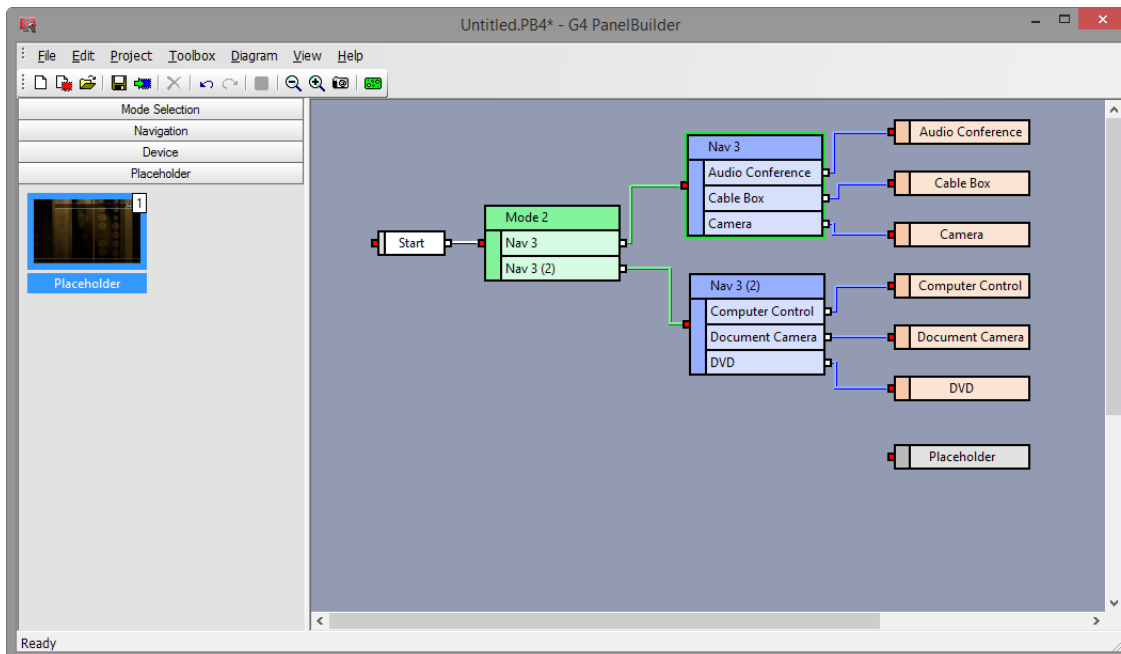




INSTRUCTION MANUAL

G4 PANELBUILDER



IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. DO NOT defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.



12. USE ONLY with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
18. DO NOT overload wall outlets or extension cords beyond their rated capacity as this can cause electric shock or fire.



The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



ESD Warning: The icon to the left indicates text regarding potential danger associated with the discharge of static electricity from an outside source (such as human hands) into an integrated circuit, often resulting in damage to the circuit.

- WARNING:** To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.
- WARNING:** No naked flame sources - such as lighted candles - should be placed on the product.
- WARNING:** Equipment shall be connected to a MAINS socket outlet with a protective earthing connection.
- WARNING:** To reduce the risk of electric shock, grounding of the center pin of this plug must be maintained.

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The AMX Warranty and Return Policy and related documents can be viewed/downloaded at www.amx.com.

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G4 PanelBuilder

Overview

G4 PanelBuilder is a stand-alone application (installed separately) from AMX that allows you to quickly create TPD4 projects for G4 Touchpanels, using either pre-fabricated templates from AMX, or user-designed templates (FIG. 1).

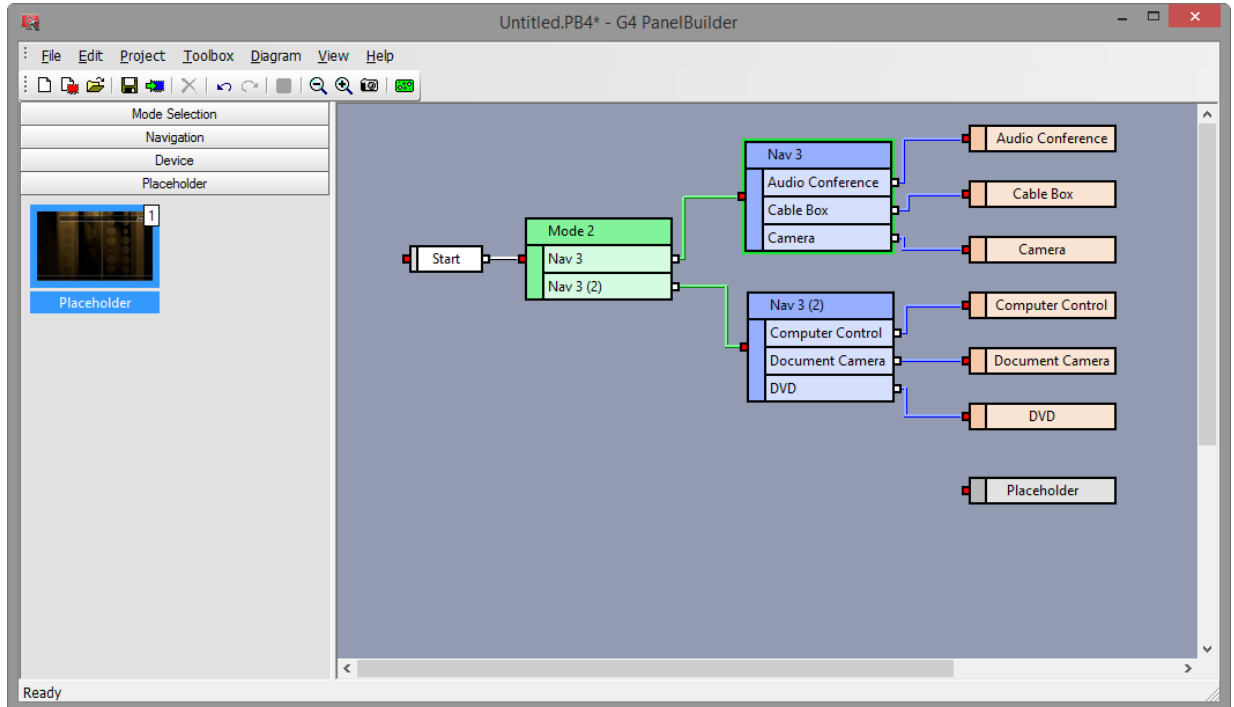


FIG. 1 G4 PanelBuilder

The G4 PanelBuilder application is designed to do the bulk of the basic layout and navigational design of a touch panel design. TPD4 is required to complete the project by specifying channel mapping information, and to generally fine-tune the project as needed.

Although G4 PanelBuilder is installed separately, it is fully integrated with TPD4. For example, the *File > New From G4 PanelBuilder* option (available only if G4 PanelBuilder is installed) launches the G4 PanelBuilder application to allow you to create a new TPD4 project.

Use the set of options in the File menu to access the key functions of the G4 PanelBuilder application:

- Click **File > New From G4 Panel Builder** to create a new TP4 panel project using G4 PanelBuilder.
- Click **File > Import Touch Panel Template** to import an existing PanelBuilder (*.TPT) or Visual Architect template file (*.VAT) into TPD4 as a starting point for your panel design.
- Click **File > Export G4 PanelBuilder Template** to export the active TP4 project as a PanelBuilder Template file (*.TPT).

System Requirements

G4 PanelBuilder supports the following platforms:

- Windows 2000 (Service Pack 3 or greater)

NOTE: *If you are installing on a Windows 2000 machine, you must have Administrator rights to install and run all required System files.*

- Windows XP Home and Professional (Service Pack 1 or greater)

Other PC requirements:

- Pentium 233 MHZ processor (minimum requirement); 300 MHZ or faster recommended.
- 75 MB of free disk space (minimum requirement); 150 MB recommended.
- 128 MB of installed memory (RAM).
- Minimum (VGA) screen resolution of 800x600
- Windows-compatible CD-ROM drive.
- Windows-compatible mouse (or other pointing device).

Supported AMX (G4) Touch Panel Types

- **MVP-7500**: 7.5" Modero ViewPoint (wireless) Touch Panel
- **MVP-8400**: 8.4" Modero ViewPoint (wireless) Touch Panel
- **NXT/NXD-1200V**: Enhanced 12" Modero Touch Panel
- **NXT/NXD-1200VG**: Enhanced 12" Modero Touch Panel (with video capabilities)
- **NXT/NXD-1500VG**: Enhanced 15" Modero Touch Panel (with video capabilities)
- **NXT/NXD-1700VG**: Enhanced 17" Modero Touch Panel (with video capabilities)
- **NXT/NXD-CV7**: 7" Modero Touch Panel (with video capabilities)
- **NXT/NXD-CA12**: 12" Modero Touch Panel
- **NXT/NXD-CV12**: 12" Modero Touch Panel (with video capabilities)
- **NXT/NXD-CA15**: 15" Modero Touch Panel
- **NXT/NXD-CV15**: 15" Modero Touch Panel (with video capabilities)
- **NXT/NXD-CV17**: 17" Modero Touch Panel (with video capabilities)
- **NXP-TPI/4**: Touch Panel Interface 4

NOTE: The nomenclature "NXT" indicates the table-top (tilt) model, and "NXD" represents the wall-mount version.

Screen Resolutions and Panel Types

Any number of template files (*.TPT) can be created to constitute a template family; it is suggested you create one for each resolution totaling 6. The resolutions and panel types are as follows:

Screen Resolutions and Panel Types		
Resolution	Panel Type	
640x480	• MVP-7500	• TPI4
800x600	• MVP-8400 • MVP-8400i	• CA12 • CV12 • TPI4
800x480	• CV7	• CV10 • CV10/PB
1024x768	• CV15 • CA15	• TPI4
1280x768	• CV17	
1280x1024	• TPI4	

According to the table there are only 6 resolutions, the minimum number to make a template family, but 12 different panel types. You only need one template per resolution but you should consider instances such as the MVP-8400(i), where the Pixels Per Inch is higher than the CV12 and the MVP-7500's limited color depth. Both examples are situations where you might consider making specific templates for those panel types.

Basic Operations

Getting Started

Creating A New Project

The first step towards designing a new *.TP4 file is creating a new project file (*.PB4).

