of the workbench and all the SoftPanels created for it. To save the SoftPanel configuration changes to a different file click the "Save As" button and specify the desired filename. This make sit possible to create multiple configuration files that can be loaded when required to completely change the operation of the SAS SoftPanel application. To load a configuration file choose the "Program Settings" tab and click the "Load New" button then select the desired configuration file (see figure 05). The selected file will be used from that point on and will be used when the application is closed and restarted.

To edit the options of an existing panel first use the "Select Panel To Edit" control to select the panel to be modified. Once the panel is chosen it's current configuration will be displayed in the "Edit Panel Options" pane (See figure 3). As soon as any change is made to the panels configuration the "Save", "Save As" and "Cancel" buttons will become active and the changes may be saved as desired with the "Save" or "Save As" buttons or canceled with the "Cancel" button.

To delete an existing panel first select the panel to be deleted with the "Select Panel To Edit" control then click the "Delete Current Panel" button and confirm or cancel the operation when the "Confirm Panel Delete" dialog (See figure 4) is displayed.

Confirm Panel Delete	×
About to delete "Monitor Control panel" SoftPanel. Please select Ok or Cancel to confirm.	
OK Cancel	

Figure 04

The "Program Settings" tab is where the general program options common to all panels on the workbench are specified. These options include: the type of license the SoftPanel application is operating under (Refer to the "Installation And Licensing Instructions For The SAS SoftPanel.pdf" document for a further description of each license type), the I.P. Address information for the SAS Server Module(s) that all the SoftPanels on the workbench will use for access to the switcher, the option to have the SoftPanel application check the Windows registry at startup to confirm that the *.saspcx file type is associated with SAS SoftPanel application, the option to allow the users to manually swap between the primary and backup SAS servers if a backup server is configured (*Note that the SoftPanel <u>always</u> attempts to use the primary SAS Server at startup*), and the option to allow the users to change the background color of the workbench. Refer to Table 03 for a more complete description of each option.

Panel Setup Program Settings General Options Check Config File Extension At Startup ✓ Allow User Manual Swap To Backup Server	SAS Server Module Settings I.P. Address 10.0.0.100 Disconnect I.P. Port 1251	
Allow User To Change Workbench Color	License Server Port 1245 SAS Server Module Settings (Backup) I.P. Address 10.0.0.140 I.P. Port 1250 License Server Port 1245 Panel Configuration File In Use MultiPanel.saspcx Load New	
License Options Local Network None - Demo License Server Network Timeout This setting defines the type of license that this SoftPanel will operate with. Changes to this information will not take effect until this SoftPanel is restarted.		

Figure 05

Option Name	Option Description
Check Config File Extension At Startup	Optionally have the SoftPanel application check the Windows registry at startup to confirm that the *.saspcx file type is associated with SAS SoftPanel application (if it is not you will be prompted if you wish to restore this association). This association allows you to double click on a *.saspcx file from File Explorer and have the SoftPanel application run with that configuration file.
Allow User Manual Swap To Backup Server	Optionally allow the user to manually connect to a backup SAS Server if one is configured. If option is not checked the user will still be prompted to swap servers if the connection to the current server is lost and valid backup server info is specified.
Allow User To Change Workbench Color	If checked a File menu item will enabled that allows the user to select the color for the workbench background.
License Options – Local	Choose this option if this SoftPanel is to be licensed for unrestricted operation on this computer only. <i>Note changes to this</i> <i>info will not take effect until the SoftPanel application is restarted.</i>
License Options – Network	Choose this option if a Network Key License Server has been installed to provide floating network license keys for the SoftPanels. <i>Note changes to this info will not take effect until the</i> <i>SoftPanel application is restarted.</i>
License Options – None / Demo	Choose this option if you wish to operate this SoftPanel unregistered in Demo Mode. Panel will operate normally except switcher control commands will not be executed. <i>Note changes to</i> <i>this info will not take effect until the SoftPanel application is</i> <i>restarted.</i>
License Options - License Server Network Timeout	The number of seconds before lost communications with the network license key server will be recognized.
Primary SAS Server I.P. Address	The IP address of the computer hosting the primary SAS Server Module and the primary netkey license server (if network license is used). 127.0.0.1 indicates local machine.
Primary SAS Server I.P. Port	The IP port the primary SAS Server Module is configured to use. Note 1250 is default.
Primary License Server I.P. port	The IP port the primary netkey license server is configured to use. Note this field only applies if the SoftPanel application is configured to use a network license key server. 1245 is default, changes to this info will not take effect until the SoftPanel application is restarted.
Primary Connect / Disconnect Button	Connect or disconnect to the primary server. Button changes function based on the current connection state. <i>Note that when</i> <i>clicked the setup dialog will be closed without saving changes as</i> <i>connection to current server is lost.</i>
Backup SAS Server I.P. Address	The IP address of the computer hosting an optional backup SAS Server Module and the backup netkey license server (if network license is used). 127.0.0.1 indicates local machine.
Backup SAS Server I.P. Port	The IP port the optional backup SAS Server Module is configured to use. <i>Note 1250 is default.</i>
Backup License Server I.P. port	The IP port the optional backup netkey license server is configured to use. <i>Note this field only applies if the SoftPanel</i> <i>application is configured to use a network license key server. 1245</i> <i>is default, changes to this info will not take effect until the</i> <i>SoftPanel application is restarted.</i>
Backup Connect / Disconnect Button	Connect or disconnect to the backup server. Button changes function based on the current connection state. <i>Note that when clicked the setup dialog will be closed without saving changes as connection to current server is lost.</i>
Load New	Load a new panel configuration file. This file specifies the panels that are to be loaded to the workbench and how they are to be configured.
Ok	Save program settings information to the "PrgConfig.xml" file and close the setup dialog box.
Cancel	Close the setup dialog without saving the program settings. Table 03

