

Expand Integrator Series Control.

The Symetrix Integrator Series products, 722, 760, 780, and 788 are designed with specific applications in mind. Each DSP is equipped with a range of control possibilities from our ARC Wall Panels, to analog controls such as switches and pots, to 3rd party external controllers such as AMX and Creston touch screens. For those users who want to push the limits of control for the Integrator Series, this Tech Tip is for you. Here we will explain how to borrow functionality from the SymNet line to expand control possibilities of your Integrator Series device.

The ARC Power Supply:

The single ARC Port on the back of each Integrator Series product can supply power and data to an ARC or string of ARCs with limits as to how many ARCs and to what distance this port can support. (See ARC Power Calculator in the Knowledge Base at support.SymetrixAudio.com for more information.) With the addition of the ARC Power Supply, you can use many times more ARCs and support much longer distances.



Connecting the ARC-PS to your Integrator Series device:

The ARC-PS simply connects to your Integrator Series device via the RS-485 terminal. This will provide eight additional ARC ports as well as the corresponding Euroblock connectors for eight discrete ARC Audio I/O. ARC panels can be connected in a “star” configuration, “daisy-chain”, or a hybrid of the two.

The Control I/O:

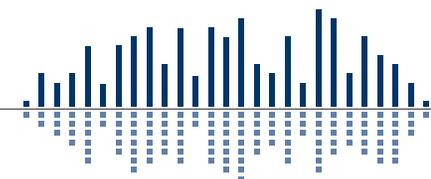
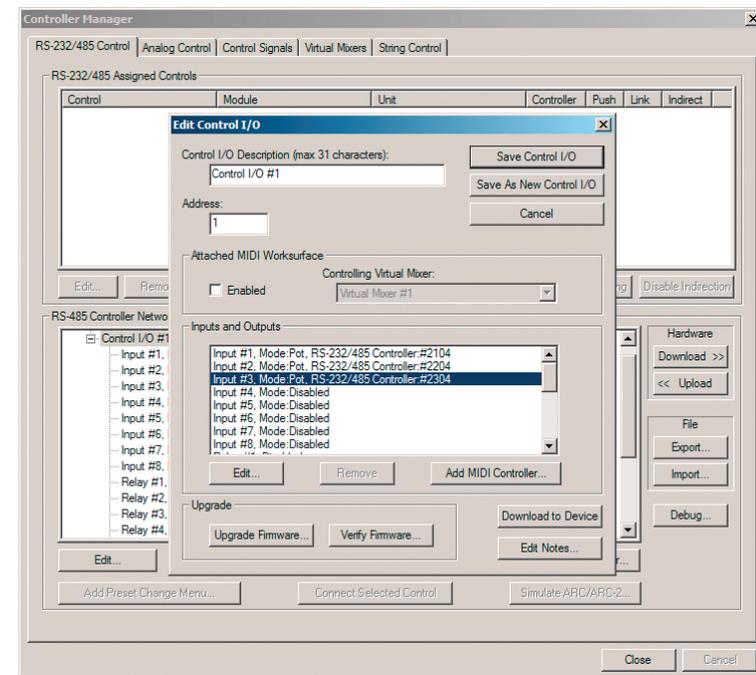
The Control I/O functions as a hardware interface for analog controls such as switches, pots, relays and binary outputs. It includes eight analog control inputs, eight open collector outputs, four relays, and four ARC ports, each with an ARC Audio I/O. The Control I/O can expand existing control to your Integrator Series device as well as give you functionality not previously possible such as binary and relay outputs.



The Control I/O is a member of the SymNet line of DSP products, and to fully open up the Control I/O for use with an Integrator Series device you will need to be familiar with some fundamental SymNet programming. (This Tech Tip assumes you have basic SymNet proficiency. For entry level training on SymNet please visit the Training link at www.SymNetAudio.com.)

