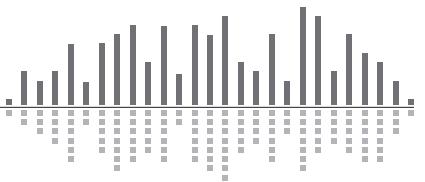


# Jupiter 4, Jupiter 8, Jupiter 12 Quick Start Guide



**Symetrix**

The Vision Behind the Sound





## What Ships in the Box

- Jupiter (4, 8, or 12) hardware device.
- Jupiter CD-ROM (Windows).
- One part number 12-0002-A switching power supply which provides 24 VDC @ 1.0 amperes. NOTE: This power supply will accept a 100-240 VAC input.
- A North American (NEMA) or Euro IEC power cable. You may need to substitute a cable appropriate for your locale.
- 12 or 20 detachable 3.81 mm terminal block connectors.
- This Quick Start Guide.

## What You Need to Provide

- A Windows PC with 1 GHz or higher processor and:
- Windows XP or higher.
- 250 MB free storage space.
- 1024x768 graphics capability.
- 16-bit or higher colors.
- CD-ROM drive or Internet connection.
- 512 MB or more of RAM as required by your operating system.
- Network (Ethernet) interface.
- CAT5 cable or an existing Ethernet network.

## Getting Help

Jupiter software, the Windows software that controls the 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 this Quick Start Guide, contact our Customer Support Group in the following ways:

**Tel:** +1.425.778.7728  
8:00 am to 4:30 pm  
**Monday through Friday,**  
**Pacific Time**  
**Web:** <http://www.symetrix.co>  
**Email:** support@symetrix.co

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at their own expense.

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

- ① Read these instructions.
- ② Keep these instructions.
- ③ Heed all warnings.
- ④ Follow all instructions.
- ⑤ Do not use this apparatus near water. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- 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 This apparatus shall be connected to a mains socket outlet with a protective earthing connection. 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.



**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 à l'intérieur aucun pièce pouvant être réparée l'utilisateur.  
S'adresser à un réparateur 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).

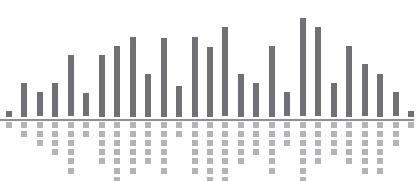
► **CAUTION:** To prevent electric shock, do not use the polarized plug supplied with the device with any extension cord, receptacle, or other outlet unless the prongs can be fully inserted.

► **Power Source:** This Symetrix hardware uses a universal input supply that automatically adjusts to the applied voltage. Ensure that your AC mains voltage is somewhere between 100-240 VAC, 50-60 Hz. 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. The appliance inlet and coupler shall remain readily operable once the apparatus has been installed.



► **Lithium Battery Caution:** Observe the correct polarity when changing the lithium battery. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to local disposal requirements.

► **User Serviceable Parts:** There are no user serviceable parts inside this Symetrix product. 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: <http://www.symetrix.co>.