Figure 06 is an example of a SOC (Single Output Controller) type panel that is configured to display the panel name, the output controlled by the panel and a gain fader to control the level of the configured output. Also notice that since there is a "Take" button present the "Auto Take Mode" option was not selected for this panel and the "Move" label is not active so the panel cannot be moved.

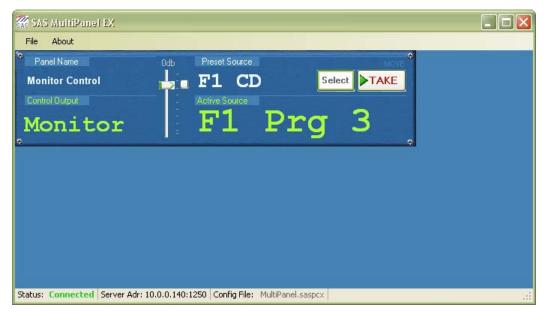


Figure 06

The status bar at the bottom of the workbench displays information about the SoftPanel application.

Status	Indicates the status of the SoftPanel applications connection to the SAS Server Module. Note that if "(BK)"
	appears after the status description this indicates that the SoftPanel is currently using the backup server.
Server Adr	Displays the I.P. Address and Port of the SAS Server Module the SoftPanel is connected to.
Config File	Displays the *.saspcx configuration file currently in use by the SoftPanel application.
	T 11 01

Table 04

This panel is configured to allow the operator to make source selections for the "Monitor" switcher output. The operator would click the "Select" button and select a source from the Source Alpha Display List (see Figure 07). The contents of the selection window are determined by the Source Alpha Display Lists that are associated with the User Group the panel is assigned to. The example (Figure 07) shows three display lists (ISDN's, TV's and Phones) in addition to the "Off" selection, which removes all sources from the output. The source display list "ISDNs" shows five sources that may be selected. These display lists and the User Groups are configured by the SAS SoftPanel Admin utility.

When a source is selected by clicking on it with the mouse, that selected source will be displayed in the "Preset Source" location on the panel. When the "Take" button is clicked, a "Take and Replace" style crosspoint command (as opposed to

a Sum on/off command) will be sent to the switcher via the SAS Server Module. When the switcher has completed the crosspoint change a tally message will be returned to the SoftPanel and the "Active Source" will be updated to reflect the new source selection for the Monitor output. Note that if the "Auto Take Mode" option had been chosen no "Take" button would be visible on the panel and selecting a source from the display list would have caused the crosspoint command to be issued immediately. Also, if the "Enable Preset Exchange" option is active for the panel the source that was displayed as "Active" will be placed in "Preset" This allows the operator to quickly swap back and forth between two sources (Active and Preset) by repeatedly clicking the "Take" button.



Figure 07

Figure 08 shows the workbench with a second SoftPanel added and the "File/Allow Panel Move" option active. The second panel is an example of an SOC User Programmed Button Panel that is configured to display the output controlled by the panel and a gain fader to control the level of the configured output. This panel was also configured to include the "Select" and "Take" buttons so that source selections for the "F1 Qbus" output could be made from the Source Display Lists assigned to the panel in addition to the sources available with the eight hot punch buttons.

On this example SoftPanel the "Enable Take / Sum Option" was selected during the panel configuration. Because of this, the operator may choose to add sources with the buttons by summing them on and building a mix, or with the more traditional Take / Replace method. Note that this summing option only applies to sources selected with the hot punch buttons. Sources selected using the Source Alpha Display Lists will be connected with a Take / Replace crosspoint operation. If more than one source is selected to the "F1 Qbus" output, the Active Source display (F1 CD in the Figure 08 example) will scroll through each active source at a rate of about one source per second.

