Quick Start Guide
SymNet™ DSP

SymNet™
Audio Matrix

To download the latest version of SymNet Designer, the Windows application that controls all SymNet hardware go to: www.symetrixaudio.com

What Ships in the Box
☑ A SymNet hardware device.

☑ SymNet Designer CD-ROM (Windows).

☑ A SymLink patch cable.

☑ A ferrite clamp

☑ A detachable power cord.

☑ 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.

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. A printable copy is also available at www.symetrixaudio.com

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

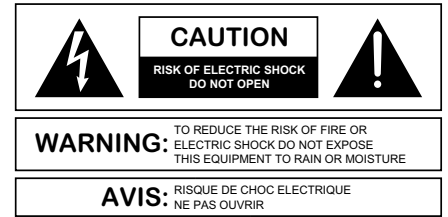Email   tech@symetrixaudio.com

Web   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 numerique de la classe A respecte toutes les Exigences du Reglement sur le materiel brouilleur du Canada.

Important Safety Instructions.
1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install only in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug cord 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
RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

AVIS: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

SEE OWNERS MANUAL. VOIR CAHIER D'INSTRUCTIONS.
No user serviceable parts inside. Refer servicing to qualified service personnel.
Il ne se trouve a l'interieur aucune piece pouvant entre reparée l'usager.
S'adresser a un reparateur compétent.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product (i.e. this quick start guide).

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.

Power Source. SymNet™ Audio Matrix hardware uses a switching power supply that automatically adjusts to the applied voltage. Ensure that your AC mains voltage is somewhere between 100-240 VAC, 50-60 Hz (200-240 VAC, 50 Hz for some export markets - refer to rating on rear panel). Use only the power cord and connector specified for the product and your operating locale. A protective ground connection, by way of the grounding conductor in the power cord, is essential for safe operation.

User Serviceable Parts. There are no user serviceable parts inside the SymNet™ Audio Matrix. 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.

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SymNet™ Audio Matrix

The Symetrix SymNet™ Audio Matrix is a family of
network linkable audio matrix processors intended for the
installed sound market. SymNet™ is a mixing, routing,
processing platform using Digital Signal Processing (DSP)
to implement the following audio processing blocks:

• Dynamics: Compressors, Limiters, Gates, Duckers,
  Downward Expanders, AGC, SPL Computer
• Parametric Equalizers
• Filters: Highpass, Lowpass, Shelf
• Crossovers: two to four-way
• Delays
• Mixers: Stereo, Mono, LCR, Matrix, Automixers, Room
  Combiners
• Signal Generators: Sine, Square, Triangle, Pink noise,
  White noise.
• Input Selector Switching
• Output Selector Switching
• Level Controls
• Meters and Oscilloscopes
• Comprehensive Remote Control Functions
• Real-time clock driven Event Scheduler

Audio processing takes place after 24-bit Sigma-Delta
conversion using 40-bit floating point processing. Floating
point processing eliminates internal dynamic range
problems caused by overflow or attenuation during digital
signal processing operations.

There are three processors in the Audio Matrix family:

• The **SymNet™ 8x8** processor. 8-inputs, 8-outputs, on
  board DSP, SymLink linkable.

• The **SymNet™ 8in** processor: 8-inputs, on board DSP,
  SymLink linkable.

• The **SymNet™ 8out** processor: 8-outputs, on board DSP,
  SymLink linkable.

SymNet™ Designer

SymNet™ Designer is an easy to use graphical user
interface (GUI) that uses drag-and-drop techniques to
quickly and easily select and connect the processing
blocks needed for a working system. You download the
finished design into the SymNet™ hardware via an RS-
232 connection and you're off and running. Up to eight
different configurations can be saved in one unit, and
these can be recalled during use to change configuration,
routing, settings, or to control an external device. Since the
configuration files are stored in the hardware, you can walk
up to a SymNet™ installation, plug your laptop computer
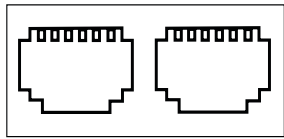into the RS-232 port, and download that unit's configuration
files.