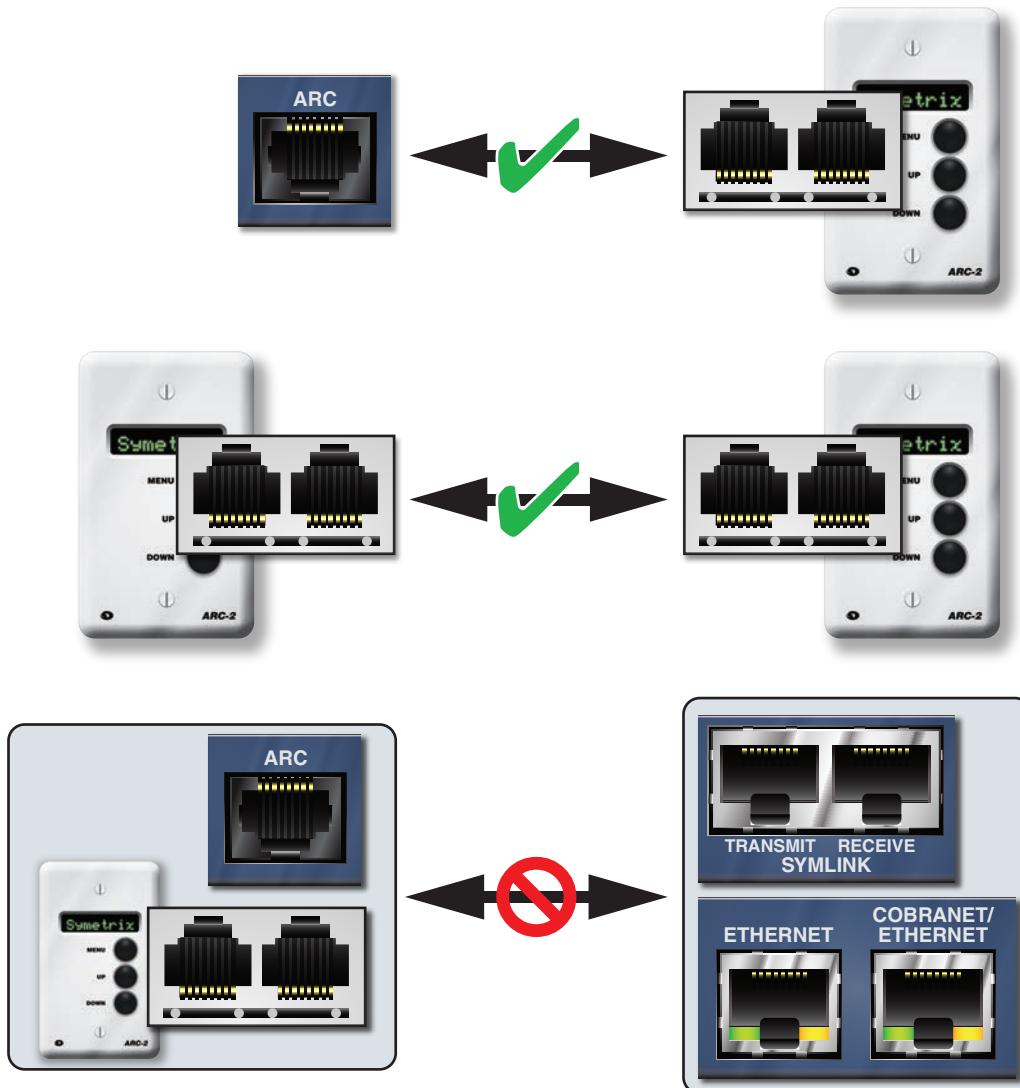


# WARNING!

The RJ-45 connectors labeled "ARC" are only for use with the ARC series of remotes.

***DO NOT plug the ARC connectors on Symetrix products into any RJ-45 connector labeled "SYMLINK", "ETHERNET" or "COBRANET".***

The "ARC" RJ-45 connectors on Symetrix products can carry anywhere from 6 to 24 VDC which can damage SymLink, Ethernet and CobraNet circuitry.





## Introducing Jupiter.

Jupiter packages powerful DSP into a zero learning curve, turn-key audio processing solution drawing its inspiration from the ‘apps’ paradigm of smartphones like the iPhone. Standing on the shoulders of Symetrix’ world-class SymNet DSP platform, Jupiter upholds our commitment to pristine sound.

### Hardware: Choice made simple.

The three Jupiter hardware offerings differ only in their audio input and output counts. All three use the same software and DSP processes, making your choice of hardware quick and easy.

### Software: Easy from the start.

Just like using productivity apps on your smart phone, you use Jupiter apps to do specific audio jobs with a simple download to Jupiter hardware. Tap into one of the multiple personalities of Jupiter – no design time, zero learning curve. Jupiter handles every task, from automixing to loudspeaker management. The ever-growing library of downloadable Jupiter apps future-proofs your hardware investment.

### Engineered by Symetrix.

Jupiter brings you controllable and simple to use audio DSP. Engineered and built in the US by Symetrix...

