

# Quick Start Guide CobraLink™



To download the latest version of SymNet Designer, the Windows application that controls all SymNet hardware go to: [www.symetrixaudio.com](http://www.symetrixaudio.com)

## Before You Begin

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### What Ships in the Box

- A CobraLink™ hardware device.
- SymNet Designer CD-ROM (Windows).
- A SymLink patch cable.
- A ferrite clamp
- One PS-4 switching power supply which provides 6 volts DC @ 3.3 amperes.  
NOTE: The PS-4 will accept a 100-240V AC input. A power cable for domestic use is supplied for the PS-4. Export customers should supply the appropriate substitute cable for their locale.
- This Quick Start Guide.

### What You Need to Provide

- A Windows PC with 300MHz or higher Pentium and:
  - WIN 98SE or WIN 2000.
  - 10-15MB free storage space.
  - 1024x768 graphics capability
  - 16 bit or higher colors
  - CD ROM drive or Internet connection.
  - 64MB RAM (WIN 98SE), 128MB RAM (WIN 2000).
- An available serial port capable of operating at 57.6 or 115.2 kilobaud.
- A cable to connect the RS-232 serial port of your PC to SymNet's front panel RS-232 input. The SymNet RS-232 input is a female DB-9 connector.
- Shielded CAT-5 cables as necessary

### Getting Help

SymNet Designer, the Windows application that controls all SymNet hardware, includes a help module which acts as a complete user's guide for both hardware and software.

If you have questions beyond the scope of the help module, contact our Customer Support Group in the following ways:

Tel (425) 778-7728  
8:00 am to 4:30 pm  
Monday through Friday,  
Pacific Time

Email [tech@symetrixaudio.com](mailto:tech@symetrixaudio.com)

Web [www.symetrixaudio.com](http://www.symetrixaudio.com)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations  
Cet appareil numérique de la classe A respecte toutes les Exigences du Règlement sur le matériel brouilleur du Canada.

### Important Safety Instructions.

Please read and keep these instructions. Heed and follow all warnings and instructions. Install in accordance with the manufacturer's instructions.

**Power Source.** This product is intended to operate from a Symetrix PS-4 (or equivalent) power supply.

**Grounding.** To avoid electric shock, plug the power cord into a properly wired receptacle before making any connections to the product. Should the provided plug not fit your outlet, consult a qualified electrician to determine if the problem lies with the plug or the outlet.

**Danger from Loss of Ground.** If the protective ground connection is lost, all accessible conductive parts, including knobs and controls that may appear to be insulated, can render an electric shock.

**Proper Power Cord.** Use only the power cord and connector specified for the product and your operating locale. Use only a cord that is in good condition. **Protect the power cord** from being walked on or pinched, particularly at the plug, convenience receptacle, and the point where the cord exits from the apparatus.

**Operating Location. Do not operate this equipment under any of the following conditions:** explosive atmospheres, in wet locations, in inclement weather, improper or unknown AC mains voltage, or if improperly fused. Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Unplug this apparatus during lightning storms or when unused for long periods of time.

**Stay Out of the Box.** To avoid personal injury (or worse), do not remove the product covers or panels. Do not operate the product without the covers and panels properly installed. Only use accessories specified by the manufacturer. Clean only with a dry cloth.

**User Serviceable Parts.** There are no user serviceable parts inside the CobraLink™. In case of failure, customers inside the U.S. should refer all servicing to the Symetrix factory. Customers outside the U.S. should refer all servicing to an authorized Symetrix distributor. Distributor contact information is available online at [www.symetrixaudio.com](http://www.symetrixaudio.com). Servicing is required when the CobraLink™ has been damaged in any way, such as when a power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not

operate normally, or has been dropped.

**CAUTION:** To prevent electric shock, do not use the polarized plug supplied with the unit with any extension cord, receptacle, or other outlet unless the prongs can be fully inserted.

