Programming Guide for Crestron Connected™ AVR

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## Overview

The Crestron Connected™ AVR is advanced connectivity to selected rich media sources through a native Crestron programming environment.

## Creating a New Project

Creating a project is

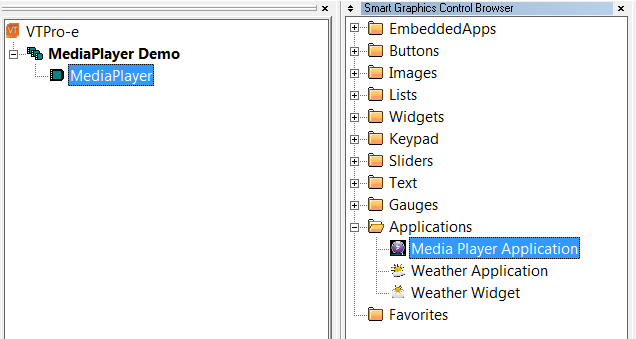
### Including the Media Player Smart Graphics™ object for supported sources.

This section explains the steps required to program a system that uses Crestron Connected™ AVR featuring Crestron Smart Graphics™ Media Player SmartObject™.

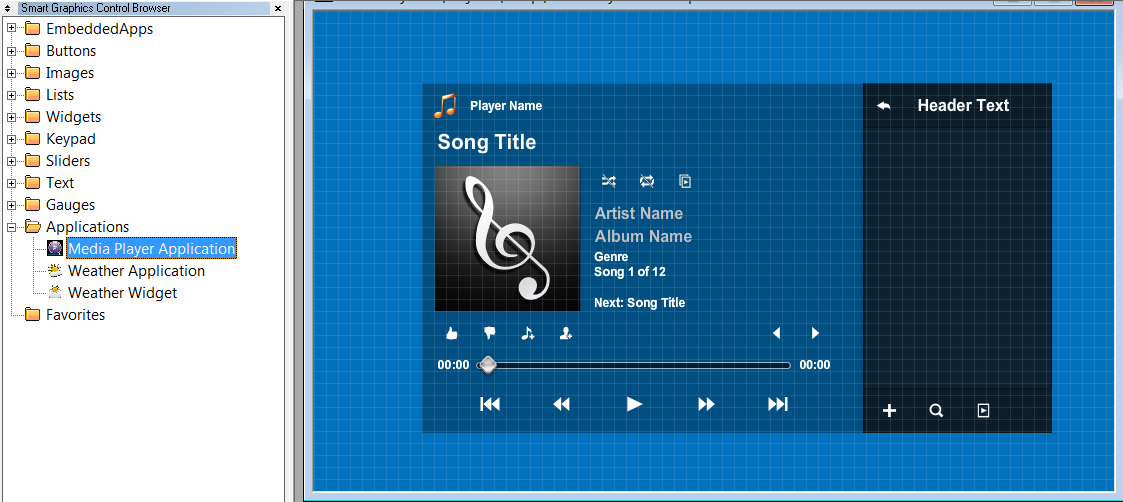
### Add the Media Player SmartObject™ to a Smart Graphics™™ enabled Project

The first step in creating a system using Media Player is creating a Smart Graphics™ project in VT Pro-e®.

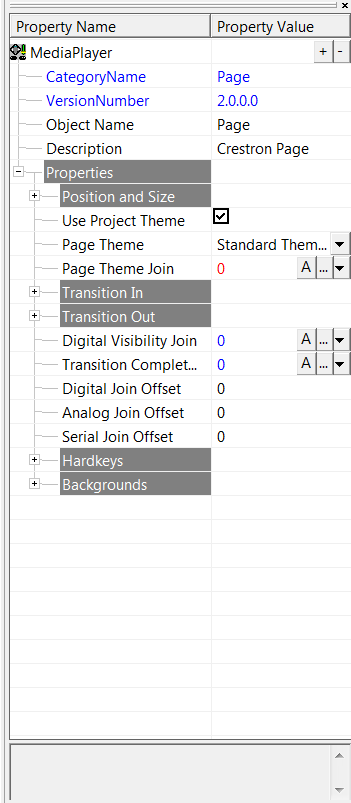
1. In VT Pro-e®, create or open a Smart Graphics™ touch screen project in VT Pro-e®.
2. Create a new page (or use an existing one).
3. In the Smart Graphics™ Control Browser, navigate to the *Applications* folder and locate the “Media Player Application”.