🐺 SAS MultiPanel EX				
File About				
Panel Name	Odb	Preset Source		\$
Monitor Control		F1 CD	Select TAKE	
Control Output		Active Source		
Monitor	1.11	Fl Pr	a 3	
•	_		2	0
Control Output	0db	Preset Source	MOVE	*
Fl Qbus		F1 CD	Select TAKE	
F1 CD Impt0003	T	Second Autom		
Inpt0005 Inpt0007	1	 Take/Replace Sum 		
WO 1 WO 2	1	F1 (
Custom Label	8			
				•
				6
Status: Connected Server Adr: 10	1.0.0.140:1	250 Contig File: MultiPanel.sa	spcx	

Figure 08

Figure 09 shows the workbench with the User Programmed Button Panel removed and a Standard XY Alpha Panel added in its place. This panel is configured to display the panel name "Full System Control" and to not display the gain fader. Operation of this panel is very similar to the Single Output Controller panel. The main difference being that the operator may select the output that is to be controlled from the Output Alpha Display Lists by clicking the "Select" button adjacent to the "Current Output" label at the lower left side of the panel. Which display lists are presented and the channels in those display lists are specified by the SAS SoftPanel Admin utility.

🗱 SAS MultiPanel EX		
File About		
Panel Name	Odb Preset Source MOVE	
Monitor Control	F1 CD Select TAKE	
Control Output	Active Source	
Monitor	F1 Prg 3	
0	1:	
Panel Name	Preset Source MOVE	
Full System Control	F1 CD Select ►TAKE	
Current Output Select	Active Source	
F1 Obus	F1 CD	
\$		
Status: Connected Server Adr: 1	0.0.0.140:1250 Config File: MultiPanel.saspcx	

Figure 09

Figure 10 shows the workbench with the Standard XY Alpha Panel removed and an Opto Relay Association Panel added in its place. This panel is configured to display the panel name "Opto / Relay Control" and to include the opto and relay test buttons. These test buttons will send a command to the switcher to turn the currently selected relay (or opto) on or off so that system functions that depend on the state of the relays and optos can be tested. When tally is received from the system indicating that the relay or opto is activated the center section of the test button will light up. The Figure 10 example relay test button shows that system relay "Rlay0031" is currently energized.

The purpose if this panel is to allow the operator to create or remove an association between the state of an opto and a relay. When an opto and a relay are "associated" the relay will change state to mimic the state of the opto. In the Figure 09 example the currently selected relay "Rlay0031" has not been associated with an opto. To create or remove an association the operator would first select the relay using the "Select" button next to the "Current Relay" label. Next the opto that will control the relay is selected using the "Select" button next to the "Preset Opto" label. This will "Preset" the chosen opto (the same as is done for a preset audio source) and when the "Link" button is clicked the command to associate the relay/opto pair will be sent to the switcher. To remove any opto association from the current relay the user would select "Off" in the opto selection window and then click "Link".

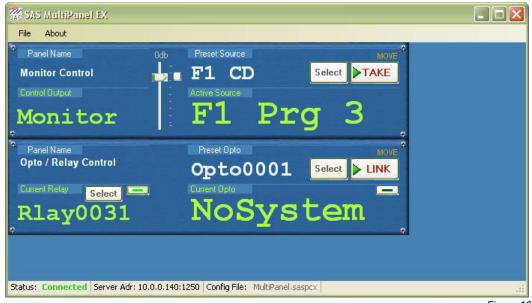


Figure 10

The location of any panel on the workbench may be adjusted by selecting "File/Allow Panel Move" from the main menu. Once this option has been activated, the "Move" label at the top right corner of the panels will turn orange and the panels may be moved by clicking the "Move" label and dragging the panel while holding the left mouse button. The "File/Prevent Panel Overlap" menu choice will prevent the panels from being moved so that they overlap each other.

The entire workbench and all the panels it contains may be instantly re-configured by loading a different configuration file. This may be done from the main workbench (as well as the setup dialog) by selecting "File/Load Panel Config File" and selecting a previously saved panel configuration file. This will cause the entire workbench to be re-configured with the panels specified in the selected configuration file. The background color of the workbench may be changed by clicking "File/Set Workbench Color" and choosing the desired color from the selection dialog that appears. *Note that the default color will always appear as the first choice in the "Custom Colors" section when the color selection dialog is opened.*

It is possible to force the SoftPanel application to disconnect from the primary SAS Server Module by selecting "File/Disconnect From Primary SAS Server". If the SoftPanel application is currently disconnected from the Server Module

then a "File/Connect To Primary SAS Server" menu choice will become available and may be used to instruct the SoftPanel application to attempt to connect to the primary Server Module at the configured I.P. Port and Address. The same connections choices will be available for the backup server if one is configured and the setup options allow it. *Note that if a connection attempt fails (either at startup or by user command) the SoftPanel application* <u>will not continue to re-attempt a connection</u>. Once the reason for the failure is corrected, the user should either restart the SoftPanel application or command a connection attempt from the file menu.

	Setup Options	
	Set Workbench Color	
~	Allow Panel Move	
	Prevent Panel Overlap	
	Load Panel Config File	
	Disconnect From Primary SAS Server	
	Connect To Backup SAS Server	
	Exit	