

Crestron TV Presets Installation Guide

The Smart Graphics TV Presets solution has been designed to support dynamic channel presets from any Smart Graphics compatible display interface. The solution utilizes a common XML format for the cable system channel lineups. This format was chosen, so that the files could be easily edited outside of the application.

All of the files are managed by a single control system module: "TV Presets File Manager". Each user interface then requires a UI module: "TV Presets CRPC Interface" that connects to the SmartObject. See the section SIMPL Windows for more information on the modules.

To increase performance in the user interface, all of the preset icons are extracted from a .zip file on the panel and loaded into a local resource manager. Do not attempt to extract the individual icons from the .zip file and transfer the files to the processor or external web directory.

Known Issues

- The preset icons will not render when used in the following configurations:

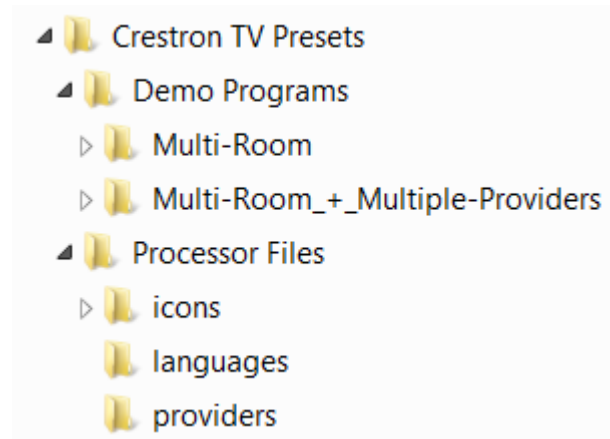
Using the control system web server to serve icons, language files & provider files

- Mobile Application connected via external IP address (outside the home)
 - Xpanel Web connected via external IP address (outside the home)
 - Xpanel EXE connected via external IP address (outside the home)
- The preset icons are extracted from a zip file the first time the application renders. This may cause a slight delay with the application showing images. However, once the icon library has been loaded by SmartGraphics, the images remain in the Resource Manager and are immediately available to the object.
- Using TV Presets in a rotatable project may display scaling issues with the object.

Installing the Resource Files

The following describes the steps required to install the TV Presets resource files. It assumes that the control system will be used to serve the icons, language files and provider files.

The instructions assume the extracted ZIP file (Crestron TV Presets.zip) folder structure was maintained.



1. Install the latest Smart Graphics controls release: 2.05.XX.XX or above.
2. Install the latest Crestron database, which includes the TV Presets SIMPL Windows modules.
3. Before using TV Presets, the following directories need to be created in the HTML folder of the processor:

“\sg_tv_presets\icons”

“\sg_tv_presets\languages”

“\sg_tv_presets\providers”

Note: For the following steps 4 – 6, utilizing an FTP Client like Filezilla, will expedite the file transfer process.

4. Copy all of the files from the folder “Processor Files\icons” to the control processor directory html\sg_tv_presets\icons”.

DO NOT unzip the icons.zip file. Transfer the file to the processor as is.

5. Copy all of the files from the folder “Processor Files\languages” to the control processor directory html\sg_tv_presets\languages”.

6. Copy all of the files from the folder “Processor Files\providers” to the control processor directory html\sg_tv_presets\providers”.

SIMPL Windows

It is strongly advised that Smart Graphics Management be used with this control. It will automate the process of connecting the touch panel control symbol to the CRPC Interface module.

There are two (2) modules required to use TV Presets. The third module is optional, and used depending on the control method of the cable tv tuners:

- *TV Presets File Manager*: This module provides a central storage point for all of the data associated with TV Presets. It also manages the resource manifest files, when the control system is used to serve those files. See the SIMPL Windows help file for more information.

Note: Only one File Manager module should be added to a program.

- *TV Presets CRPC Interface*: This module connects to the touch panel SmartObject and allows it to communicate with the File Manager module.

Note:

One CRPC Interface module is required for every TV Presets SmartObject on the touch panel. If more than one TV Presets control is used on a touch panel, DO NOT share the SmartObject ID's. Each control needs a unique ID and its own CRPC Interface module.

If TV Presets is used in more than one program in a processor, the CRPC Interface module parameter “IP Port Number” will need to be modified from its default port.