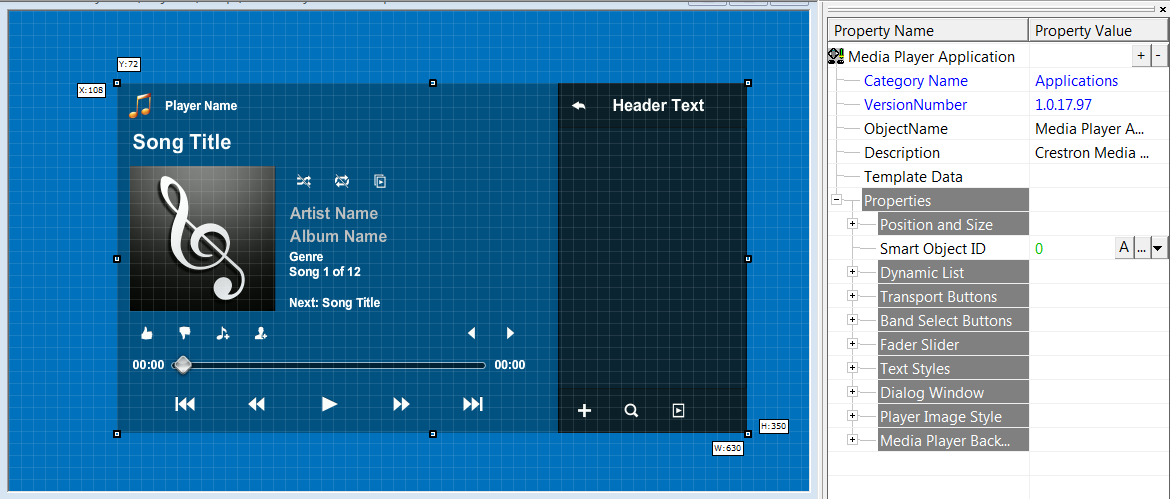
1. Click and drag the “Media Player Application” object on to the page.



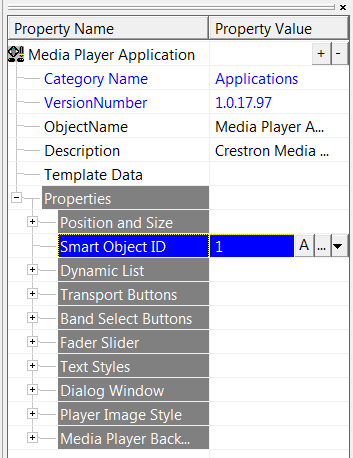
1. Open the Property grid (**Options** | **Property Grid**) if not already visible.



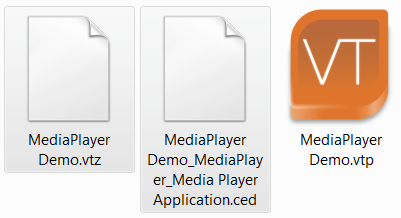
1. Select the Media Player object by clicking on it. The Property grid is updated with the Media Player Application’s settings.



1. In the property grid, set the Smart Object ID to a unique ID number not already used in the project. Zero (“0d”) is not a valid value.



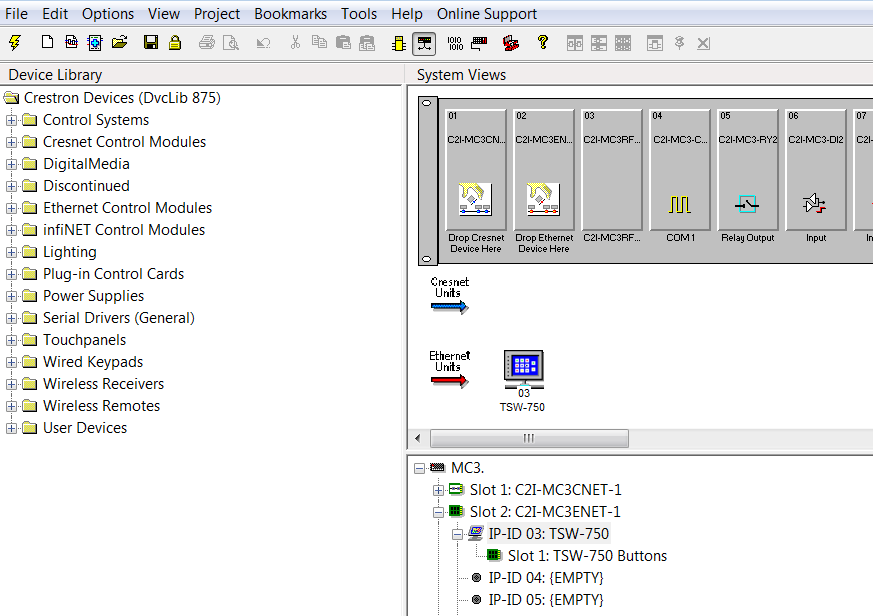
1. Save the project and compile it. A .vtz and .ced file are generated in the project folder. Remember the location of these files.