**Explore Jupiter.**

## Jupiter Apps.

### Mixing and Routing for:

- Houses of Worship
- Courtrooms
- Banquet Rooms

### Public Address and Distribution for:

- Transit Stations
- Theaters
- Shopping Malls

### Sound Reinforcement for:

- Nightclubs
- Courtrooms
- Lecture Halls

### Special Purpose Signal Processing for:

- Broadcast Facilities
- Production Suites
- Live Sound

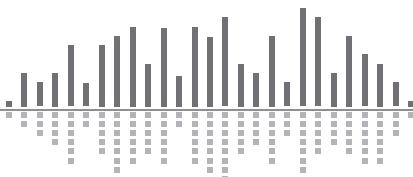
<b>Performance Data</b>		
ITEM	DESCRIPTION	DETAILS
<b>INPUTS</b>		
<b>Number of Inputs</b>	Twelve (12), eight (8), or four (4) switchable balanced mic or line level on Jupiter 12, 8 or 4 respectively.	
<b>Connectors</b>	3.81 mm terminal blocks.	
<b>Nominal Input Level</b>	+4 dBu line or -36 dBu mic level (software selectable) with 20 dB of headroom.	<b>NOTE:</b> For unbalanced analog input, either reference the minus input terminal to the signal source ground (preferred) or ground the minus input to the adjacent ground terminal (tie low to ground). Using the second method deprives you of the common mode rejection inherent in a balanced input, even when coming from an unbalanced source.
<b>Mic Pre-amp Gain</b>	+40 dB.	
<b>Input Trim</b>	+/- 24 dB.	
<b>Maximum Input Level</b>	+23 dBu	
<b>Input Impedance</b>	> 18 kΩ balanced, > 9 kΩ unbalanced, > 2 kΩ with phantom power engaged.	
<b>CMRR</b>	> 50 dB @ 1 kHz, unity gain	
<b>Mic Pre-amp EIN</b>	< -125 dBu, 22 Hz - 22 kHz, 100 Ω source impedance.	
<b>Phantom Power</b>	+20 VDC, 20 mA maximum per input.	
<b>OUTPUTS</b>		
<b>Number of Outputs</b>	Four (4), eight (8), or four (4) line level on Jupiter 12, 8 or 4 respectively.	
<b>Connectors</b>	3.81 mm terminal blocks.	
<b>Nominal Output Level</b>	+4 dBu line level with 20 dB of headroom.	
<b>Maximum Output Level</b>	+24 dBu.	
<b>Output Impedance</b>	200 Ω balanced, 100 Ω Unbalanced.	<b>NOTE:</b> For unbalanced analog output, do not connect the minus output terminal. Unbalanced configuration results in 6 dB lower output level.
<b>SYSTEM</b>		
<b>Sampling Rate</b>	48 kHz.	
<b>Frequency Response</b>	20 Hz - 20 kHz, +/- 0.5 dB.	
<b>Dynamic Range</b>	> 110 dB (A-Weighted), input to output.	
<b>THD+Noise</b>	< -85 dB (un-weighted); 1 kHz @ +22 dBu with 0 dB gain.	
<b>Interchannel Crosstalk</b>	< -90 dB @ 1 kHz, typical.	
<b>Latency</b>	< 1.6 ms, input to output with all DSP inactive.	

<b>Mechanical Data</b>		
ITEM	DESCRIPTION	DETAILS
<b>Space Required</b>	1U (WDH: 48.02 cm x 19.05 cm x 4.37 cm / 18.91 in x 7.5 in x 1.72 in), depth is specified from front panel to back of connectors.	Allow at least 3 inches additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
<b>Electrical</b>	100-240 VAC, 50/60 Hz, 25 Watts maximum.	Universal input.
<b>Ventilation</b>	Maximum recommended ambient operating temperature is 30 C / 86 F.	Ensure that the left and right equipment sides are unobstructed (5.08 cm, 2 in minimum clearance). The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths, curtains, etc.
<b>Certifications or Compliance</b>	UL 60065, cUL 60065, IEC 60065, EN 55103-1, EN 55103-2, FCC Part 15, RoHS	
<b>Shipping Weight</b>	8 lbs. (3.63 kg)	

All specifications and features subject to change without notice.



<b>Front Panel</b>		
Item	Description	Comments
<b>Inputs</b>	Four (4), eight (8) or twelve (12) bi-color LEDs on Jupiter 4, 12 or 8 respectively.	Illuminate green to indicate signal present (> -48 dBu), amber between 0 and +23 dBu and red to indicate clipping (> +24 dBu).
<b>Outputs</b>	Four (4), eight (8) or four (4) bi-color LEDs on Jupiter 4, 12 or 8 respectively.	Illuminate green to indicate signal present (> -48 dBu), amber between 0 and +23 dBu and red to indicate clipping (> +24 dBu).
<b>Power</b>	Green LED	Illuminates to indicate the device is powered on and fully operational. Flashes while device is booting.
<b>ARC (LED)</b>	Green LED	Illuminates to indicate ARC port (RS485) connection on the front or rear port.
<b>Network</b>	Bi-color LED	Illuminates green to indicate network (Ethernet) activity, amber to indicate acquisition of a network address in DHCP mode.
<b>ARC (Connector)</b>	RJ45 connector	Distributes power and control data to Symetrix ARC wall panel remotes. Uses standard straight-through UTP CAT5 cabling.  ⚠ Warning! Refer to the RJ45 Warning for compatibility information.