1. Launch the G4 PanelBuilder application.
2. Select File > New. This launches the New Project dialog.
3. Type the Job Name in the corresponding field.
4. Select the Panel Type and Resolution from the drop down menus.
5. Select your desired template family from the thumbnails listed.

NOTE: If no templates are shown you will need to load them. You can either Install A Template from File or Install Templates from AMX.com.

6. After you have clicked on your desired template, click OK.
7. Your new project is now open to the G4 PanelBuilder Application Interface. A Start element is in place within the Diagram area.

NOTE: If a project is already open and you select open a new or existing project, you are prompted by the Save As dialog. The previous project will remain on screen until you are done setting up the new project.

Adding A Toolbox Element to The Diagram

Once you have a project file open you can add elements to the panel file.

1. Select the element type within the Toolbox.
2. Find the desired element, click-and-drag the element to the Diagram area.

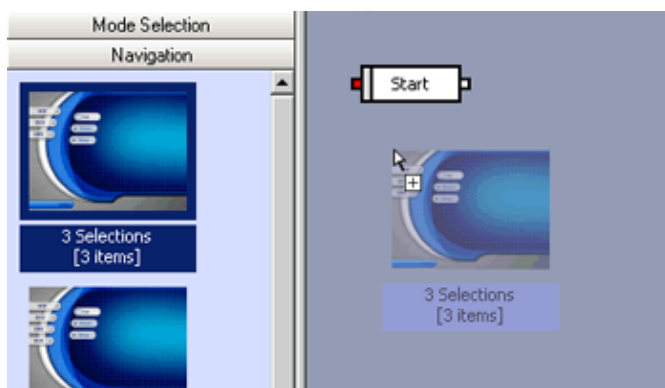


FIG. 2 Drag a Navigation element to the Diagram area

3. Now connect the Start element to the Navigation element. Click on the Exiting node (white) on the Start element and drag it to the other element. All possible connections are indicated by a green outline. If the connection cannot happen the outline is red. A connection line appears between the two elements.

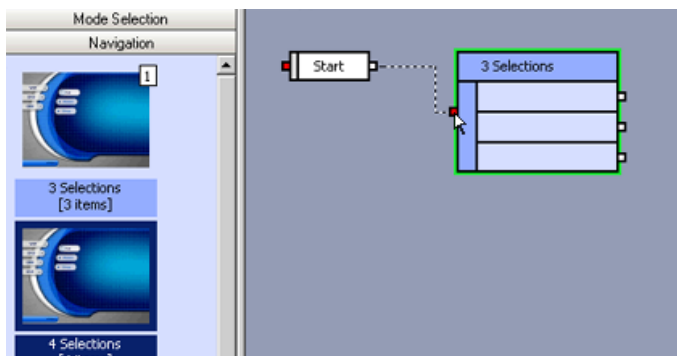


FIG. 3 Drag Start node to Navigation element node

4. You can now edit the properties for the Navigation element or select another element to add to the diagram area.

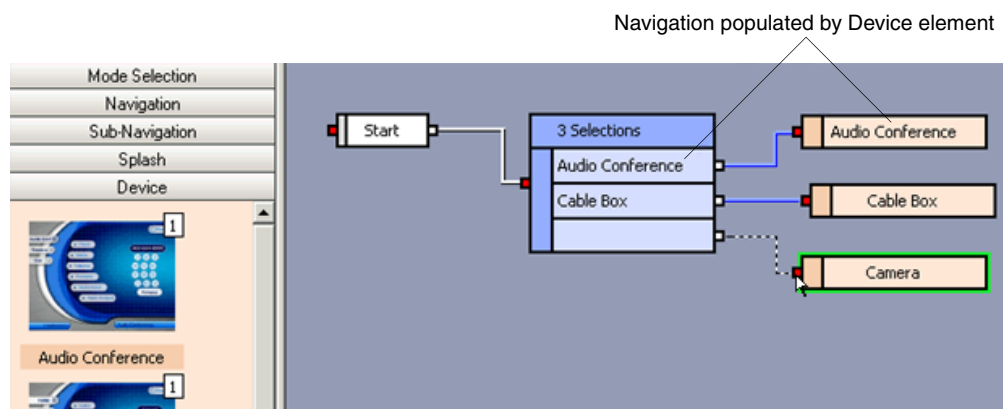


FIG. 4 Drag Navigation element node to Device element node

NOTE: An element will populate the corresponding appropriate field, when connecting. This saves you the trouble of naming element properties.

Adding Elements via The Diagram Menu

Designing G4 PanelBuilder projects is done through graphic representation. The flow between the pages is done through the Diagram area. Connections are then made between the elements in the Diagram area. To add an element using the Diagram menu:

1. Open a project or create a new project file.
2. Select **Diagram > Add Element**, then select the element with the appropriate number of selections or device for your criteria. You can either click and drag or nudge the elements within the Diagram area. Select an element and use your arrow keys to nudge.

Connecting Elements

Developing flow between pages is made possible by creating lines from one element's exiting node to another element's entering node.

1. With a template open and elements present in the diagram area, left-click and hold on the exiting node of a desired element.
2. Drag your mouse over any part of another element. If a connection is permissible, the element highlights in green. If the connection is not possible the element highlights in red.

You have now created the flow from one page to another.

Editing Diagram Element Properties via The Diagram Menu

Once an element is in place in the Diagram area, it is necessary to name the node and place text for the corresponding buttons.

1. Select an element in the Diagram area.
2. Select **Diagram > Properties** to open the Diagram Properties dialog.
3. Click within the text fields to edit. You can either type the name or use the browse (...) button to edit the *Connections* fields.
4. Once all fields are edited, click **OK**.

Generating A TPDesign4 Project

After your new project has all the necessary elements, their nodes are connected and the element properties are set; you are ready to generate a .TP4 file.

1. Select **File > Generate TPDesign4 Project** to launch the Generate TPDesign4 Project dialog.
2. Select the location to save the file and place a check next to *Open project in TPDesign4* if you want G4 PanelBuilder to launch the newly created file within TPDesign4.
3. Click **Save**.

NOTE: When you generate a TPDesign4 project G4 PanelBuilder stores information to the .PB4 file. As a result the file will indicate being "dirty" or changed. You will need to save the .PB4 file.

Saving A Project

To save a G4 PanelBuilder project file (*.PB4):

1. Select **File > Save**. If this is the first instance of a save for your project, the Save As dialog launches.
2. Type the File name in the field provided.
3. Locate the directory you would like to save within.
4. Place a check next to *Package template with project file* if you would like to include the .TPT file with the .PB4 file. Doing this will allow you to open the G4 PanelBuilder file on other machines running the application.
5. Click **Save**.

Select **Save As** if you would like to save your project under another name or different location.

1. Select **File > Save As** to launch the Save As dialog.
2. Type the File name in the field provided.
3. Locate the directory you would like to save within.
4. Place a check next to *Package template with project file* if you would like to include the .TPT file with the .PB4 file. Doing this will allow you to open the G4 PanelBuilder file on other machines running the application.
5. Click **Save**.

NOTE: When you generate a TPDesign4 project G4 PanelBuilder stores information to the .PB4 file. As a result the file will indicate being "dirty" or changed. You will need to save the .PB4 file.

Closing A Project

To exit an open project but leave G4 PanelBuilder running:

- Select File > Close. If you have not already saved, the Close Project dialog will prompt you.
- If the file save is current the file closes.

NOTE: When you generate a TPDesign4 project G4 PanelBuilder stores information to the .PB4 file. As a result the file will indicate being "dirty" or changed. You will need to save the .PB4 file.

Templates

Preview a Template via Template Manager

G4 PanelBuilder pages derive their look from templates (*.TPT files). Template Manager allows you access to all template files located on your computer. To preview any template located on your computer using Template Manager:

1. Select **File > Template Manager** to launch the Template Manager dialog.
2. Double-click on the thumbnail of a template family.
3. Select a thumbnail for one of the panel types within the family.
4. Click on the **Samples** button to launch the Template Samples Images dialog.

Opening a Most Recently Used Template

The Tasks Pane is a collection of frequently used functions. This is intended to add convenience to panel design.

In the Tasks Pane, under *Start a new project*, is a list of recently used templates.

- To create a new G4 PanelBuilder project using one of the templates listed, click on the link for the desired template name. A new project file opens using your selected template.

Install a Template via Template Manager

The style for your panel pages is dictated by the template (.TPT) file you are using. You can download templates from AMX.com or create your own and then load them into G4 PanelBuilder.

1. First, launch the Template Manager dialog by selecting **File > Template Manager**.
2. Click the **Install** button in the bottom left corner.
3. Select either:
 - From AMX.com
 - From File

Install Templates from AMX.com

G4 PanelBuilder project files (*.PB4) derive their style from templates. In addition to making your own templates, you can download AMX created templates. To install a .TPT file from AMX.com:

1. Select **File > Template Manager** to open the Template Manager dialog.
2. In the bottom left corner of the dialog, select **Install**.
3. Select *From AMX.com* from the drop-down list to launch the AMX.com Template Library dialog.
4. Select a thumbnail of one of the template families.
5. Click the **Install** button.

If the .TPT file already resides on your computer you will be prompted by the Replace Template dialog. Select one of the following:

- **Yes** - Confirms the replacement of the .TPT file on a panel-by-panel basis.
- **Yes All** - Confirms the replacement of all .TPT files at one time.
- **No** - Denies the replacement of the .TPT file on a panel-by-panel basis.
- **No All** - Denies the replacement of all .TPT files at one time.
- **Abort** - Cancels the template import with no changes.

NOTE: If you replace a .TPT file that is referenced by a .PB4 file, it will be updated in the .PB4 file.

6. After the template has been installed, click **Close**.

Install a Template From File

G4 PanelBuilder utilizes templates to apply appearances to panel pages. You can import your own local files as a template (.TPT) for use within G4 PanelBuilder.

1. Select **File > Install Templates From File** to launch the dialog.
2. Locate the .TPT file you would like to import.
3. Click **Install**.

NOTE: *Templates are identified by their job names. Regardless of file name, if the job name already exists, you are prompted by the Replace Template dialog.*

If you replace a .TPT file that is referenced by a .PB4 file, it will be updated in the .PB4 file.