Up to 8 (16 with version 2.0 or higher of SymNet™
Designer software) SymNet™ can be linked using
SymLink, an ultra-fast 64-channel audio/data backbone
used to connect units in adjacent racks using CAT-5
cabling. SymLink is a ring network; all hardware is self-
contained and no hubs or interface cards are required.

This Quick Reference Guide is intended for the installer's
use during installation. Further details about SymNet™
Designer can be found in the program's help system.
SymNet™ Designer can be found on the CD-ROM shipped
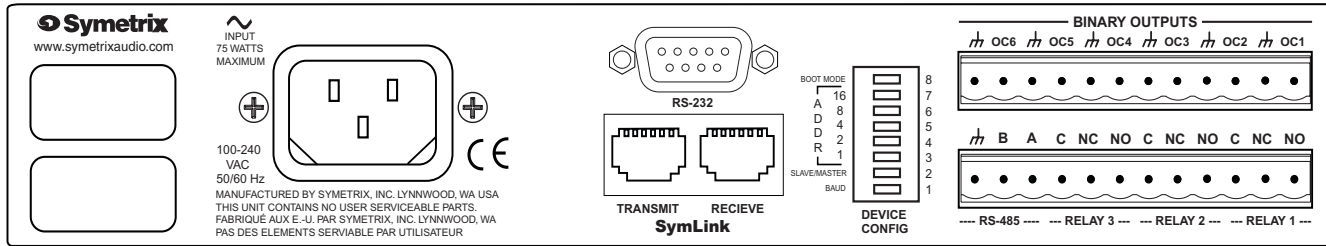with the hardware or downloaded from the Symetrix web
site: http://www.symetrixaudio.com.

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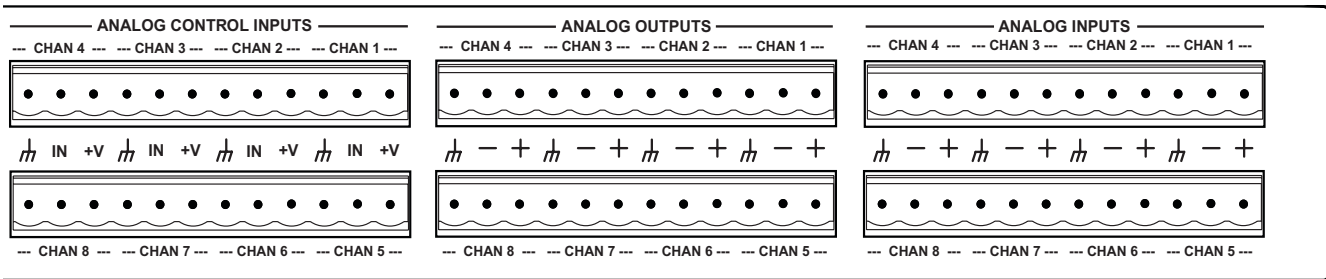| Mechanical		
Item	*Discussion*	*Remarks*
Space Required	1U (WDH: 48.26 cm x 21.59cm x 4.369cm / 19 in x 8.5 in x 1.72 in) Depth measurement does not include connector allowance.	Allow 1-inch additional depth for Euroblock connectors. Additional depth may be required depending on your particular DB-9 connector. Allow 1U (1.72 in, 4.369cm) free space above <u>and</u> below unit for proper ventilation.
Electrical	100-240 VAC, 50-60 Hz (200-240 VAC, 50 Hz for some export markets - refer to rating on rear panel), 100 W maximum.	No line voltage switching is required.
Ventilation	Fan located at equipment right, pulls cold air into unit. Air exit at equipment left.	Ensure that the left and right equipment sides are unobstructed (2", 5.08cm minimum clearance). The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths, curtains, etc.
Weight	3.0kg / 6.6 lbs net.	