**The Symetrix Limited Warranty.** Symetrix, Inc. expressly warrants that the product will be free from defects in material and workmanship for eighteen (18) months from the date the product is shipped from the factory. Symetrix's obligations under this warranty will be limited to repairing or replacing, at Symetrix's option, the part or parts of the product which prove defective in material or workmanship within eighteen (18) months from the date the product is shipped from the factory.

**Servicing the CobraLink™.** If you have determined that your CobraLink™ requires repair services and you live outside of the United States please contact your local Symetrix dealer or distributor for instructions on how to obtain service. If you reside in the U.S. then proceed as follows.

**Return authorization.** At the Symetrix factory, Symetrix will perform in-warranty or out-of-warranty service on any product it has manufactured for a period of three (3) years from date of manufacture. Before sending anything to Symetrix, please contact our Customer Support Group for a return authorization (RA) number.

**In-warranty repairs.** To get your CobraLink™ repaired under the terms of the warranty:

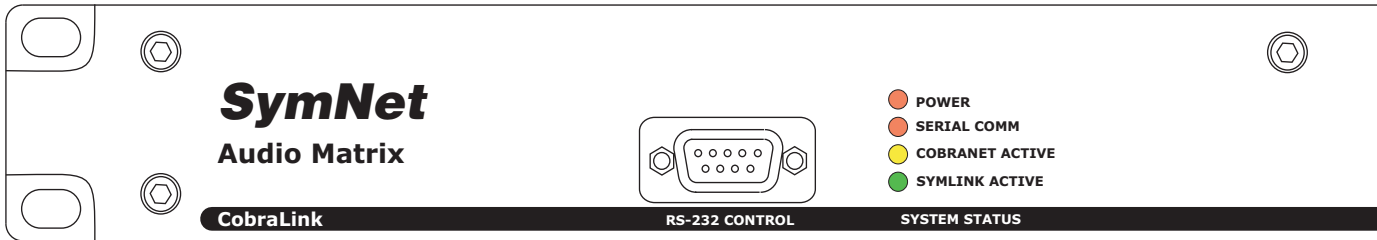
1. Call us for an RA number.
2. Pack the unit in its original packaging materials.
3. Include your name, address, daytime telephone number, and a brief statement of the problem.
4. Write the RA number on the **outside** of the box.
5. Ship the unit to Symetrix, freight prepaid. We do not accept freight collect shipments.

Just do these five things, and repairs made in-warranty will cost you only one way freight charges. We'll pay the return freight.

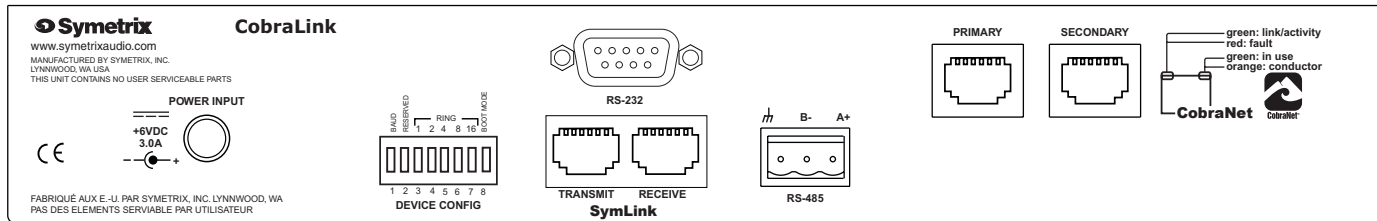
All charges will be COD unless you have made other arrangements (prepaid, Visa or Mastercard).

**Out-of-warranty repairs.** If the warranty period has passed, you'll be billed for all necessary parts, labor, packaging materials, and freight charges. Please remember, you must call for an RA number before sending the unit to Symetrix.

### Hardware Connections And Switch Settings



CONNECTION	DESCRIPTION	WHAT IT DOES
RS-232 CONTROL	DB-9 (d-sub) Female	Connects to host computer running SymNet Designer.