Remove a Template From G4 PanelBuilder

Panel pages designed in G4 PanelBuilder depend on templates to dictate their style. The Template Manager allows you to preview, add and remove templates from your local directory.

To remove template files (*.TPT) files:

1. Open the Template Manager dialog by selecting **File > Template Manager**.
2. Select the thumbnail of the template to be removed.
3. Click **Remove** at the bottom of the window.
4. Confirm you have selected the appropriate template and click **OK**.

Opening A Project

To open a (*.PB4) file in G4 PanelBuilder:

1. Select **File > Open** to launch the Open Project dialog.
2. Select the file and click **OK**.

NOTE: *If a project is already open and you select open a new or existing project, you are prompted by the Save As dialog. The previous project will remain on screen until you are done setting up the new project.*

Changing Color Schemes

If the template you are working with has more than one color scheme available the Color Schemes button is active in the toolbar.

To change the color scheme of your project file:

1. With your project file open go to **Project > Color Schemes** to open the Color Schemes dialog.
2. Select the color scheme in the field and click **OK**.

While the color change is not reflected in the toolbox, you will see it if you select an element and go to **Diagram > Preview**.

Creating a New Project from File

You can change templates attributed to projects and create a new project as a result.

1. Select **File > New From File** to launch the New From File dialog.
2. Open your desired project file (*.PB4).
3. The next window to open is the New project dialog. Select the new template to be used with the project.
4. Click **OK**.

NOTE: *If a project is already open and you select open a new or existing project, you are prompted by the Save As dialog. The previous project will remain on screen until you are done setting up the new project.*

Editing Project Properties

You can edit some of the project's properties as well as add information specific to you, i.e., Dealer ID and Designer ID.

1. Select **File > Project Properties** to launch the Project Properties dialog.
2. Place your cursor within the white fields to add and edit text.

To set a password for the project:

1. Click the drop-down menu for *Protection*. Select either:
 - **read-only** - project can be opened; not changed.
 - **locked** - project cannot be opened.

NOTE: *Password protection extends only to TPDesign4. Projects password protected in G4 PanelBuilder can still be opened and used.*

2. Type a password in the field provided.
3. Re-type the password within *Confirm*.
4. Click **OK** when all changes have been made.

NOTE: *Project properties differ from file properties established in TPDesign4. File properties entered in TPDesign4 are what is displayed in the Template Manager dialog.*

Alternate Screen Names

G4 PanelBuilder supports alternate screen names for use with elements with longer names. Within TPDesign4, the template designer can designate abbreviated text for substitution. You can then change the on-screen text in PanelBuilder and the default text fits without the need for modification.

The full name of the element is always displayed in the toolbox area.

Using Unicode Text

G4 PanelBuilder supports assigning text to template elements that differs from the element name. This means you can rename an element, and the new name will be used to populate panel titles and button names. Additionally, the new text can be set in Unicode. To assign Unicode text to a template element:

1. Select the element within the diagram area.
2. Select **Diagram > Properties** to open the Diagram Properties dialog.
3. Click on the browse button (...) to launch the Unicode Edit dialog widow.
4. Type the Unicode within the text field and the equivalent is displayed below.
5. Click **OK** to close the Unicode Edit dialog.
6. Click **OK** to close the Diagram Properties dialog.

The Unicode can now only be edited via the Unicode Edit dialog. If the element name and screen name differ, both are displayed within the node.

If Unicode characters are specified but the template does not support the specified font a Unicode font is used only in those instances. To set the Unicode Font:

1. Select **Project > Project Properties** to open the Project Properties dialog.
2. From the drop down list, select the font G4 PanelBuilder is to use in the event the Unicode character font is not supported.
3. Click **OK**.

Preview Diagram Element

G4 PanelBuilder files are designed within the diagram area using graphic representation for the panel pages. It is necessary to see how the pages will look when finished. Will the text fit the selected button? To preview an element within the Diagram area:

1. Select an element in the Diagram area.
2. Select **Diagram > Preview** to launch the Diagram Preview dialog. This view is what the finished panel will look like.
3. When finished click **Close**.

Preview a Toolbox Element

G4 PanelBuilder uses graphic representation within the Diagram area to develop panel files and express flow between pages. While the toolbox does contain thumbnails for the elements, you can view larger screenshots of each element. To preview a toolbox element:

1. Select an element in either the toolbox or Diagram area.
2. Select **Toolbox > Element Preview** to launch the Template Sample Images dialog.
3. Click **Close** when you are finished.

Globally Remove an Element Instance

G4 PanelBuilder uses the Diagram area as a graphic representation for the flow panel pages take. You create this flow by placing elements within the Diagram area and then connecting them accordingly.

You can delete these elements from the work area individually or in a global fashion. To globally remove an element:

1. Select the element thumbnail to be removed within the Toolbox.
2. Select **Toolbox > Remove All Instances From Diagram**.

Undo, Redo And Delete

The crux of G4 PanelBuilder is the graphically driven interface of the Diagram area. You are able to move elements around within the provided area as well as connect them to develop a flow. It is possible to edit these actions via the Edit menu. The functions, undo, redo and delete do not apply to changes made to element properties.

To Undo an action in the Diagram area:

- Select **Edit > Undo**.

To Redo an Undo or Delete action:

- Select **Edit > Redo**.

To delete an element or connection in the Diagram area:

1. Select the item in the Diagram area.
2. Select **Edit > Delete**.

Create Snapshots to Clipboard

Since designing panel projects in G4 PanelBuilder is a visual exercise, where you drag and link individual elements to make a flow within the Diagram area. It is necessary to be able to show the design or "snapshot" of the intended look. Once you are ready to create a snapshot to your computer's clipboard:

1. Select **Diagram > Copy Snapshot To Clipboard**.
2. Open a graphic program, i.e., Paint or Photoshop and paste the image into it.

NOTE: Even if you zoom in or out of the Diagram area, the default, 100%, view is used in creating a snapshot to clipboard.

Show and Hide Grid

The Diagram area allows you to visually arrange your panel pages and connect them to create a flow. You can toggle a grid to snap the elements to on and off. To show the grid:

- Select **Diagram > Show Grid**. When a check is present next to this function in the Diagram menu, the elements will align incrementally and the grid is shown.

Snap To Grid

The Diagram area allows you to visually arrange your panel pages and connect them to create a flow. To have the elements snap to the grid:

- Select **Diagram > Snap To Grid**. When the check is present the elements snap to the grid. The elements align according to the grid in the Diagram area.

Zoom In and Out of Diagram

When designing a G4 PanelBuilder file, you place elements within the Diagram area, set properties and create connections between the elements to establish flow. To zoom in or out of the Diagram area:

- Select **Diagram > Zoom Out/In**. This function will zoom incrementally.

To select the percentage in which to zoom:

- Select **Diagram > Zoom** and then select the desired percentage.

NOTE: Even if you zoom in or out of the Diagram area, the default, 100%, view is used in creating a snapshot to clipboard.

Using Web Updates

Newer versions of G4 PanelBuilder can now be acquired via the internet. The Web Update utility accesses the AMX web site with the application ID and version number and searches for updates.

1. Select **Help > Web Update** to check for updates.
2. If updates are available for the installed version of G4 PanelBuilder they will be downloaded at this time.
3. After the download is complete Web Update will close G4 PanelBuilder and the updates will be added.

If you do not have Web Update installed, you will receive a window indicating where it can be downloaded.

Exiting G4 PanelBuilder

After you have created a new touch panel page, generated it and saved it, you are ready to close G4 PanelBuilder.

- Select **File > Exit**. If you have not already saved a currently open project, you are prompted to do so now. Confirm, deny or cancel the changes.

Creating Templates for G4 PanelBuilder

Overview

A G4 PanelBuilder template is a TPD4 file complete with pages, popups and buttons, named in a manner that G4 PanelBuilder will understand the relationship between all of the elements. Then, based on the established elements, G4 PanelBuilder customizes the TPD4 file based on the navigation flow you designed.

Any number of template files (*.TPT) can be created to constitute a template family, it is suggested you create one for each resolution totaling 6. You only need one template per resolution but you should consider instances such as the MVP-8400(i), where the Pixels Per Inch is higher than the CV12 and the MVP-7500's limited color depth. Both examples are situations where you might consider making specific templates for those panel types.

1. You should spend some time deciding what you want the panel to do. What navigation model are you going to use? You know you're going to have the required template elements but are some of your menus so complex they will require sub-menus? What devices and features will the template include? Consider using some optional template elements. Careful consideration will reveal the type of navigation you will need.

Things to remember:

- You must have a minimum of 1 Navigation element.
- You must have a minimum of 1 Placeholder element.
- You must have a main preview image ("[preview].jpg" or "[preview].png").
- You cannot create a "drill-down" style of navigation with G4 PanelBuilder.
- Your navigation menus will always be on top of your Devices. Make sure they do not conflict with each other.

Suggestion: Create a simple TPD4 file showing the desired output. Doing this gives you a starting point to begin looking at how to modify the TPD4 file to create a template.

2. You are ready to begin restructuring the elements to fit your needs. Start with the Device and Navigation elements first and the Placeholder elements last. The key for creating your own elements naming conventions. G4 PanelBuilder looks for navigations with the name, [nav#navName]pageName.

Suggestions: Start with the most complex Device element first, then make copies of it. This method allows you to modify and delete thus the pages are more likely to be similar. Also, create several different variations of Navigation and Sub-Navigations (3 items, 4 items, etc...).

3. Create the preview images for the elements. Images do not have to be full size, in fact AMX templates utilize a 1/4 screen size to reduce the template file size.

Suggestion: Mock up the interface in TPDesign4 by opening the corresponding page and display all applicable popups. Select **Page > Copy Image To Clipboard**. Then open the resource manager and select Paste. Now rename the new image to the appropriate element name.

4. After you have completed the template design, do a generate. A .TPT file is created and a list of errors and warnings are displayed at this time, if applicable.

5. Repeat the design for other resolutions.

Things to remember:

- You can use TPD4's **Save As Other Panel Type** when appropriate or as a starting point.
- Leave the "Job Name" in the Panel Properties the same for all related TPD4 files, this is the basis of a template family.
- Not all resolutions have to be done at once. If necessary you can build the ones you currently need and address the other resolutions as they present themselves.