Connections		
Item	*Discussion*	*Remarks*
Binary outputs (relay and open collector) and analog control inputs	All use Euroblock connectors. Symetrix part number 039003.	Connectors come in 3-pin modules. Connectors included with unit.
SymLink	RJ-45 CAT-5 shielded network cabling required.	Uses standard RJ-45 'straight-through' wiring. 10 meter length limit.
RS-232	DB-9 female d-sub connector on unit	Same connector used on front panel.You need pins: 2, 3, 5, 7, 8, (wired 'straight-through').
AC mains		Opposite end as required for your locale. Cable included with unit.

Interconnecting Multiple Units via SymLink

This is relatively straightforward, however the following points are important to keep in mind:

- SymLink is a ring network unlike Ethernet which uses a hub and spoke topology making a single connection to each device from the hub. Each device on a SymNet™ network has two connections: TRANSMIT and RECEIVE. With SymNet™ the last unit's TRANSMIT connector must connect to the first unit's RECEIVE connector.

- SymLink cables must be shielded, and are limited to 10 meters length (each).

- It is not necessary to follow any particular numeric order when interconnecting units. This may be helpful when units are located in adjacent racks.

- Each unit must have a different Unit ID number. The master unit must be Unit ID #1. Remember where this unit is, because the PC running SymNet™ Designer must be connected to it.

TRANSMIT   RECEIVE
SymLink

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SymNet™ Rear Panel (left)

SymNet™ Rear Panel (right)

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DIP Switch Settings		
An eight-position DIP switch is located in the middle of the rear panel of the SymNet™ hardware. It determines serial port speed, master/slave mode, unit address, and factory firmware enable. The ON setting is to the left as you face the rear of the unit.		**Note: after changing any DIP switch setting, reboot the hardware by disconnecting it from AC power and then reconnecting it.**
Switch Number, bottom to top	*What does it do?*	*Remarks*
1 - BAUD	Sets baud rate of front panel RS-232 Serial Port.	Off=115200 baud, On=57600 baud. Must match setting in SymNet™ Designer.
2 - MASTER / SLAVE	Off = MASTER, On = SLAVE	Unit with ADDR = 1 must be the MASTER. All other units must be SLAVES.
3-7 - ADDR (Device Address)	Each unit must have a unique address. These switches set that number, in binary form, using the bit values labeled on the equipment. On = 1, Off = 0.The device address equals the number programmed via SW3-7.	SW3 - 1 SW4 - 2 SW5 - 4 SW6 - 8 SW7 - 16 All switches OFF = device address 0 (zero). All switches are ON = device address 31.
8 - Use Factory Firmware	On = Use Factory OS Off = Use upgraded OS	Set to OFF unless instructed otherwise by tech support.

RS-232 Settings	
The rear panel DIP switch determines the baud rate (speed) of the front panel RS-232 connector. After changing the setting of the DIP switch, you must reboot the hardware by removing and restoring AC power to the unit. The cable connecting to the host PC is a simple DB-9 extension cable, with like pins wired to like pins, with male and female connectors at the ends. You can purchase this at any computer store. Generally all pins are wired, which is permissible. At a minimum, you need pins 2, 3, 7, and 8 wired. Pin 5 (ground) is optional but recommended.	You should connect your host PC to the front panel RS-232 port. The rear panel port may be used, but the hardware must be programmed to allow this. See the SymNet RS-232 protocol document available at http://www.symetrixaudio.com for details. Test your RS-232 connection by trying to download to the hardware. You should see the yellow RS-232 LED on the front panel blink.

Note
Included in the SymNet packaging is a ferrite clamp. In order to maintain CE compliance, this clamp should be installed on the TRANSMIT side of each SymLink cable.