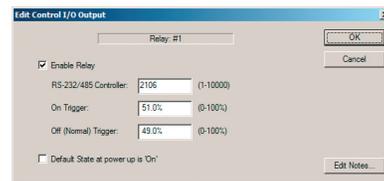
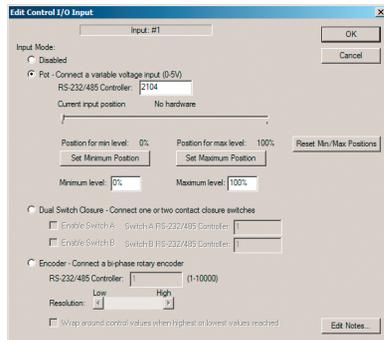
Programming of analog control inputs, binary and relay outputs for the Control I/O is managed solely within SymNet, so the unit will first need to be configured using the SymNet Designer software and a host processor such as an 8x8 DSP or an Express device. Note: If you are using only the ARC ports then the Control I/O will connect to your Integrator Series device in the same way as the ARC-PS – you will not need to program the Control I/O.

- 1) Connect the Control I/O and host PC to your SymNet device and launch the latest version of SymNet Designer. (Ensure connection preferences and dip switches are set properly. Also perform a firmware upgrade.)
- 2) Open the Controller Manager and create new RS-485 device: Control I/O. Then, edit the appropriate Input, Relay, or Open Collector output.



- Launch the software for your Integrator Series device and open the Help menu. In the Controller Assignment Tables section, look-up the controller number of the parameter you wish to control. Enter that number into the Edit Control I/O Input/Output window in SymNet Designer. Repeat for each control needed.

ZONE MIX 760 OUTPUT PROCESSING						
CONTROL	CONTROLLER NUMBER (by OUTPUT)					
	1	2	3	4	5	6
Unit Outputs						
+4/-10 Radio Button	2101	2201	2301	2401	2501	2601
Output Gain	2104	2204	2304	2404	2504	2604
Output Mute	2106	2206	2306	2406	2506	2606
Main Output Meter	2108	2208	2308	2408	2508	2608



- Download the RS-485 programming to the Control I/O from SymNet. Your analog control inputs/outputs are now programmed with the appropriate controller numbers from your Integrator Series device.
- Go On-line with the Integrator Series device. Plug the Control I/O into its RS-485 terminal, and then check that the analog control input changes the software GUI.

Custom ARC Programming:

Using SymNet Designer, the entire line of ARC panels can be made to control a huge range of parameters within your Integrator Series device beyond those already available in the External Controller Wizard. Using custom ARC programming, you can unlock

control for any parameter in the Integrator Series GUI including EQ and SPL parameters, for example, as well as Zone Mix faders. You can also create custom Modular ARCs using expansion panels such as the EX4 and EXK giving you even more possibilities.

- Connect your ARC and host PC to your SymNet processor and launch the latest version of SymNet Designer. (Ensure connection preferences and dip switches are set properly. Perform firmware upgrades to ARC(s) and ensure unique RS-485 addresses if using multiple ARCs.)
- Open the Controller Manager and create new RS-485 device(s) to match the ARC(s) you are using.
- If using a Modular ARC (K1, SW4, SWK, MIC, or XLR), simply edit the newly created ARC and enter the appropriate controller number (found in the Controller Assignment Tables section of the Integrator Series software Help menu) in the appropriate section of the Edit Modular ARC menu, i.e., Switches, Knobs, etc.
- If using an ARC-2 you must first assign the appropriate controller number to a “dummy” parameter in SymNet Designer. Place a DSP module in the Design View that contains the same parameter type as the one you wish to control in your Integrator Series device, for example a gain fader. Give the parameter inside that module the appropriate controller number. Then from within the Controller Manager, highlight the control in the top window and click Add ARC Menu. This will allow you to add this controller number to a new or existing ARC-2. You can further edit the attributes of this control in the Edit ARC-2 window.
- When all appropriate controller numbers have been added to your ARC(s), download to the RS-485 network. You can then connect the ARC(s) to the RS-485 network of your Integrator Series device. **Note:** Custom programmed ARCs will not appear in the External Controller Wizard and you must ensure that all ARCs on the network have unique RS-485 addresses regardless of how they were programmed.

Summary:

Integrator Series products can borrow tools from the SymNet line to expand external control. An ARC-PS provides eight additional ARC ports to the RS-485 network and requires no special programming. A Control I/O provides analog control inputs and binary and relay outputs to your Integrator Series device by programming it in SymNet Designer using controller numbers found in the Controller Assignment Tables section of the Integrator Series software Help menu. ARCs may control nearly any parameter in your Integrator Series device (not just those available from within the External Control Wizard) if they are programmed from the Controller Manager in SymNet Designer.

