



| Control I/O Overview |

The Control I/O is a SymNet system accessory which expands SymNet's ability to control and be controlled from external devices.

Core SymNet DSP products including the 8x8 DSP, 8in DSP and 8out DSP provide flexible external control means including RS-232 (for media controllers such as Crestron and AMX), RS-485 (for SymNet ARC end user panels). They also provide analog control inputs, open collector outputs, and control relays which may be wired in any number of ways to accommodate a sounds system's control needs. That said, oftentimes system designs require more control than is provided on these core devices. The Control I/O serves to expand and augment the existing capabilities.

In addition to expanding SymNet's control input and control output capacity, Control I/O provides a MIDI gateway to SymNet. Low cost generic MIDI controllers can be used for real time or programmed control of almost any SymNet parameter, examples being presets, EQ settings, audio source selection, volume, etc.

The addition of software based Control Modules to SymNet Designer has facilitated the implementation of adaptable and intelligent control systems for both internal audio processing modules <u>and</u> binary control outputs. Complex event based logic, sequenced events, and custom functions can be designed with these modules as well as control of third party hardware and custom displays.

The Control I/O helps system designers make full use of the power of Control Modules. For example, consider a design using software based Control Module audio level detectors to sense the presence of audio exceeding a predetermined SPL level in various audio zones of an amusement park. Signals from the level detectors could be used to drive Control I/O outputs wired to warning indicator LEDs. A system operator could then use this information to make necessary manual volume adjustments to his system.

| Control I/O Features |

- Analog control inputs (x8) which besides serving as inputs for pots and encoders can be used as inputs for up to 16 switches.
- Open collector outputs (x8) with internal +5V pullup resistors.
- Control relays (x4).
- RS-485 (x1).
- MIDI In/Out (x1) via 15-pin 'joystick' port (DB15 to DIN adapter not supplied).
- ARC (Adaptive Remote Control) ports (x4).
- Set up and controlled from the SymNet Designer application running on a Windows[™] PC beginning in version 3.5.
- SymNet ring supports multiple Control I/O's for greatly expanded control capability.
- | Use Control I/O to accept external commands from: |
- SymNet ARC user panels.
- Generic MIDI controllers.
- Potentiometers.
- Momentary and latching action switches.
- Incremental encoders.
- Rotary switches.
- 0-5 volt DC control voltages.
- ASCII commands from 3rd party controllers.

| Use Control I/O to control: |

- Lamps, LEDs.
- Lighting.
- Audible and visible alarms.
- Cart machines, messaging systems.
- External audio and video routers.
- Virtually anything that can be controlled from a current loop or normally open / normally closed dry relay contacts.

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