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Hardware Installation... *continued*   6/13

Analog Input / Output Connections

Item	*Description*	*Details*	*Remarks*
Analog Inputs	Balanced-bridging input accepts signal levels from mic (-50 dBu nominal) through line (+4 dBu nominal). 48V phantom power available. There is 20 dB headroom past the signal level selected. At unity gain (+4 dBu setting), the maximum input level is +24 dBu.	Input impedance: >6.66k balanced, >3.3k unbalanced. The input topology uses a balanced instrumentation amplifier. Both inputs are identical and symmetrical in terms of impedance and shunt capacitance. Set input level capability, phantom power, and gain via control software.	For unbalanced use, either reference the minus input terminal to the signal source ground (preferred) or ground the minus input to the adjacent ground terminal. Using the second method deprives you of the common mode rejection inherent in a balanced input, even when coming from an unbalanced source.
Analog Outputs	Balanced line output delivers +24 dBu maximum level. Nominal level can be software adjusted for professional or consumer line levels or mic level.	Output source impedance: 204-Ohms balanced, 102-Ohms unbalanced. The output topology is a chain of inverters, emulating a grounded center-tap transformer secondary.	For unbalanced use float (do not connect) the minus output terminal. Note that unbalanced usage results in 6 dB lower output level.
Analog Control Inputs	High-impedance input accepts 0-10V positive DC signals. 10V reference voltage available at rear panel interface.	Use with external potentiometer (10k linear taper) or external voltage source (0-10V). See Rear Panel for connections.	

Binary, Relay and RS-485 Outputs

Item	*Discussion*	*Remarks*
Binary Outputs	Six NPN transistor outputs, cleverly wired to allow operation as open collector output for relay coil driving or for sourcing LED drive current. Collector and ground connections furnished. These outputs can also drive an LED directly. Current limit resistor not needed.	2N4401 transistors. Current must be < 50 mA, 24V maximum. Control software determines how these are used. If you're driving a relay, be sure to include a reversed biased diode connected across the relay coil. Connect the LED from the output to ground.
Relay Outputs	Three SPDT relay contacts. Contact rating: 3A, 24 VDC, resistive 0.3A, 60 VDC, resistive	SymNet™ Designer determines how these are used. Do not use at 120 VAC.
RS-485 I/O	Connect to RS-485 system.	2-signal lines and ground provided. See SymNet™ Designer Help Module or http://www.symetrixaudio.com for complete protocol.

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Software Installation

The Symetrix SymNet™ Designer software provides real-time control over multiple audio functions from a Windows 98/2000 PC environment.

Use one of the following procedures to install the SymNet™ Designer on your computer.

From the SymNet™ Designer CD-ROM:

1. The software should auto run after inserting the CD-ROM into your computer's CD-ROM drive.

2. If the software does not auto run, then Click on the Start button, Run D:\SETUP

(If your CD-ROM drive isn't D:, then substitute its drive letter)

From the Symetrix web site (http://www.symetrixaudio.com):

1. Download the SymNet™ Designer program file.

2. From the Start button, Run the file/program that you just downloaded to start the Setup program.

The software always starts up in offline mode. Regardless, you can explore the software, experiment to your heart's content, and perhaps even get useful work done. You can save any configurations that you create to a file that can be downloaded later into an operating SymNet™ system.

If there is a SymNet™ unit connected, you can go to online, and upload the configuration file from the SymNet™ unit(s). Once you have a unit connected, you can also work in real time, which allows you to hear adjustments and settings as you make them.

Using SymNet™ Designer

Once the installation process is complete, you should have an icon on your desktop, and a program item on the Start menu. Click on the SymNet™ icon and you're ready to begin.

SymNet™ Designer is mostly self explanatory. The Configuration Screen represents all SymNet™ units in a system. Each unit can store up to eight configurations. Using the insert tab of the tool kit (left-hand) window, you select the SymNet™ unit that you wish to configure and drag it to the configuration page. Double clicking on the unit opens it, and causes the tool kit to display all the different signal processors available. The tool kit window is context sensitive. It always displays the items that can be placed in the current window. You can use the Browser to navigate to all of the relevant windows opened.