Below is the workspace for TPDesign4. The pages are highlighted in the color of the element they represent (FIG. 5).

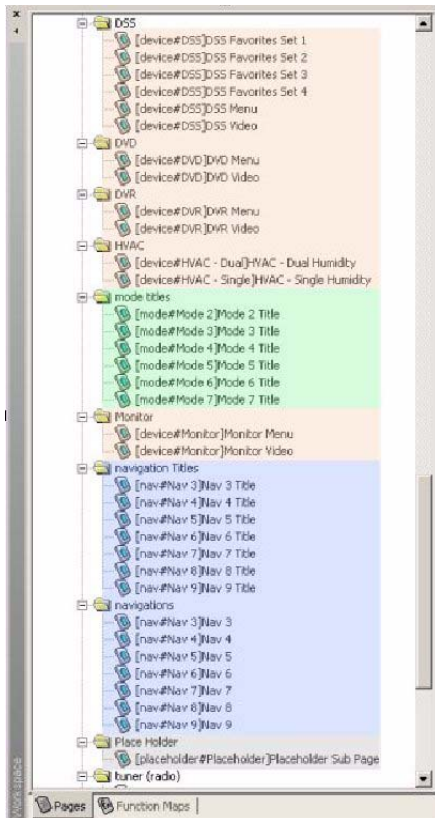


FIG. 5 G4 PanelBuilder Template - workspace for TPDesign4

Creating a New Touch Panel Project

G4 PanelBuilder provides a quick alternative to creating touch panel projects from scratch. Use this option to launch the G4 PanelBuilder application and create the basic layout and navigation of your panel file.

1. Select **File > New From G4 PanelBuilder** to launch the G4 PanelBuilder application. In G4 PanelBuilder, there are several possible approaches to creating a new PanelBuilder (*.PB4) file in the G4 PanelBuilder application:
 - (In G4 PanelBuilder, select **File > New** (or select *Choose Template* in the Tasks Pane) to create a new PanelBuilder project file based on existing templates (that were either downloaded from www.amx.com, or were created in TPDesign4).
 - (In G4 PanelBuilder, select **File > New From File** (or select *Start From Existing Project* in the Tasks Pane) to open a copy of an existing PanelBuilder project file to use as a starting point.
 - (In G4 PanelBuilder, select a template from the list of recently opened templates (or select *Start a New Project* in the Tasks Pane).
2. In G4 PanelBuilder, develop the PanelBuilder project as desired. Refer to the G4 PanelBuilder help file for details on creating a G4 PanelBuilder (*.PB4) file.
3. In G4 PanelBuilder, select **File > Save** to save the PB4 file. Use **File > Save As** to save the file under a new name and/or specify a different target directory.
4. In G4 PanelBuilder, select **File > Generate TPDesign4 Project**. In the Generate TPDesign4 Project dialog, specify a name and target directory for the (*.TP4) file. By default, once the TP4 file has been generated, the project is automatically opened in TPDesign4 (de-select the *Open Project in TPDesign4* option to disable this feature).
 If the project does not automatically open in TPDesign4, launch TPDesign4 and open the project file (**File > Open**). TPDesign4 treats projects generated in G4 PanelBuilder the same as any other TP4 project file; use TPDesign4 to assign channel mapping information and make any other refinements to the project as needed.
5. Save the project (**File > Save**). The file is now ready for transfer.

NOTE: Use the **Panel > Send to G4 PanelPreview** option to preview the resulting panel file in the G4 PanelPreview application.

Importing G4 PanelBuilder Templates

You can import existing G4 PanelBuilder template (*.TPT) files to take advantage of the prefabricated elements they contain:

1. Select **File > Import G4 PanelBuilder Template** to access the Import G4 PanelBuilder dialog. Locate and open the desired template file (*.TPT).

If you have downloaded G4 PanelBuilder templates from www.amx.com, they reside in the following directory:

C:\Program Files\Common Files\AMXShare\G4Templates

2. The selected template file is opened in TPDesign4 as a TP4 project file.
3. Modify and save the file as needed.

Creating G4 PanelBuilder Templates

You can use TPDesign4 to create custom G4 PanelBuilder template (*.TPT) files.

A template is essentially just a TPDesign4 project (*.TP4) file with pages, popup pages and buttons named in a specific way that allows G4 PanelBuilder to recognize the elements in the project, and understand the relationships between these elements. Once a project file is exported as a G4 PanelBuilder Template (*.TPT) file, it can be used as a starting point for panel design in the G4 PanelBuilder application.

The basics of this operation are simple: once you have created or opened a TP4 file, select File > Export As G4 PanelBuilder Template. Assuming that the project adheres to the various rules required by G4 PanelBuilder for a valid template file, the file is exported with the TPT file extension. There are certain basic requirements that must be met by the TP4 file before it can be exported as a G4 PanelBuilder Template (TPT) file:

- The project must contain at least one Navigation Element. A Navigation element consists of at least one popup (may contain multiple popups), and represents the place where you make most navigation selections (i.e. a main menu page).
- The project must contain at least one Placeholder Element. A Placeholder element is a blank or empty device/feature element that allows you to include items in the project that are not specifically included in the template.
- The project must contain at least one main Preview image. A Preview image is the image that is used for thumbnail representation of the template within the G4 PanelBuilder application.

If TPD4 detects that there are problems with the file that would prevent it from being used by G4 PanelBuilder, these errors and warnings are listed in the Export As G4 PanelBuilder dialog.

Creating Templates with Alternate Screen Names

G4 PanelBuilder supports alternate screen names for use with elements with longer names. The alternate name must be defined by the template creator.

You must create an info button for the device and use this syntax:

[info]alternate name

For example, the device Audio Conference could have the alternate screen name of Audio Conf. displayed on the navigation button. The info button is defined as:

[info]Audio Conf

Creating Templates with Color Schemes

When you create a template within TPDesign4 you can designate color palettes from which to work. Defined color palettes are Color Schemes, utilized by G4 PanelBuilder for changing color schemes.

Define The Color Scheme

1. Within TPDesign4, select **Panel > Edit Palettes** to open the Edit Palettes dialog.
2. Select *Rename* to edit the name of the palette.
3. Define the colors used in the palette.
4. Repeat steps 2 and 3 for as many color schemes you want available within the template file.
5. Click **Close**.

Create A Preview Image

Before TPDesign4 will export a template file, all color schemes must have a sample image.

1. Select a panel page that best represents the color scheme used. It is suggested you use the same panel page for all color schemes to better show the color changes.
2. With the selected panel page open and active, select **Page > Create Template Preview Image** to open the Create Template Preview Image dialog.
3. Set *Element Type* to *Palette*.
4. The *Name* must match the name you used in step 2 of *Define The Color Scheme*.
5. You can set the *Scale*, *File Format* and *Compression* at your discretion.
6. Click **OK**.

You can now export the file as a template, open and use it within G4 PanelBuilder.

TPDesign4 and G4 PanelBuilder

Overview

Although G4 PanelBuilder is installed separately from TPDesign4, it is fully integrated with TPD4. For example, the *File > New From G4 PanelBuilder* option in TPDesign4 (available only if G4 PanelBuilder is installed) launches the G4 PanelBuilder application to allow you to create a new TPD4 project.

Use the set of options in the TPDesign4 File menu to access the key functions of the G4 PanelBuilder application:

- Click **File > New From G4 Panel Builder** to create a new TP4 panel project using G4 PanelBuilder.
- Click **File > Import Touch Panel Template** to import an existing PanelBuilder (*.TPT) or Visual Architect template file (*.VAT) into TPD4 as a starting point for your panel design.
- Click **File > Export G4 PanelBuilder Template** to export the active TP4 project as a PanelBuilder Template file (*.TPT).

Creating a New TPD4 Project Using G4 PanelBuilder

The G4 PanelBuilder application (installed separately) provides a quick alternative to creating touch panel projects from scratch in TPDesign4. Use this option to launch the G4 PanelBuilder application and create the basic layout and navigation of your panel file. In TPDesign4:

1. Select **File > New From G4 PanelBuilder** to launch the G4 PanelBuilder application. In G4 PanelBuilder, there are several possible approaches to creating a new PanelBuilder (*.PB4) file in the G4 PanelBuilder application:
 - In G4 PanelBuilder - select **File > New** (or select *Choose Template* in the Tasks Pane) to create a new PanelBuilder project file based on existing templates (that were either downloaded from www.amx.com, or were created in TPD4).
 - In G4 PanelBuilder - select **File > New From File** (or select *Start From Existing Project* in the Tasks Pane) open a copy of an existing PanelBuilder project file to use as a starting point.
 - In G4 PanelBuilder - select a template from the list of recently opened templates listed under **Start a New Project** in the Tasks Pane).
2. (In G4 PanelBuilder) Develop the PanelBuilder project as desired. Refer to the G4 PanelBuilder help file for details on creating a G4 PanelBuilder (*.PB4) file.
3. (In G4 PanelBuilder) Select **File > Save** to save the PB4 file. Use **File > Save As** to save the file under a new name and/or specify a different target directory.
4. (In G4 PanelBuilder) Select **File > Generate TPD4 Project**. In the Generate TPD4 Project dialog, specify a name and target directory for the (*.TP4) file.
By default, once the TP4 file has been generated, the project is automatically opened in TPD4 (de-select the Open Project in TPD4 option to disable this feature).
5. If the project does not automatically open in TPD4 (see above), launch TPD4 and open the project file (**File > Open**). TPD4 treats projects generated in G4 PanelBuilder the same as any other TP4 project file. Use TPD4 to assign channel mapping information and make any other refinements to the project as needed.
6. Save the project (**File > Save**).

The file is now ready for transfer.

NOTE: Use the *Panel > Send to G4 PanelPreview* option to preview the resulting panel file in the G4 PanelPreview application.

Importing G4 PanelBuilder Templates

You can import existing G4 PanelBuilder template (*.TPT) files into TPDesign4 to take advantage of the prefabricated elements they contain:

1. Select **File > Import Touch Panel Template** to access the *Import Touch Panel Template* dialog. Locate and open the desired template file (*.TPT).
If you have downloaded G4 PanelBuilder templates from www.amx.com, they reside in the following directory:
C:\Program Files\Common Files\AMXShare\G4Templates
2. The selected template file is opened in TPD4 as a TP4 project file.
3. Modify the file as needed.