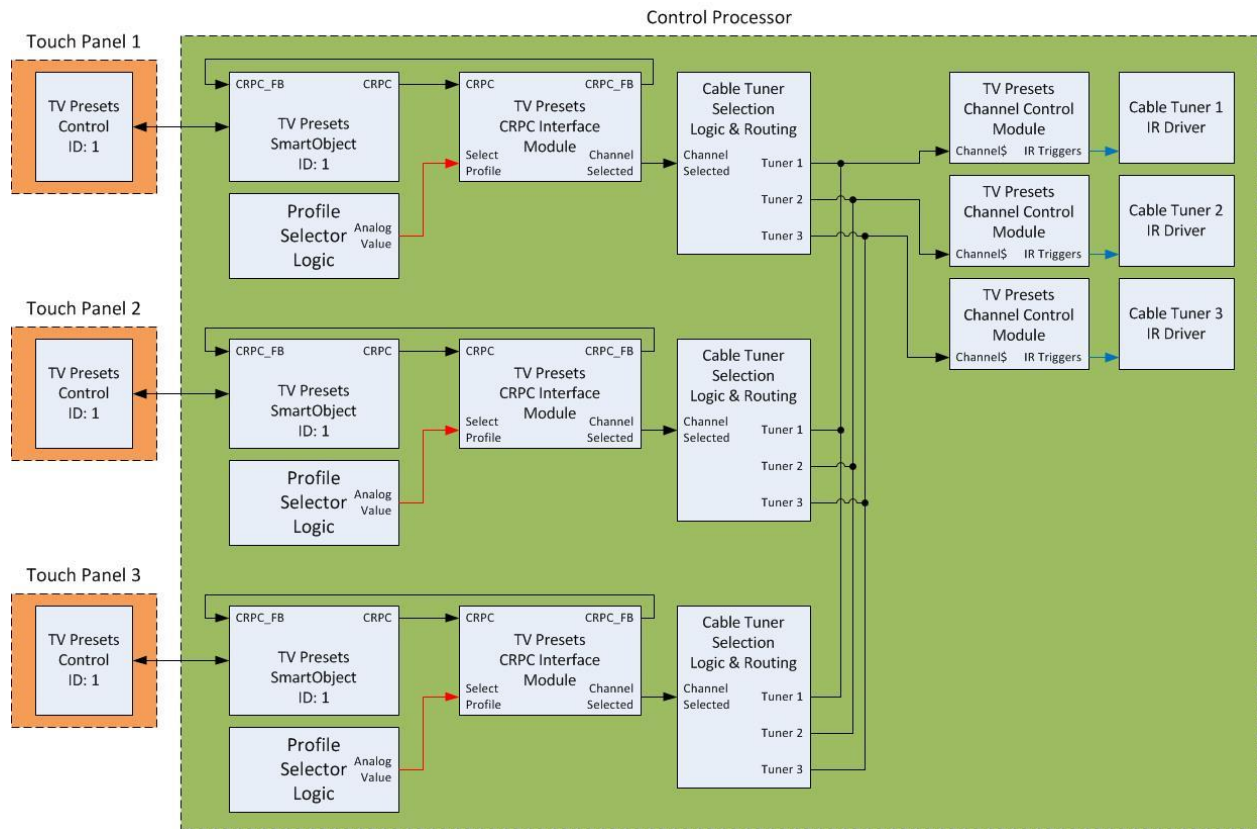
I.E.

If Program 1 is using TV Presets, the port can remain using the default port of 41798.

If Program 2 is also using TV Presets, then the port on every TV Presets CRPC Interface module needs to be modified so it is NOT 41798. They can all be set to 41790 for example.

- *TV Presets Channel Control*: This is an optional module that allows the “Channel_Selected” serial output of the CRPC Interface module, to control a cable tv IR driver. It is essentially a serial-to-digital converter. See the SIMPL Windows help file for more information.

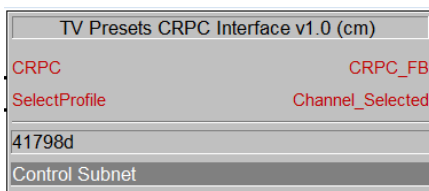
The following is an example of a typical SIMPL Windows connection flow:



To get a better understanding of the connections, it is recommended that one of the demo programs be used as a reference.

Control Subnet

If the user interfaces are located on the control subnet of the control system, the Ethernet Adapter parameter must be changed from the default (Primary) to Control Subnet in each TV Presets CRPC Interface module.



Adding Custom Icons

All of the icons used for TV Presets are stored and extracted from a single .zip file. To add icons, modify the content of icons.zip file and transfer that file back to the processor.

External Web Server

An external web server can be used to serve the icons, languages and provider files. When doing this, manifest files for each directory will need to be created/managed manually. A script could also be created, that runs periodically, to manage the manifest files.

A manifest file should be created in each directory and follow the correct XML format. A sample of each has been provided with the demo program package.

See the TV Presets File Manager module help file for information on how to set the URL paths for the icons, languages and provider files manifests.

Note: It is assumed that someone with IT experience will configure and manage the external web server. Exact details on configuration, security settings, etc. are out of scope and will not be provided.

Creating Provider Files

To create a provider file, it is easiest to start with one of the samples that were provided.

Creating Language Files

To create a language file, it is easiest to start with one of the samples that were provided.

Troubleshooting

The following details basic troubleshooting steps to determine why the TV Presets application is not working correctly.