Drag and drop signal processors into the configuration page. Connect them together by clicking on a connection point and moving the mouse in the direction you want the wire to run. Make corners by clicking at the corner and

moving off in a new direction. Terminate a wire by clicking on the terminating connection point or by hitting the ESC key or right mouse button. Right click on an existing wire to make a tee connection.

Once you've completed your design, download it to the SymNet™ unit. Double click on processors on the configuration page to see and change their settings.

Note: There are a lot of useful functions available in the mouse right-click. Explore! That's the ultra-condensed version. You'll find more complete information in SymNet™ Designer's help system.

Internal Hardware Memory

SymNet™ saves its settings in internal Flash Memory, allowing it to recall settings through a power-down/up cycle. Unlike static ram, the flash memory does not require batteries, and is designed to retain its memory for the life of the product.

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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, provided that the Buyer gives Symetrix prompt notice of any defect or failure and satisfactory proof thereof. Products may be returned by Buyer only after a Return Authorization number (RA) has been obtained from Symetrix. Buyer will prepay all freight charges to return the product to the Symetrix factory. Symetrix reserves the right to inspect any products which may be the subject of any warranty claim before repair or replacement is carried out. Symetrix may, at its option, require proof of the original date of purchase (dated copy of original retail dealer's invoice). Final determination of warranty coverage lies solely with Symetrix. Products repaired under warranty will be returned freight prepaid via United Parcel Service by Symetrix, to any location within the Continental United States. Outside the Continental United States, products will be returned freight collect.

The foregoing warranties are in lieu of all other warranties, whether oral, written, express, implied or statutory. Symetrix, Inc. expressly disclaims any IMPLIED warranties, including fitness for a particular purpose or merchantability. Symetrix's warranty obligation and buyer's remedies hereunder are SOLELY and exclusively as stated herein.

This Symetrix product is designed and manufactured for use in professional and studio audio systems and is not intended for other usage. With respect to products purchased by consumers for personal, family, or household use, **Symetrix expressly disclaims all implied warranties, including but not limited to warranties of merchantability and fitness for a particular purpose.**

This limited warranty, with all terms, conditions and disclaimers set forth herein, shall extend to the original purchaser and anyone who purchases the product within the specified warranty period.

Symetrix does not authorize any third party, including any dealer or sales representative, to assume any liability or make any additional warranties or representation regarding this product information on behalf of Symetrix.

This limited warranty gives the buyer certain rights. You may have additional rights provided by applicable law.

NOTE: Some Symetrix products contain embedded software and may also be accompanied by control software intended to be run on a personal computer. Said software is specifically excluded from this warranty.

Limitation of Liability

The total liability of Symetrix on any claim, whether in contract, tort (including negligence) or otherwise arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair, replacement or use of any product will not exceed the price allocatable to the product or any part thereof which gives rise to the claim. In no event will Symetrix be liable for any incidental or consequential damages including but not limited to damage for loss of revenue, cost of capital, claims of customers for service interruptions or failure to supply, and costs and expenses incurred in connection with labor, overhead, transportation, installation or removal of products, substitute facilities or supply houses.

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Servicing the SymNet™ Audio Matrix
If you have determined that your SymNet™ unit 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 years from date of manufacture.

Before sending anything to Symetrix, please contact our Customer Service Department for a return authorization (RA) number. The telephone number is (425) 778-7728. Additionally support is available via E-mail through tech@symetrixaudio.com or via the web site http://www.symetrixaudio.com.

In-warranty repairs
To get your SymNet™ 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. If you don't have the factory packaging materials, we recommend using an oversize box. Wrap the unit in a plastic bag, surround it with bubble-wrap, and place it in the box surrounded by Styrofoam peanuts. Be sure there is enough clearance in the box to protect the rack ears. We won't return the unit in anything but Symetrix packaging for which we will have to charge you. If the problem is due to operator misuse or error, you will have to pay for both parts and labor. In any event, if there are charges for the repair, you will pay for 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.