Chameleon Images, Custom Palettes and G4 PanelBuilder

Chameleon images can be used in conjunction with custom palettes to create G4 PanelBuilder template files that, when opened in the G4 PanelBuilder application, are capable of switching from one color scheme to another without having to edit the buttons directly. For example, you could create a single template file with four different color palettes that would allow you to use the same template to quickly produce four different variations on the design - one color scheme for each design. The Color Schemes feature in G4 PanelBuilder allow you to apply different "color skins" to a single template.

Since the Fill and Border colors are in turn associated with a particular color palette (which is saved as part of the TPD4 project), the colors used to render the chameleon image will change if and when a different color palette is applied to the template in the G4 PanelBuilder application.

Chameleon images utilize the 4 color channels that comprise 32-bit PNG images to define separate colorizable regions.

Using chameleon images coupled with custom palettes to create Color Schemes requires the use of both TPD4 and G4 PanelBuilder: Chameleon images are imported and applied to buttons (or popup pages) in TPD4. Custom palettes are created in TPD4, and saved as part of the TPD4 project. TPD4 is also required to export the project as a G4 PanelBuilder Template (*.TPT). However, the primary benefits of these features are realized in the G4 PanelBuilder application (via the Project > Color Schemes feature).

Not all TPD4 projects support the Color Schemes feature in G4 PanelBuilder. In order to utilize Chameleon Images and Color Schemes in G4 PanelBuilder, the TPD4 project must meet several requirements before being exported as a G4 PanelBuilder template file (via the **File > Export as G4 PanelBuilder Template** option):

The project must utilize at least one chameleon image (meaning that a chameleon image has been applied to at least one button in the project). There are also several requirements for images to allow them to be recognized as chameleon images by TPD4. The project must include at least one custom palette (in addition to the default palette). The project must include one preview image for each of the custom palettes that are included. These preview images are used to display the color options that are available for this template in G4 PanelBuilder. Note that if the exported project does not meet these requirements, the Color Schemes feature in G4 PanelBuilder will be disabled for this template.

When a valid TPD4 project file is exported as a G4 PanelBuilder template, and then opened in the G4 PanelBuilder application, the **Project > Color Schemes** option (in the G4 PanelBuilder application) allows you to apply different color schemes to the template with a single click.

See Also:

- For instructions on creating new palettes in TPD4 (and related topics), refer to the TPDesign4 online help.
- For instructions on exporting TPD4 projects as G4 PanelBuilder Templates, refer to the *Creating G4 PanelBuilder Templates* section (below).
- For instructions on using the *Color Schemes* feature in G4 PanelBuilder to apply different color schemes to a panel builder project, refer to the G4 PanelBuilder online help.

Creating G4 PanelBuilder Templates

You can use TPD4 to create custom G4 PanelBuilder template (*.TPT) files.

A template is essentially just a TPD4 project (*.TP4) file with pages, popup pages and buttons named in a specific way that allows G4 PanelBuilder to recognize the elements in the project, and understand the relationships between these elements.

Once a TP4 project file is exported as a G4 PanelBuilder Template (*.TPT) file, it can be used as a starting point for panel design in the G4 PanelBuilder application.

The basics of this operation are simple: once you have created or opened a TP4 file, select **File > Export As G4 PanelBuilder Template**. Assuming that the project adheres to the various rules required by G4 PanelBuilder for a valid template file, the file is exported with the TPT file extension. There are certain basic requirements that must be met by the TP4 file before it can be exported as a G4 PanelBuilder Template (TPT) file:

- The project must contain at least one Navigation Element. A Navigation element consists of at least one popup (may contain multiple Popups), and represents the place where you make most navigation selections (i.e. a main menu page).
- The project must contain at least one Placeholder Element. A Placeholder element is a blank or empty device/feature element that allows you to include items in the project that are not specifically included in the template.
- The project must contain at least one main Preview image. A Preview image is the image that is used for thumbnail representation of the template within the G4 PanelBuilder application. TPD4 offers a tool that aid in the creation of preview images that are embedded in G4 PanelBuilder template files, the *Create Template Preview Image* dialog is available via the Page menu (FIG. 6):

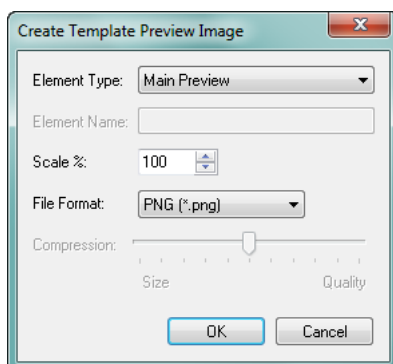


FIG. 6 Create Template Preview Image dialog

NOTE: Projects that utilize custom palettes must also contain one preview image for each color palette that will be available for selection in G4 PanelBuilder (via the Color Schemes option).

Template Requirements

Overview

There are a few key items required of all templates. TPD4 will not allow you to create a template without:

- A minimum of 1 *Navigation Element*
- A minimum of 1 *Placeholder Element*
- A main *Preview Image* ("[preview].jpg" or "[preview].png")

	Must Contain At Least One Page	May Contain Multiple Pages	Must Contain At Least One Popup	May Contain Multiple Popups	Can Link To Start	Can Link To Mode	Can Link To Navigation	Can Link To Sub-Navigation	Can Link To Splash	Can Link To Device	Can Link To Placeholder	Can Link To Feature	Can Link To Sub-Feature
Start													
Mode													
Navigation													
Sub-Navigation													
Splash													
Device													
Placeholder													
Feature													
Sub-Feature													

FIG. 7 G4 PanelBuilder Templates - Required Template Elements

G4 PanelBuilder Templates - Required Template Elements	
Navigation Elements	
This is the main menu where most of your navigation selections are made.	
<ul style="list-style-type: none"> • Consists of at least one popup but can contain multiple Popups. • Cannot contain any pages • Only one can be displayed at a time. 	
[nav#navName] pageName	
• navName	• The name of the Navigation as it will appear within G4 PanelBuilder.
• pageName	• The base page name that will be used in the generated TP4 project.
Only one of the pages or Popups in A Navigation element can contain an Info button. The Info button contains the page flip information for displaying the Navigation element and can contain an optional icon image.	
[info]buttonName	
• buttonName	This is unused and the button is deleted in the generated TP4 project.
The Popups in the Navigation element must contain at least one item button that will be filled with navigation information. Item buttons are ordered within the Navigation element in order of left to right then top to bottom.	
[item]buttonName	
• buttonName	This is the button name used in the generated TP4 project.
Popups in a Navigation element can contain one or more Title buttons. The text will be replaced with the name given to the Navigation in the generated TP4 project.	
[title]buttonName	
• buttonName	This is the button name used in the generated TP4 project.

G4 PanelBuilder Templates - Required Template Elements (Cont.)

Placeholder Elements

This is a blank device element that allows you to represent unique items in the diagram area.

- Is one page and may have optional Popups.
- Only one Placeholder element can be displayed at a time.

[placeholder#placeholderName]pageName

- | | |
|-------------------|---|
| • placeholderName | The name of the Placeholder element as it appears in G4 PanelBuilder. |
| • pageName | The base page name used in the generated TP4 project. |

Only one page or popup within a Placeholder element can contain an **Info** button. The Info button contains the page flip information for displaying the Placeholder element and can also contain an optional icon image.

[info]buttonName

- | | |
|--------------|--|
| • buttonName | This is unused and the button is deleted in the generated TP4 project. |
|--------------|--|

The pages and pops in a Placeholder element can contain one or more **Title** buttons. The text is replaced with the name given to the Placeholder element in the generated TP4 project.

[title]buttonName

- | | |
|--------------|--|
| • buttonName | The button name will be used in the generated TP4 project. |
|--------------|--|

Optional Template Elements

There are required elements when developing templates but G4 PanelBuilder also supports a series of optional elements that will make your templates more robust.

There are rules that govern all template elements (see FIG. 7 on page 18):

Your templates can have any of the following:

G4 PanelBuilder Templates - Optional Template Elements

MODE ELEMENTS

This element is generally used for designating "modes" your system will work in, i.e., "Video Conference Mode" or "Presentation Mode." Additionally, Mode elements can be associated with rooms.

- Consists of a single page and can contain multiple Popups.
- Only one Mode element can be displayed at a time.

[mode#modeName]pageName

- | | |
|------------|--|
| • modeName | The name of the Mode as it will appear in G4 PanelBuilder. |
| • pageName | The base page name used in the generated TP4 project. |

Only one page in a Mode element can contain an **Info** button. The Info button contains the page flip information for displaying the Mode element and can also contain an optional icon image.

[info]buttonName

This text is used to populate the mouseover element description in the toolbox.

- | | |
|--------------|---|
| • buttonName | Unused; the button is deleted in the generated TP4 project. |
|--------------|---|

The page in the Mode element must contain at least one **Item** button that contains the navigation information. Item buttons are ordered within the Mode element by left-to-right then top-to-bottom.

[item]buttonName

- | | |
|--------------|--|
| • buttonName | The button name used in the generated TP4 project. |
|--------------|--|

Popups in a Mode element can contain one or more Title buttons, whose text is replaced with the name given to the Mode in the generated TP4 project.

[title]buttonName

- | | |
|--------------|--|
| • buttonName | The button name used in the generated TP4 project. |
|--------------|--|

SUB-NAVIGATION ELEMENTS

This element is a submenu and can occur on screen with Navigation elements.

- Consists of at least one popup and can contain multiple Popups.
- Cannot contain pages.

[subnav#navName]pageName

- | | |
|------------|--|
| • navName | The name of the Sub-Navigation element as it appears in G4 PanelBuilder. |
| • pageName | The base page name that is used in the generated TP4 project. |

Only one of the Popups in a Sub-Navigation element can contain an **Info** button, which contains the page flip information for displaying the Sub-Navigation element and can also contain an optional icon image.