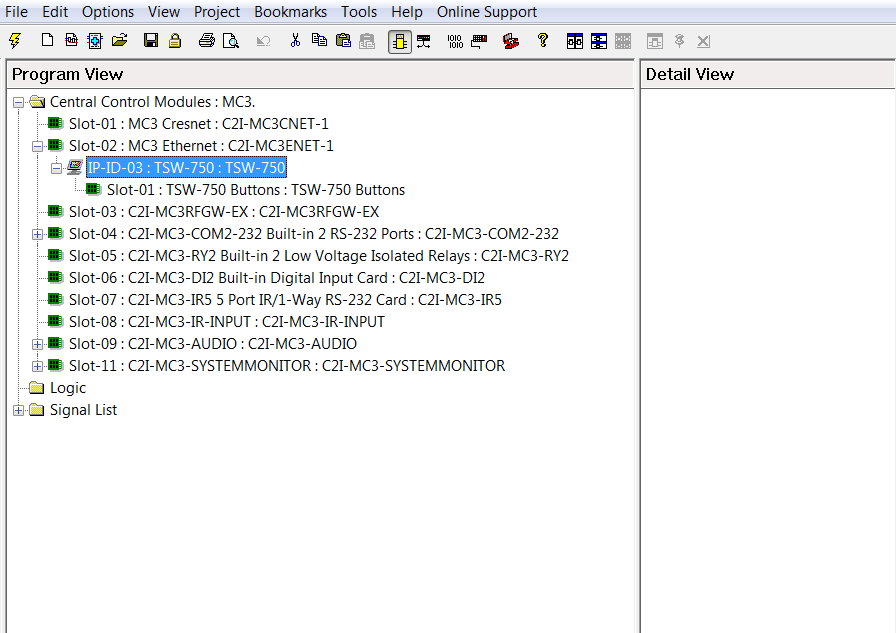
### Add the Media Player to SIMPL Windows

Once the project has been created, Media Player must be added in the SIMPL Windows program.

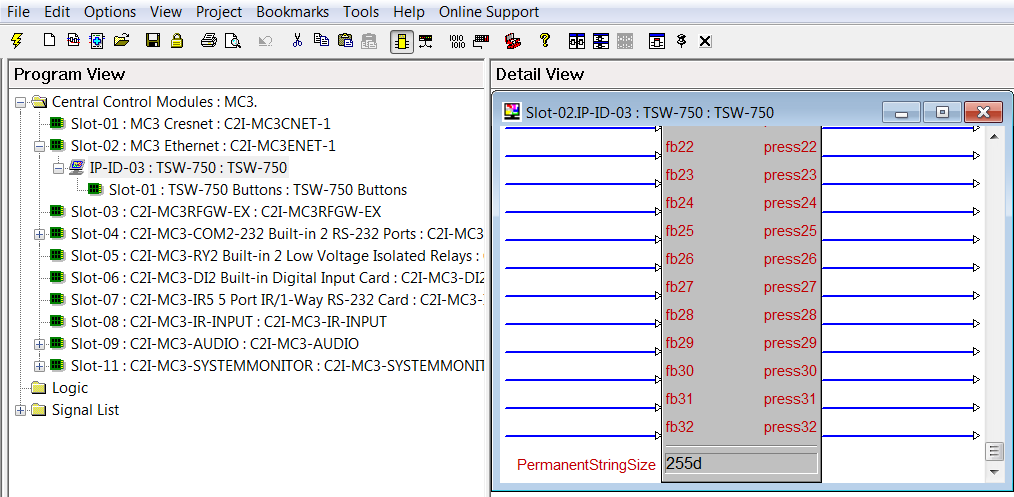
1. In SIMPL Windows, create a program that contains a 3-Series processor and a Smart Graphics™ enabled touch screen.