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Declaration Of Conformity   10/13

We, Symetrix, Incorporated, 6408 216th St. SW, Mountlake
Terrace, WA, 98043, USA, declare under our sole
responsibility that the products:

- **SymNet™ 8x8 DSP**
- **SymNet™ 8in DSP**
- **SymNet™ 8out DSP**

to which this declaration relates, are in conformity with the
following standards:

EN 55103-1
Product family standard for audio, video, audio-visual and
entertainment lighting control apparatus for professional
use.
Part 1: Emission.

EN 55103-2
Product family standard for audio, video, audio-visual and
entertainment lighting control apparatus for professional
use.
Part 2: Immunity.

EN 60065
Safety requirements for mains operated electronic and
related apparatus for household and similar general use.

The technical construction file is maintained at:
Symetrix, Inc.
6408 216th St. SW
Lynnwood, WA, 98043
USA

The authorized representative located within the European
Community is:
World Marketing Associates
P.O. Box 100
St. Austell, Cornwall, PL26 6YU, England

Date of issue: 15 March, 2002
Place of issue: Mountlake Terrace, Washington, USA

Authorized signature:

Dane Butcher, President, Symetrix Inc.

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Common Problems And Solutions   12/13
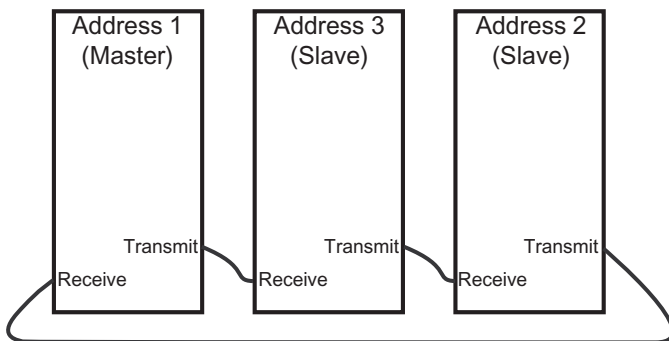
Dancing Lights. If any of your SymNet units power on and seem to suffer from Dancing Lights Syndrome, never fear. This simply means that there is no active configuration loaded. When designing your site, it is necessary to designate a particular configuration to be loaded at power on. This is done by 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. <u>IMPORTANT</u>: 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.

<u>Upgrading Firmware</u>:
1. Install the latest version of SymNet Designer. The latest version is always available at www.symetrixaudio.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.

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Supplement

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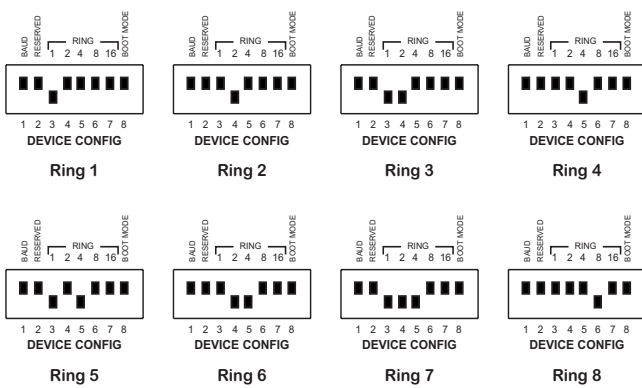
SymNet DSP (8x8, 8in and 8out)

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

Address 1 (Master) Address 2 (Slave) Address 3 (Slave) Address 4 (Slave)

Address 5 (Slave) Address 6 (Slave) Address 7 (Slave) Address 8 (Slave)

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.

Ring 1 Ring 2 Ring 3 Ring 4

Ring 5 Ring 6 Ring 7 Ring 8

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.

Address 2 Address 3 Address 4

Address 5 Address 6 Address 7 Address 8