G4 PanelBuilder Templates - Required Template Elements (Cont.)	
[info]buttonName	
This text is used to populate the mouseover element description in the toolbox.	
• buttonName	Unused; the button is deleted in the generated TP4 project.
Popups in the Sub-Navigation element must contain at least one Item button that will contain navigation information. Item buttons are ordered in the Navigation element left-to-right then top-to-bottom.	
[item]buttonName	
• buttonName	The button name used in the generated TP4 project.
The Popups in a Sub-Navigation element can contain one or more Title buttons. The text within the Title buttons are replaced with the name given to the Sub-Navigation in the generated TP4 project.	
[title]buttonName	
• buttonName	The button name used in the generated TP4 project.
SPLASH ELEMENTS	
This element is a popup that can contain an image, i.e., corporate logo.	
<ul style="list-style-type: none"> Consists of at least one popup and can contain multiple Popups. Cannot contain pages. 	
[splash#splashName]pageName	
• splashName	The name of the Splash element as it appears in G4 PanelBuilder.
• pageName	The base page name that is used in the generated TP4 project.
Only one of the popups in a Splash element can contain an Info button, which contains the page flip information for displaying the Splash element and can also contain an optional icon image.	
[info]buttonName	
This text is used to populate the mouseover element description in the toolbox.	
• buttonName	Unused; this button is deleted in the generated TP4 project.
Popups in a Splash element can contain one or more Title buttons. The text within the buttons is replaced with the name given to the Splash element in the generated TP4 project.	
[title]buttonName	
• buttonName	The button name used in the generated TP4 project.
DEVICE ELEMENTS	
This element is the actual device used. For reference, consult AMX templates where we list the most commonly used devices.	
<ul style="list-style-type: none"> Consists of one page and can contain multiple Popups. Only one Device element can be displayed at a time. 	
[device#deviceName]pageName	
• deviceName	The name of the Device as it appears in G4 PanelBuilder.
• pageName	The base page name used in the generated TP4 project.
Only one page or popup in a Device element can contain an Info button which contains the page flip information for displaying the Device element and can also contain an optional icon image.	
[info]buttonName	
This text is used to populate the mouseover element description in the toolbox.	
• buttonName	Unused; the button is deleted in the generated TP4 project.
Pages and popups in a Device element can contain one or more Title buttons. The text within the buttons is replaced with the name given to the Device element in the generated TP4 project.	
[title]buttonName	
• buttonName	The button name used in the generated TP4 project.
FEATURE ELEMENTS	
This element resembles the Device element. However, there can only be one Feature element in a panel design, i.e., the "Clean Panel" feature.	
<ul style="list-style-type: none"> Consists of one page and can contain multiple popups. Only one Feature element can be displayed at a time. 	
[feature#featureName]pageName	
• featureName	The name of the feature as it appears in G4 PanelBuilder.
• pageName	The base page name that is used in the generated TP4 project.
Only one page or popup in a Feature element can contain an Info button, which contains the page flip information for displaying the Feature element and can also contain an optional icon image.	

G4 PanelBuilder Templates - Required Template Elements (Cont.)	
[info]buttonName	
This text is used to populate the mouseover element description in the toolbox.	
• buttonName	Unused; the button is deleted in the generated TP4 project.
The pages and popups in the Feature element can contain one or more Title buttons, whose text is replaced with the name given to the Feature in the generated TP4 project.	
[title]buttonName	
• buttonName	The button name that is used in the generated TP4 project.
SUB-FEATURE ELEMENTS	
This element represents the "universal" features that appear on many pages, i.e., "volume."	
<ul style="list-style-type: none"> Consists of at least one popup and can contain multiple popups. Cannot contain pages. 	
[subFeature#subFeatureName]pageName	
• subFeatureName	The name of the Sub-Feature element as it appears in G4 PanelBuilder.
• pageName	The base page name that is used in the generated TP4 project.
Only one of the pages or popups in a Sub-Feature element can contain an Info button, which contains the page flip information for displaying the Sub-Feature element and can also contain an optional icon image.	
[info]buttonName	
This text is used to populate the mouseover element description in the toolbox.	
• buttonName	Unused; the button is deleted in the generated TP4 project.
Popups in a Sub-Feature element can contain one or more Title buttons, whose text is replaced with the name given to the Sub-Feature element in the generated TP4 project.	
[title]buttonName	
• buttonName	The button name that is used in the generated TP4 project.

Rules for Navigating a Template

In addition to the template requirements and required elements, there are rules for navigating the templates and template wide conventions you need to heed.

When navigating to a Device, Feature or Placeholder element from a Navigation element:

- Hide all Popups on the page for that element.
- Perform the standard page flip to the page for that element.
- Show any Popups for the element.
- Show any Popups for the linked Sub-Feature, when applicable.
- Show the Navigation element that is linked to the element.

NOTE: *Any Sub-Navigation elements that may have been currently displayed will be hidden.*

When navigating to a Device, Feature or Placeholder element from a Sub-Navigation element:

- Hide all Popups on the page for that element.
- Perform the standard page flip to the page for that element.
- Show any Popups for the element.
- Show any Popups for the linked Sub-Feature, when applicable.
- Show the Navigation element that is linked to the Sub-Navigation element or chain.
- For Sub-Navigations the user must set "Hide On Action" to No, then show the Sub-Navigation element that is linked to the element. Otherwise, the Sub-Navigation is not shown.

Info buttons are optional and only have to be included within an element if the order the popup pages is shown is important, if not all popup pages should be initially shown, or if an icon is used on the corresponding Navigation or Sub-Navigation button.

If the Info button is omitted, popup pages are shown in alphabetical order.

Template Wide Conventions

- Text Replacement** - The string "[text]" is required on the button wherever text is to be replaced in the output file. The string "[text]" allows you to prepend/ postpend text with characters. If the text on a button to be replaced does not contain "[text]" then it is unchanged.
- Panel Title** - A template can contain as many buttons named "[panelTitle]" as necessary, they are replaced with the "Job Name" of the panel.
- Preview Images** - A template must contain a main preview image and can also contain a preview image for each element. The main preview image should be named "[preview].JPG" (or .PNG). The element previews should follow the same naming conventions as their page prefixes, i.e., "[device#DVD].JPG." There can only be one preview image per element.

Creating Navigation Elements

In order for a TP4 file to be successfully exported as a G4 PanelBuilder Template file (*.TPT), the TP4 project file must contain at least one Navigation Element. A Navigation element consists of at least one popup (may contain multiple Popups), and represents the place where you make most navigation selections (i.e. a main menu page).

To create a basic Navigation element, create a new popup page (Panel > Add Popup Page), and name it according to the naming convention required by G4 PanelBuilder for Navigation elements:

[nav#navName] pageName

- **navName** - The name of the Navigation as it will appear in G4 PanelBuilder.
- **pageName** - The base page name that will be used in the generated TP4 project.

The following example illustrates the implementation of a Navigation popup, as seen in the "graphiclySound-Orange" template (available from AMX). Note that the template includes several variations on the same Navigation theme, offering different numbers of buttons.

The example shown in FIG. 8 is for the Navigation popup named "[nav#3 Selections]Navigation 3", which as the name implies, contains three buttons:

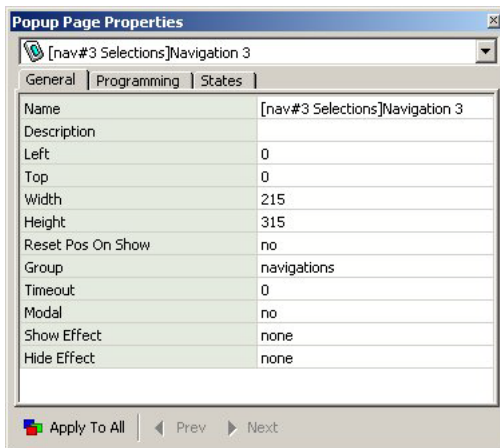


FIG. 8 Properties window - Navigation popup - "[nav#3 Selections]Navigation 3"

Example Navigation Popups in the Workspace Window - these represent the variations on the Navigation theme for different numbers of buttons (FIG. 9):

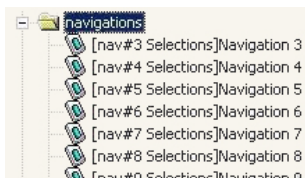


FIG. 9 Workspace window - Example Navigation Popups

The "[nav#3 Selections]Navigation 3" popup as it appears in the Workspace (FIG. 10):

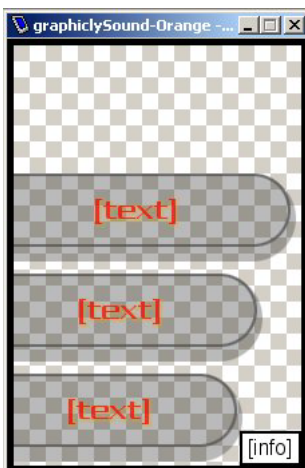


FIG. 10 [nav#3 Selections]Navigation 3" popup

G4 PanelBuilder Templates - Creating Placeholder Elements

In order for a TP4 file to be successfully exported as a G4 PanelBuilder Template file (*.TPT), the TP4 project file must contain at least one Placeholder Element. A Placeholder element is basically a blank device/feature element that allows you add items to the project in G4PanelBuilder that are not included in the template. Placeholder elements consist of one page, and may contain multiple Popups. Only one Placeholder element can be displayed at a time.

To create a basic Placeholder element, create a new Page (Panel > Add Page) , and name it according to the naming convention required by G4 PanelBuilder for Placeholder elements:

[placeholder#placeholderName] pageName

- **placeholderName** - The name of the Placeholder element as it will appear in G4 PanelBuilder.
- **pageName** - The base page name that will be used in the generated TP4 project.