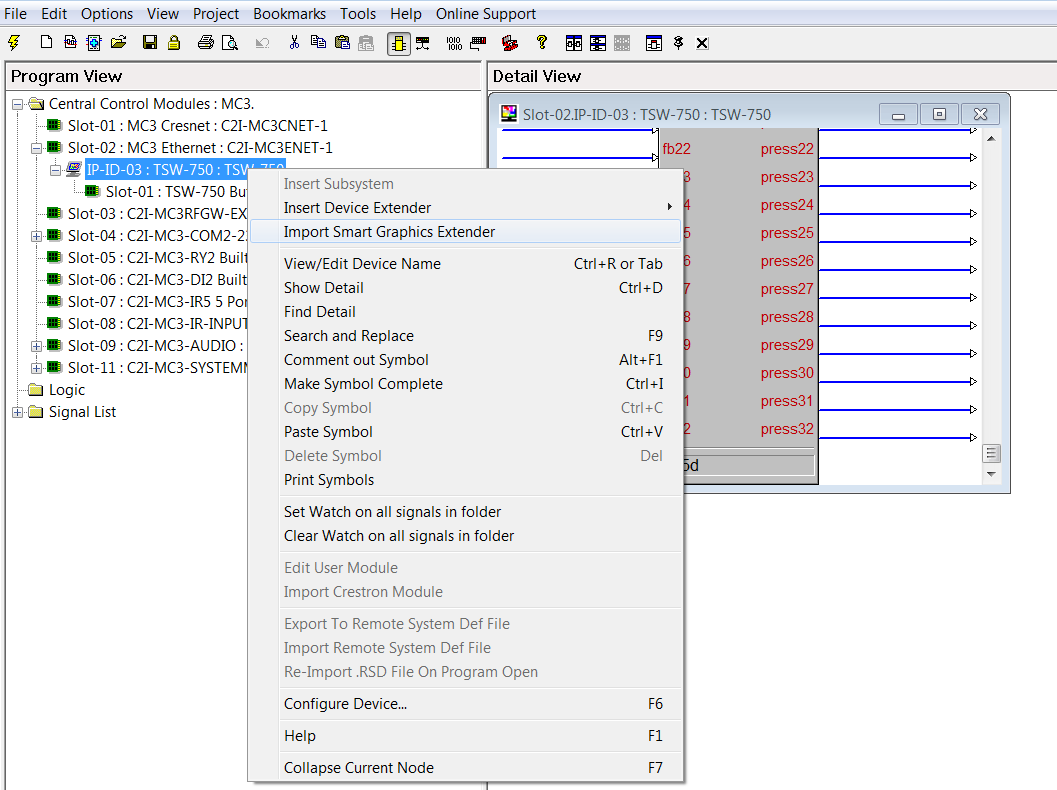
1. Navigate to the Programming view and find the touch screen symbol in the device tree under Central Control Modules.



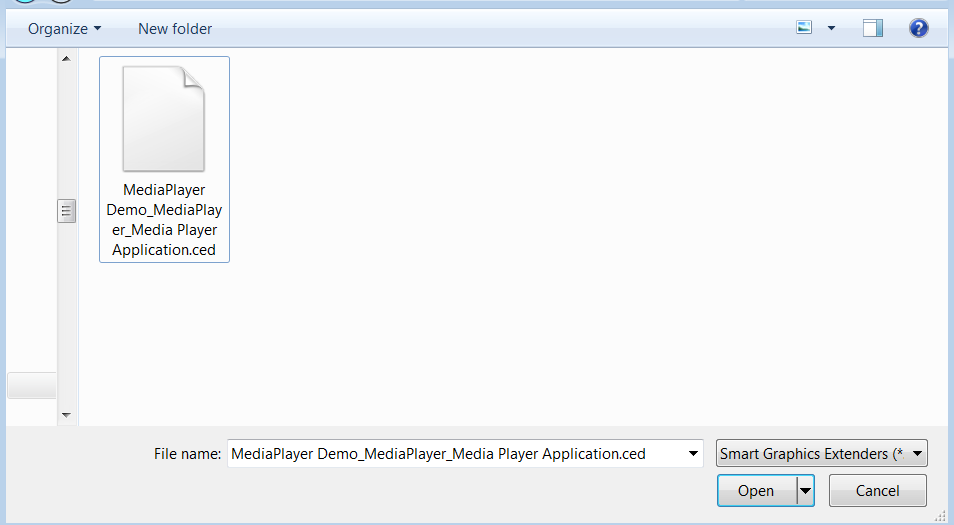
1. Set the Permanent String Size to a value of **255d** to accommodate CRPC packets.