CONNECTION	DESCRIPTION	WHAT IT DOES
POWER INPUT	2.0mm Jack	Accepts power from Symetrix PS-4 (or equivalent) power supply only.
DEVICE CONFIG	8 position DIP switch	1 (BAUD) - Sets front panel RS-232 baud rate. Default = UP = 115,200, DOWN = 57,600. 2 (not used) 3-7 (RING) - Sets ring number of the SymNet ring. In a system with more than one CobraLink unit, each unit must be given a unique ring number. Exactly one unit must be assigned to ring number 1, that is switch 3=DOWN, switches 4-7= UP. 8 (BOOT MODE) - Default = UP. Set to DOWN only if instructed to do so by a Symetrix Customer Support.
SYMLINK	RJ-45	SymNet units connect via a ring network called SymLink. Each device on the network has two connections: TRANSMIT and RECEIVE. Each unit's TRANSMIT connector must connect to another unit's RECEIVE connector. The order of units does not matter. The last unit's TRANSMIT connector must return to the first unit's RECEIVE connector to complete the ring. Connect using high quality shielded CAT-5 patch cables.
RS-232	DB-9 (d-sub) Female	Connects to third party control device such as AMX or Crestron.
RS-485	Detachable Euroblock	Connects to SymNet ARC or any other RS-485 slave device.
COBRANET	RJ-45	Connects the SymNet ring to a CobraNet network. Use the connector labelled PRIMARY. The connector labelled SECONDARY is redundant and can be used if the CobraNet device you are connecting to has a SECONDARY port.
<b>NOTE</b>		Included in the CobraLink packaging is a ferrite clamp. In order to maintain CE compliance, this clamp should be installed on the TRANSMIT side of each SymLink cable.



## Common Problems And Solutions

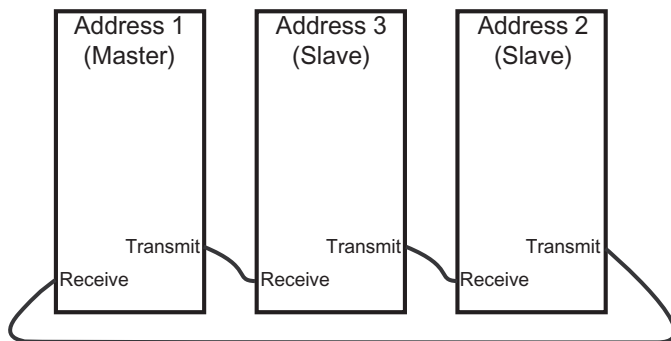
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**Dancing Lights.** If any of your SymNet units power on and seem to suffer from Dancing Lights Syndrome, never fear. This simply means that there is no active configuration loaded. When designing your site, it is necessary to designate a particular configuration to be loaded at power on. This is done by opening your Site File in SymNet Designer and choosing “Triggers and Power On Default...” from the “Hardware” menu. In the dialog box that opens, click the “Change Power On Default...” button. Now choose which configuration (1 through 8 or None) you would like to be the power on default and click “OK”. You must now download your Site File to the hardware (F4) in order for the settings to be stored.

**Serial Communications.** Be sure that you use a *straight-through* RS-232 cable connected to the *front* DB-9 port labeled RS-232 CONTROL. You must connect to whichever unit is master for a given ring. It is permissible to connect to any ring provided that you connect to the master unit (the unit with an Address of 1). By default, SymNet Designer communicates with the hardware units at a baud rate of 115,200 bps. This is how the baud DIP switch (number 1) is configured in the examples on page 2. However, if you have a PC that is incapable of operating at this speed, a setting of 57,600 bps is available. DIP switch 1 will be opposite of the examples on page 2 and the speed of 57,600 bps must be selected in SymNet Designer’s Preferences dialog accessible from the File menu.