Here's an example implementation of a Placeholder element, as seen in the " graphiclySound-Orange" template (FIG. 11):

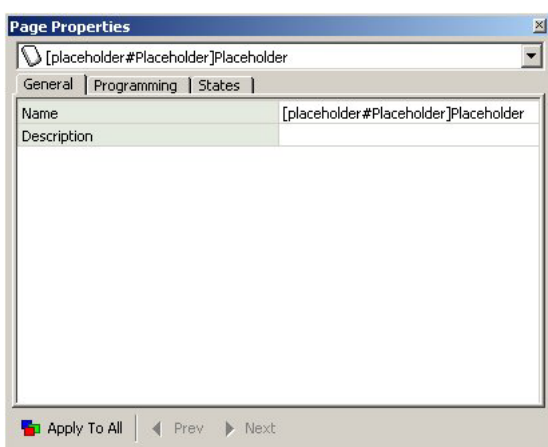


FIG. 11 Example (General) properties for a Placeholder page

Example Placeholder page in the Workspace Window (FIG. 12):

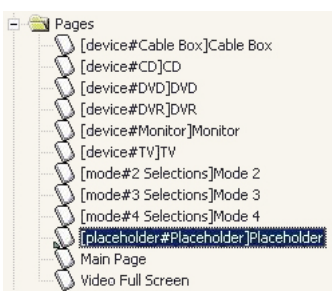


FIG. 12 Example Placeholder page in the Workspace Window

The "[placeholder#Placeholder]Placeholder" page as it appears in the Workspace (FIG. 13):

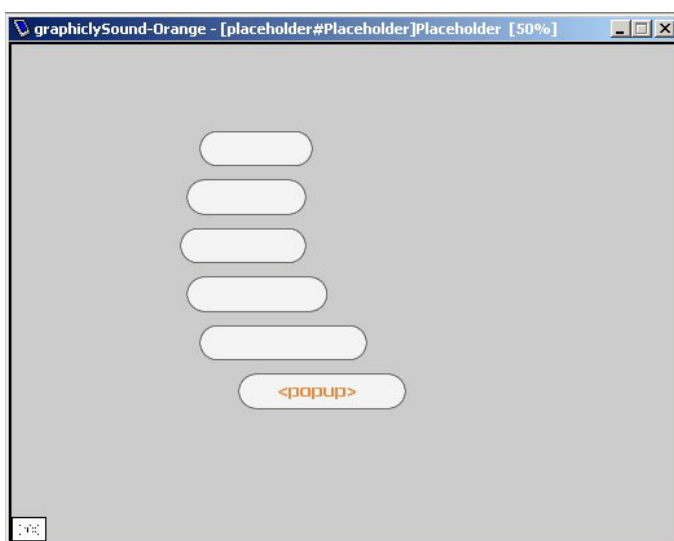


FIG. 13 [placeholder#Placeholder]Placeholder" page

Creating Preview Images

In order for a TP4 file to be successfully exported as a G4 PanelBuilder Template file (*.TPT), the TP4 project file must contain at least one Main Preview Image. However, you can create multiple preview images to represent various elements in the project.

Preview Images are used in G4 PanelBuilder for both the thumbnail images displayed in the Template Manager, as well as the icons in the toolbox.

- Preview Images cannot be used within the panel design itself.
- They must be either JPG or PNG files.

NOTE: *If you have created multiple color palettes as part of your TP4 project, and intend to use them to enable the Color Schemes feature in G4 PanelBuilder, you must create a separate preview image for each custom palette that you want to be available for application (via the Project > Color Schemes option in G4 PanelBuilder).*

To create preview images for your G4 PanelBuilder template:

1. Open a page in a Design View window.
2. Select **Page > Create Template Preview Image** to open the *Create Template Preview Image* dialog. The preview Image will be created using the page that currently has edit focus (FIG. 14):

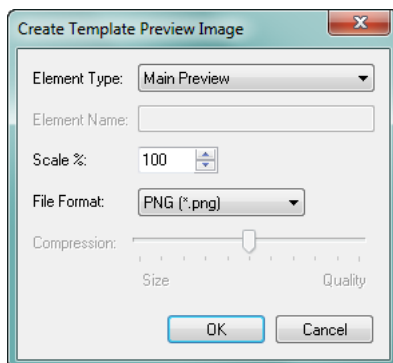


FIG. 14 Create Template Preview Image dialog

3. Select the type of preview image you want to create from the *Element Type* drop-down menu. This menu lists all of the types of project elements that are recognized by G4 PanelBuilder. Pick the one that best describes the type of element you are creating a preview image for.
The first item in the list is *Main Preview*, which represents the main preview image that is required by G4 PanelBuilder for the template to be valid.
4. If you have selected any element other than the Main Preview element, then you can enter an alternative name for it in the *Element Name* text field.
 - For all element types other than the Main Preview element, the name represents the element name for which the preview is being created. For example, if you have created a DVD Device element, the preview image for this would need to be created as Device element type, and DVD as the name.
 - Default values for these fields are pulled from the name of the page being displayed. For example, if the DVD page mentioned above is named "[device#VCR]Main", then the dialog will be re-populated with "Device" as the element type and "VCR" as the name.
5. Use the up and down arrows next to the *Scale %* field to scale the image, if desired. For example, in order to minimize the file size of the template, you may decide to reduce the zoom on your preview image(s) to 25%.
6. In the *File Format* drop-down, select either JPG or PNG as the file format for the image file. If you select JPG, you can specify the compression setting using the *Compression* slider bar. The *Size* side of the bar optimizes the file size of the image file (typically at the expense of image quality). Conversely, the *Quality* side of the bar optimizes the file for image quality, which usually results in a larger file size.
7. Click **OK** to create the preview image.

Once the preview image has been generated, it appears in the Resource Manager (*Images* tab). If you created a Main Preview image, it will be named **[preview].JPG** or **[preview].PNG**. Otherwise, it will be named according to the name specified above. Select the image and click the **Export** button to export the image to another directory, if desired.

AMX Element Naming Conventions

Use the following naming convention to allow for portability between templates. Errors could occur if the elements do not match from template to template.

AMX Element Naming Conventions		
Device Name	Example	
Audio Conference	[device#Audio Conference]Audio Conference	
Cable Box	[device#Cable Box]Cable Box	
Camera	[device#Camera]Camera	
Cassette Deck	[device#Cassette Deck]Cassette Deck	
CD	[device#CD]CD	
G4 Computer Control	[device#Computer Control]G4CC	
Document Camera	[device#Document Camera]Document Camera	
Door	[device#Door]Door	
DSS	[device#DSS]DSS	
DVD	[device#DVD]DVD	
DVR	[device#DVR]DVR	
HVAC - Dual	[device#HVAC - Dual]HVAC - Dual	
HVAC - Single	[device#HVAC - Single]HVAC - Single	
Lift	[device#Lift]Lift	
Light Zone	[device#Light Zone]Light Zone	
Monitor	[device#Monitor]Monitor	
Pool	[device#Pool]Pool	
Screen	[device#Screen]Screen	
Security	[device#Security]Security	
Shade	[device#Shade]Shade	
Slide Projector	[device#Slide Projector]Slide Projector	
Spa	[device#Spa]Spa	
Switcher <i>size</i>	[device#Switcher <i>size</i>]Switcher <i>size</i>	
Radio	[device#Radio]Radio	
TV	[device#TV]TV	
VCR	[device#VCR]VCR	
Video Projector	[device#Video Projector]Video Projector	
Volume - Dual	[device#Volume -Dual]Volume - Dual	
Volume - Single	[device#Volume - Single]Volume - Single	
Feature Name	Example	
US Weather Maps	[feature#US Weather Maps]US Weather Maps	
Mode Names	Example	Description
Mode X	[mode#Mode 3]Mode 3	[mode#Mode x] x = the number of mode options
Navigation Names	Example	Description
Nav X	[nav#Nav 3]Nav 3	[nav#Nav 3]Nav 3 x = the number of navigation options

Alternate Screen Names for Template Elements

Template elements can now be given an alternate name that will be used as the default on-screen text when added to a project in G4 PanelBuilder. The text will be taken from the name that follows the '[info]' tag on an Info button's name. For instance, to use a shorter name for the Audio Conference element, name your Info button '[info]Audio Conf'.

Program Reference

The G4 PanelBuilder Work Area

The G4 PanelBuilder Application Interface is the main view you work with when creating a new panel file (*.PB4), as you can see it is visually driven.

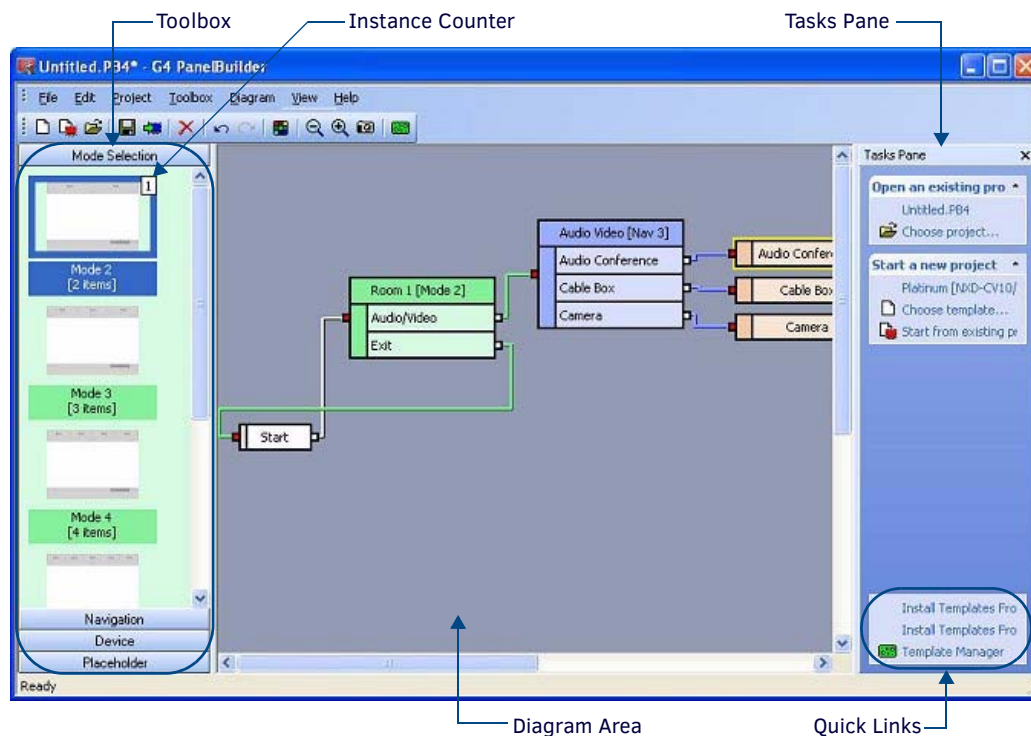


FIG. 15 G4 PanelBuilder Application Interface

G4 PanelBuilder Work Area	
Menu Bar	The menu bar is the location of all functions for G4 PanelBuilder.
Toolbar	The toolbar contains icons for the commonly used functions.
Toolbox	All elements available within a selected template reside in the toolbox. The toolbox is only available when a template is open.
Status Bar	In addition to giving you the current status of G4 PanelBuilder, i.e., Ready. The status bar also provides a brief description of toolbar and menu items via mouse over.
Instance Counter	The instance counter tracks and displays the number of times an element is used within the current project.
Diagram Area	The Diagram area is the graphical representation of the flow your panel file will follow. After pulling the elements from the Toolbox you can connect and develop the elements.
Tasks Pane	The tasks pane is a collection of links to commonly used functions. In addition to opening projects (both new and existing), tasks pane tracks recently opened projects and templates. To access anything listed in the tasks pane, click on any of the items listed.
Quick Links	Located within the Tasks Pane is a small sub-section quick links. These links allow you quick access to adding and managing templates within G4 PanelBuilder.