Issue: **(First Use) The TV Presets application opens on my touch panel, but I do not see any icons when adding a new preset.**

Things to check:

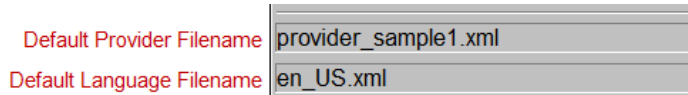
1. Verify the inputs that set the file paths on the TV Presets File Manager module are set correctly.
 - If the control system web server is being used to serve the files, make sure the inputs are set as follows:

```
Custom_Icon_URL = \\HTML\\sg\_tv\_presets\\icons\\  
Custom_Language_File_URL = \\HTML\\sg\_tv\_presets\\languages\\  
Custom_Provider_File_URL = \\HTML\\sg\_tv\_presets\\providers\\
```

- If an external web server is being used to serve the files, make sure the inputs match the URL paths to the directories for icons, languages and providers.

I.E. Custom_Icon_URL = <http://myCustomTVPresets/icons>

2. Verify that all of the files exist in the web server directories.
3. Verify that the Default Provider Filename and Default Language Filename parameters in the File Manager Module Parameter Fields match actual files in the web server directories.



4. Verify that manifest files exist in each of the directories on the web server. The manifest files are created by the TV Presets File Manager module and used by the actual TV Presets application running on the user interface.
5. Verify that the manifest filenames reflect the program slot where the TV Presets modules are running.

I.E. If the modules are running in Program Slot 1, all of the manifest filenames should be suffixed with "1".

6. Verify that the manifest file contents match the actual files in the web directories.

7. Verify that the manifest files can be opened using a web browser. This test should be performed on the same Ethernet network that the user interfaces exist on.

I.E.

- Files are being hosted in the control system web server.
- IP address of the control system is 192.168.1.100.
- Program running in Slot-1 of an MC3.
- The Custom_Icon_URL input to the File Manager Module is:
[\\HTML\\sg_tv_presets\\icons\\](http://192.168.1.100/sg_tv_presets/icons/)

To see the contents of the manifest file in the icons directory, use this URL:

http://192.168.1.100/sg_tv_presets/icons/iconManifest1.xml

8. If the manifest files cannot be opened in Step 6, verify that the network is configured correctly. If the control system is located on a different subnet (VLAN) than the touch panels, make sure the subnet networks can communicate with each other.
9. Ensure there are no other CRPC applications using the same TCP port, as the TV Presets application. The CRPC port is defined on each TV Presets CRPC Interface module, in the “IP Port Number” parameter field. The default port number is 41798.
10. Using SIMPL Debugger, watch the CRPC communication between the TV Presets CRPC Interface module and the user interface. Verify that the correct “direct connect” Ethernet address and port is sent to the user interface.

I.E.

- MC3 control system with a single Ethernet adaptor
- IP address of the control system is 10.254.48.49
- IP Port Number in TV Presets CRPC Interface module is 41798
- Watching signal connected to CRPC_FB output

The CRPC message should contain a label “cip-direct/json-rpc”, followed by the IP and Port settings, which should match the control system configuration.

```
""ip": "10.254.48.49", "port": "41798"}
```


Issue: The TV Presets application was working, but now all of my profiles are empty.

Things to check:

1. Verify that the profile data files still exist in the control system. The files are stored in the NVRAM disk "User" folder. A subfolder is created, based on the program slot the TV Presets modules are running. The actual file names correspond to the SelectProfile analog input.

I.E. For Program Slot 1 and SelectProfile = 0, the file path will be "NVRAM\User\TV_Presets_App_Data_1\Profile 0".

2. Verify the contents of the profile data file. The contents are JSON encoded and can be opened in any text editor.
3. Ensure there are no other CRPC applications (recently added) using the same TCP port, as the TV Presets application. The CRPC port is defined on each TV Presets CRPC Interface module, in the "IP Port Number" parameter field. The default port number is 41798.
4. Using SIMPL Debugger, watch the CRPC and CRPC_FB signals routed to/from the SmartGraphics TV Presets CED symbol. Ensure communication is occurring on both signals.

Issue: An icon was added/changed/removed from the icons.zip file, in the icons folder of the web server, but it is not showing when adding a new preset.

Things to check:

1. Verify that the new icon is actually being referenced in one of the provider files.
2. If the control system program was not restarted, pulse the "Trigger_File_Refresh" input on the TV Presets File Manager module. This will force all of the manifest files to be re-generated and the user interfaces to refresh.

Issue: A language file was added/changed/removed to the languages folder of the web server, but it is not showing in the configuration interface.

Things to check:

1. If the control system program was not restarted, pulse the "Trigger_File_Refresh" input on the TV Presets File Manager module. This will force all of the manifest files to be re-generated and the user interfaces to refresh.

2. Verify that the manifest file, in the web server languages folder, reflects all of the language files in that folder.

Issue: A provider file was added/changed/removed to the providers folder of the web server, but it is not showing in the configuration interface.

Things to check:

1. If the control system program was not restarted, pulse the “Trigger_File_Refresh” input on the TV Presets File Manager module. This will force all of the manifest files to be re-generated and the user interfaces to refresh.
2. Verify that the manifest file, in the web server languages folder, reflects all of the language files in that folder.