**SymLink Communications.** The SymLink bus uses industry standard CAT-5 shielded Ethernet cable. The SymNet units are interconnected in a Token Ring network fashion. The transmit of the first unit is connected to the receive of the second unit and so on. The last unit in the chain should then have its transmit connected to the first units receive to complete the ring. All SYMLINK ACTIVE green LEDs should be lit on the front of each SymNet device.

Example:



**Firmware. IMPORTANT:** Your hardware devices must be running the firmware that complements the version of SymNet Designer in use. If you are receiving this software with a new SymNet device from the factory, then the firmware versions should already be correct. However, if you are using it with an existing SymNet device, then the firmware must be upgraded. It is always wise to double check the versions on all units as a first step to troubleshooting communications errors.

SymNet Designer 1.2 and later features a “Verify” button in the Upgrade Firmware dialog. This makes it easier to verify that you have the correct Microprocessor firmware file for the currently running version of SymNet Designer. However, it does not check for the correct version of the FPGA firmware file. This must still be done manually.

### Upgrading Firmware:

1. Install the latest version of SymNet Designer. The latest version is always available at [www.symmetrixaudio.com](http://www.symmetrixaudio.com). The correct firmware version is included and installed with the SymNet Designer software.
2. Launch SymNet Designer.
3. Connect your hardware devices as they would be for normal operation. It is recommended you disconnect or power down all audio sources connected to SymNet during the upgrade.
4. In SymNet Designer, choose Hardware -> Upgrade Firmware. The dialog that appears will tell you the current version of the firmware in your hardware devices.
5. Click the Upgrade button under SymNet Microprocessor file. An open file dialog will appear allowing you to navigate for firmware files. By default it should take you into the C:\Program Files\Symetrix\SymNet Designer X.X\Upgrade folder. Select the most recent SNMvXXXX.bin file and click Open.
6. After this finishes, click the Upgrade button under SymNet FPGA file. Select the SDFvXXXX.bit file and click Open. (If you are upgrading a CobraLink device, select the CLFvXXXX.bit file instead.)
7. If you have more than one SymNet device, select each device using the address drop down at the top of the dialog box and repeat steps 5-6.
8. If you are using CobraLink and have more than one ring, also repeat for all devices on all rings using the Ring drop down at the top of the dialog box.
9. When finished, click Close.

## DIP Switch Reference 8/5

### SymNet Family DIP Switch Settings

**NOTE:** As of SymNet Designer software version 2.0, a maximum of 32 Rings, each having 16 Addresses, are possible. For the sake of space, only switch settings for the first 8 Rings or Addresses are pictured.

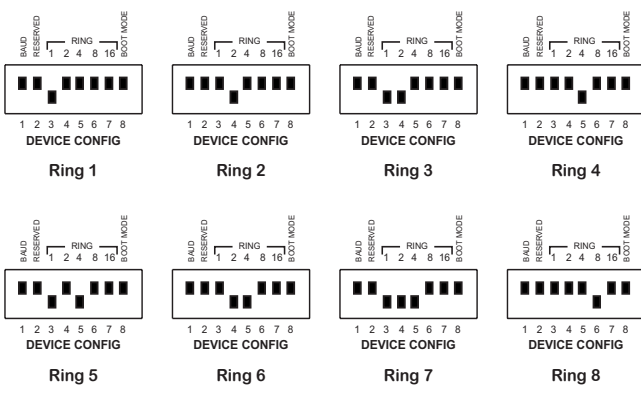
#### SymNet DSP (8x8, 8in and 8out)

**NOTE:** Only one Master is allowed on the Ring and it should be Address 1.



#### SymNet CobraLink

**NOTE:** The DIP switches on a CobraLink device configure its Ring number. A CobraLink device is always at Address 1 and is the Master of its ring.



#### SymNet BreakIn12 and BreakOut12

**NOTE:** An Address of 1 is not valid on the BreakIn12 or BreakOut12 since these devices can not be the Master on a Ring.