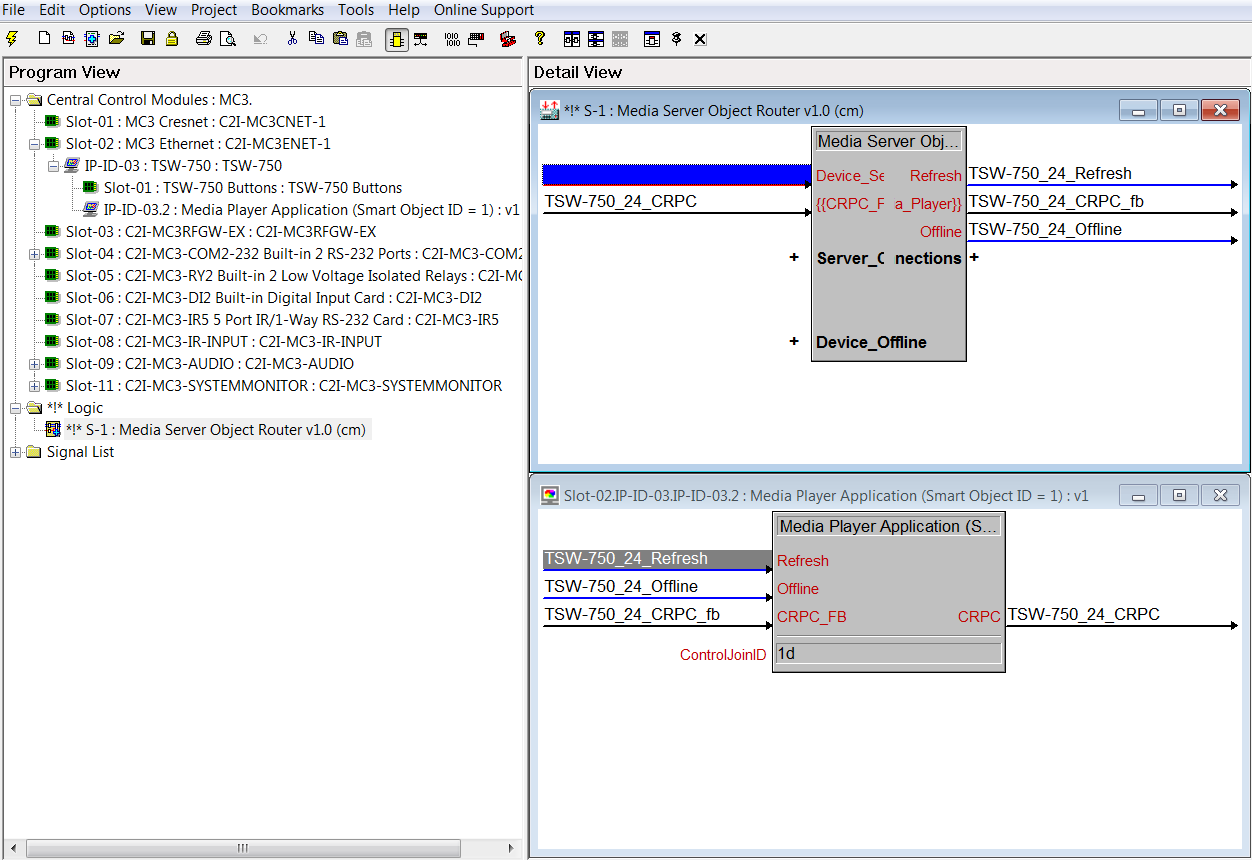
1. Right-click the touch screen’s device symbol and select **Import Smart Graphics™ Extender**.



1. Locate and select the .ced file that was generated in step 8 of the previous section. The file is titled similar to X\_X\_Media Player Application.ced where X\_X is the VTPro-e project name and page name, respectively.



The Smart Object is added under the touch screen device symbol and the Media Server Object Router v1.0.cmc module is automatically added. Signals from the module to the Smart Object are automatically connected.

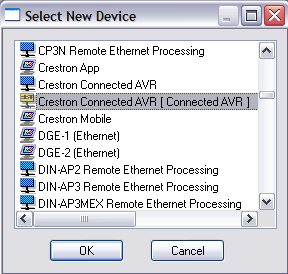


### Programming a Crestron Connected™ AVR to Connect to the Media Player SmartObject™

Perform the following procedure to add programming for the following devices:

* Crestron Connected AVR

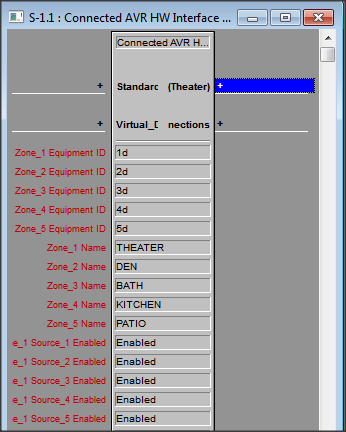
1. Add the device from the Configure view in SIMPL Windows and select the [Connected AVR] option to have the hardware module auto-connected to the device symbol.