Diagram Area

The Diagram area is the graphical representation of the flow your panel file will follow. After pulling the elements from the Toolbox you can connect and develop the elements. You can either click and drag or nudge the elements within the Diagram area. Select an element and use your arrow keys to nudge.

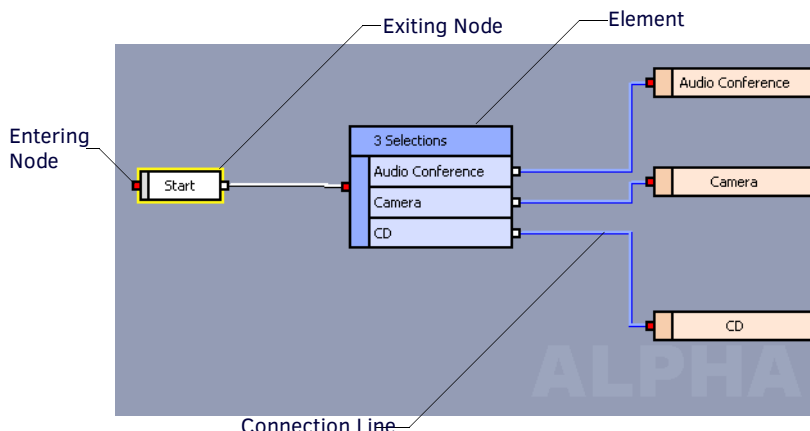


FIG. 16 Diagram Area

Diagram Area	
Entering Node	This node receives the connection line from another element.
Exiting Node	This node connects out to another element.
Element	The building block of the panel files, i.e., Modes, Navigation, Devices, and etc.
Connection Line	The graphical representation of the connection between two elements. The color of the connection line is dictated by the element it is exiting.

Toolbar

The toolbar contains icons for the commonly used functions:

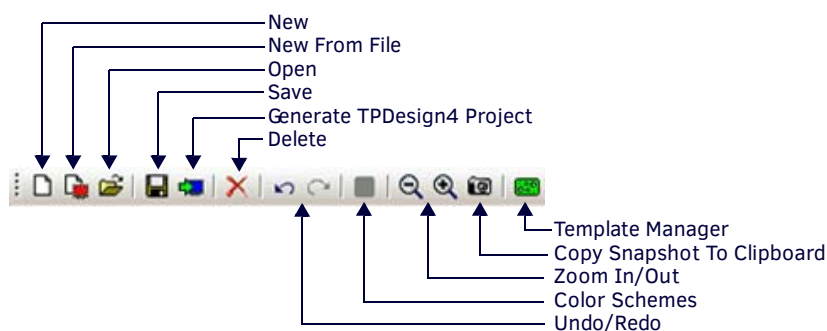


FIG. 17 Toolbar

Toolbar	
New	Launches the New Project dialog.
New From File	Launches the New From File dialog.
Open	Launches the Open Project dialog.
Save	Saves the current project. If the project has not been previously saved it will launch the Save As dialog.
Generate TPDesign4 Project	Launches the Generate TPDesign4 Project dialog.
Delete	Deletes the element currently selected in the Diagram area.
Undo	Undoes action taken in diagram area. Undo does not apply to text changes within elements.
Redo	Reverses the undo action taken within the diagram area.
Color Schemes	Launches the Color Schemes dialog.
Zoom Out	Decreases the magnification of the diagram area. Increments are 150%, 125%, 100%, 75% and 50% of work area.
Zoom In	Increases the magnification of the diagram area. Increments are 150%, 125%, 100%, 75% and 50% of work area.
Copy Snapshot To Clipboard	Copies only the diagram area to your computer's clipboard.
Template Manager	Launches the Template Manager dialog.

Tasks Pane

The tasks pane is a collection of links to commonly used functions. In addition to opening projects (both new and existing), tasks pane tracks recently opened projects and templates. To access anything listed in the tasks pane, click on any of the items listed.

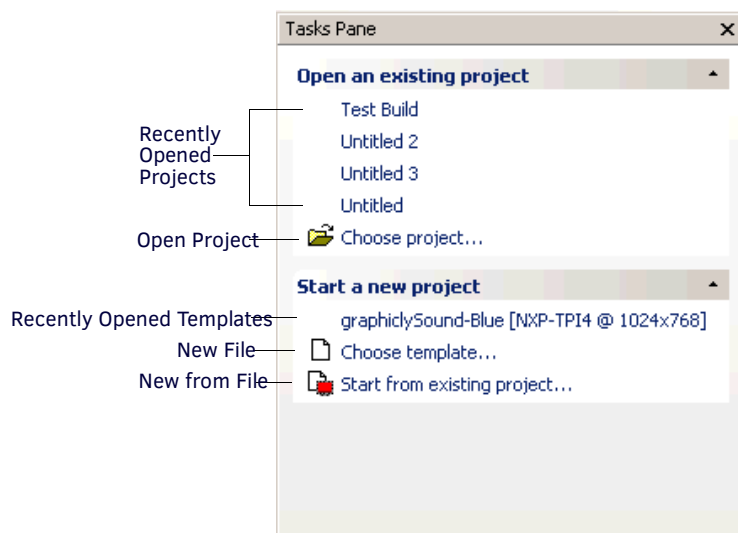


FIG. 18 Tasks Pane

Tasks Pane	
Recently Opened Projects	A list of file names for recently opened existing projects.
Open Project	Launches the Open Project dialog.
Recently Opened Templates	A list of file names for recently opened templates.
New File	Launches the New Project dialog.
New from File	Launches the New From File dialog.

Quick Links

Located within the Tasks Pane is a small sub-section quick of links. These links allow you quick access to adding and managing templates within G4 PanelBuilder.


AMX.com Template Library — Install Templates From AMX.com...
 Install Template from File — Install Templates From File...
 Open Template Manager —  Template Manager

FIG. 19 Quick Links

Quick Links	
Install Templates From AMX.com	If a internet connection is available, G4 PanelBuilder connects to AMX's collection of online templates. The templates are found in AMX.com Template Library dialog.
Install Templates From File	Launches the Install Templates From File dialog.
Template Manager	Launches the Template Manager dialog.

Toolbox

All elements available within a selected template reside in the toolbox. The toolbox is only available when a template is open.

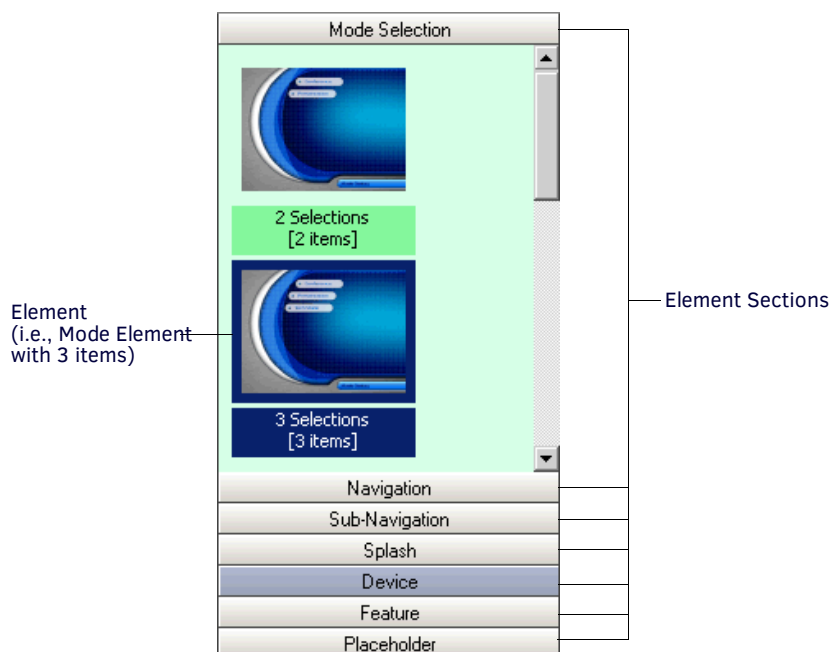


FIG. 20 Toolbox

As you can see, the toolbox is divided into elements with specific pages contained therein. Click on the element you would like to add, i.e., Navigation, Device, etc. All available elements will be shown. When available, a thumbnail representation of the page will appear within the toolbox; otherwise a general image will be shown for the thumbnail. Mouse-over the element to get a description. Once you have found the element you would like to use, you can right-click on the thumbnail to access the toolbox context menu or drag-and-drop the element into the diagram area.

Only elements contained within the template are represented within the toolbox. If the template does not contain a particular element, you will not see it in the toolbox.

Color Schemes

Templates can contain multiple color palettes, allowing you to switch from one color scheme to another within one template. The current scheme is reflected in the element preview but the elements in the toolbox will remain the main color scheme.

Used either with Chameleon buttons or standalone, you can use a single template that can deliver different predefined color schemes.

Status Bar

Located at the bottom of the G4 PanelBuilder Application Interface is the status bar. In addition to giving you the current status of G4 PanelBuilder, i.e., Ready. The status bar also provides a brief description of toolbar and menu items via mouse over.

Viewing Panes

The G4 PanelBuilder Application Interface is composed of panes, sections containing tools for creating a panel project. To reveal or hide different panes:

- Select **View >** (any of the panes listed; a check mark indicates the pane is in view) **Toolbar, Tasks Pane, Toolbox** or **Status Bar**.

Changing Visual Style

To change the appearance of G4 PanelBuilder, select **View > Visual Style** and select from the following:

- Default
- Office XP®
- Office 2003®



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