Stepped Debugging in SIMPL#

Note that stepped debugging in SIMPL# is intended for use with SIMPL# PRO programs. While functionality may exist and appear to operate with SIMPL# Libraries, this is neither recommended nor supported.

Also note that on processors with control subnets, the addressing is different. (fill in details here)

# Setup

## Crestron Toolbox

### Address Book Entry

* In Toolbox, open the Address Book tool and ensure there is a TCP entry for your processor.

## Visual Studio

### Configuration

* Click **Tools > Options** to display the Options dialog
* Select **Device Tools > Devices**
* Select CrestronSDK ARMV7 Device. Click “Save As…”
* Rename the device as something friendly, eg. “My RMC3”
* Select the new device. Click “Properties…”
* Next to TCP Connect Transport, click “Configure…”
* Select “Use specific IP address:” and enter the IP address of your processor. Note that you must use the IP address; using the hostname will cause a failure on a later step.
* Click the OK buttons to save these settings and exit the Options dialog.

### Connecting to the Control System

* Ensure that the program open in Visual Studio is identical to the one running on the processor.
* Using the Solution Explorer, double click the “ControlSystem.cfg” to display the Control System Configuration component.
* You will see an address book icon on the top/left portion of this window. Click the icon and select your control processor from the Crestron Toolbox Addressbook that appears.
* The status bar beside the address book icon will change to say “Connected to <addressbook entry name>”
* Under the Program Slot pull-down option, select the application slot where your program is running.
* Under the Storage Option pull-down option, select the storage location (likely Internal Flash).

### Attach to the program

* In the ControlSystem.cfg window, there will be a list of tasks. Locate the one which applies to the program you wish to debug, and take note of the ID number (leftmost column)
* Click **Debug > Start Debugging** or press F5
* Click **Debug > Attach to Process…**
* In the Attach to Process dialog, select Transport: Smart Device
* Click the Browse… button next to Qualifier and select the device you set up in the first step (eg. “My RMC3”)
* In the “Available Processes” list, scroll until you find the ID number that was noted from the ControlSystem.cfg screen. Select this line and click the “Attach” button.
* Return to the programming screen. The program is now running in debug mode.

# Debugging

* By inserting a break point in your code (left click in the column to the left of the text editor) the SIMPL# program or library will halt at this point in runtime.
* Press F10 to step through the code; one line at a time.
* Hover over variables for a quick look at their values
* Other helpful hints here