1. Navigate to the Programming view and locate the now imported and connected hardware module in the Logic folder named:

* Connected AVR HW Interface…

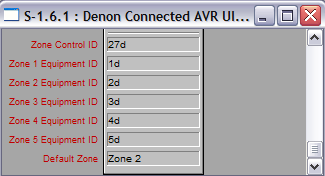
Enter unique, non zero, values for each of the Zone Equipment IDs and set Source availability.

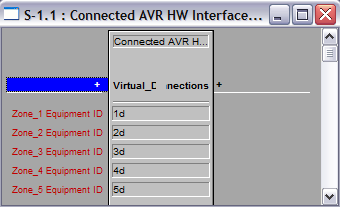


1. Add a Crestron Connected AVR UI module for each user interfaces in your project. UI modules are found in the **Symbol Library | Crestron Modules | Media Player** folder named:

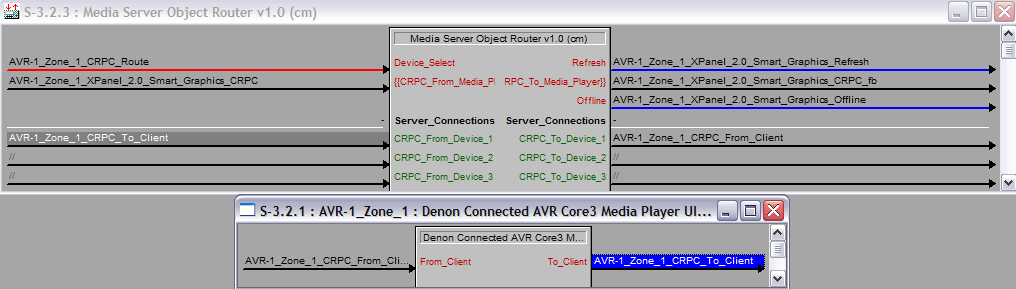
* Denon Connected AVR UI…

Enter the matching Zone Equipment IDs on each UI module as set on the HW interface module in step 2. The Zone Control ID should be a unique value for this UI. Also, the default zone that this UI controls must be set.





1. Connect the AVR’s CRPC input and output (From\_Client, To\_Client) to an available corresponding pair of CRPC output and input joins (CRPC\_To\_Device\_#, CRPC\_From\_Device\_#) respectively, on the “Media Server Object Router” module.



1. The **Device\_Select** analog signal on the Media Server Object Router v1.0.cmc is used to select the device the Media Player connects to. Use an analog initialize or similar logic to set the value to the desired device.

For example, if the touch panel UI module is connected to *Device 1* on the Object Router, setting the **Device\_Select** analog value to **1** connects the Media Player application to the intended UI module.

It is required that this value is set in the program, not at program startup, but after your panel has come online and ready to receive data.

1. Repeat steps 3-5 for each touch panel UI to be controlled.
2. After all devices have been added, compile and upload the program to the control system.

## Using the sample project

The sample project ‘Denon Connected AVR Sample’ utilizes a Crestron Connected™ AVR along with the MC3 control system and two TSW-750 touch panels.

The IPID for the AVR is set to 30, while the 2 panels are set to 32 and 33.

See your AVR’s accompaning documentation for information on system set up .

## Editing the sample project

1. Adding a zone/Interfac e

User interfaces can be added to the sample project by adding a panel as depicted above in the SIMPL ‘Configure’ interface. Then the interface programming for the panel and logic folder can be duplicated and renamed.

In this sample both the name tags “TSW-750.1” and “TSW-750.2” are used.

1. Adjusting the number of zones.

Each interfaces in the sample project are configured to control each available zone on the Connected AVR. The number of zones are dictated by the AVR. The maximum of 5 zones are supported in the program. To remove a zone from the interface, you must remove the ability for a UI to select the undesired zone. This is most easily done by removing it from the Zone selection list.

In the case where the default zone is no longer available, it is should be adjusted in programming accordingly.