## Rear Panel

Item	Description	Comments
Power Input	Locking power plug	Accepts power from Symetrix power supply part number 12-0002-A (100-240 VAC, 50-60 Hz, 25 Watts max). Connect only to a grounded power outlet.
ARC	RJ45 jack	<p>Distributes power and RS485 data to one or more ARC devices. Uses standard straight-through UTP CAT5 cabling.</p> <p><b>Warning!</b> Refer to the RJ45 Warning for compatibility information. Individual wires may be broken out according to the pinout diagram below for use with an ARC-PS or longer RS485 runs with local ARC powering.</p> <div style="text-align: center;"> <b>ARC PORT PINOUT</b> <p><b>Note:</b> The ARC Audio line may be grounded at the Symetrix rack-mount device and the ARC wall panel to provide additional distance.</p> </div>
Ethernet	RJ45 jack	<p>Communications interface for Jupiter software running on the host PC as well as 3rd party control for systems such as AMX or Crestron. Uses standard straight-through UTP CAT5 cabling. Features auto-crossover sensing for direct device-to-device connections.</p> <p>For 3rd party control, refer to the control protocol document available on the Symetrix web site or within the Jupiter software help file.</p>
Logic Outputs (1-4)	Two (2) 3-pin 3.81 mm terminal blocks	Four (4) logic outputs with two (2) paired common ground pins. Logic Outputs go low (0V) when active, and are internally pulled high (5V) when inactive and can drive external LED indicators directly. Purpose configured by the External Controller Wizard, able to follow most buttons and LEDs in software. Polarity may be inverted in software.
External Control Inputs (CTRL 1 and 2)	Two (2) 3-pin 3.81 mm terminal blocks	Allows real-time control of any volume using standard 10k Ohm linear potentiometers or mutes and presets using standard contact closures. May also be used for emergency system integration. Purpose configured by the External Controller Wizard. Each connection accommodates one potentiometer or two switches. Uses standard shielded twisted pair cabling.
Analog Line Outputs	Four (4), eight (8) or four (4) 3-pin 3.81 mm terminal blocks on Jupiter 4, 12 or 8 respectively.	Four (4) or eight (8) balanced analog line level audio outputs, individually software-selectable levels of -10 dBV or +4 dBu.
Analog Mic/Line Inputs	Four (4), eight (8) or twelve (12) 3-pin 3.81 mm terminal blocks on Jupiter 4, 8 or 12 respectively.	Twelve (12), eight (8) or four (4) balanced analog audio inputs with individually software-selectable phantom power and level of -40 dBu or +4 dBu. <b>Note:</b> Input 4 may be switched internally to the ARC Audio input. Mode is configured by the inputs panel in the software.

### NOTE:

Detachable terminal blocks connectors are designed for use with bare wire. Do not tin stranded wires before inserting them into the connectors.

## Power

### POWER INPUT

Connect the locking power plug connector end of the supplied AC cord to the receptacle on the rear of Jupiter. Connect the AC connector end of the supplied AC cord to an AC power source that is of the correct voltage and frequency (100-240 VAC, 50-60 Hz). Use only the power cord and connector specified for the product and your operating locale.

When Jupiter is powered up correctly, the POWER LED on the front of the device will be lit solid green.



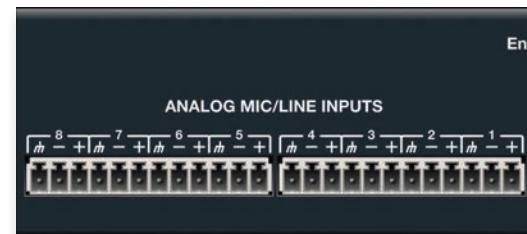
## Audio

### ANALOG

#### MIC/LINE INPUTS

Using standard mic/line cables terminated on one end with terminal block connectors and appropriate connectors for your mic/line sources on the other end, connect the terminal block ends into the ANALOG MIC/LINE INPUTS of Jupiter and the opposite ends into your source devices' outputs. Refer to the **Audio Wiring Reference** for more information.

**NOTE:** Wiring the inputs to an unbalanced cable will typically result in an input level that is 6 dB lower than the input level achieved using a balanced cable. If wiring to an unbalanced source, you may need to adjust Jupiter's input level. Refer to the INPUT LEVEL within the INPUTS panel in the software.

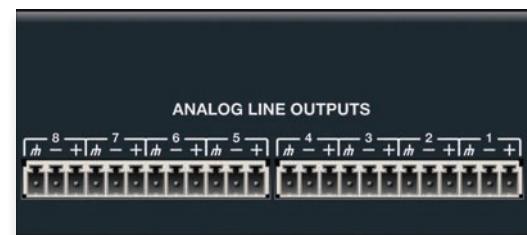


### ANALOG

#### LINE OUTPUTS

Using standard mic/line cables terminated on one end with terminal block connectors and appropriate connectors for your destination devices on the other end, connect the terminal block ends into the ANALOG LINE OUTPUTS of Jupiter and the opposite ends into your destination devices' inputs. These outputs are +4 dBu balanced line level outputs by default. If you need an unbalanced output, see the analog audio wiring diagrams in the **Audio Wiring Reference**.

**NOTE:** Wiring the outputs to an unbalanced cable will typically result in an output level that is 6 dB lower than the output level achieved using a balanced cable. If wiring to an unbalanced destination, you may need to change Jupiter's output level. Refer to the OUTPUT LEVEL within the OUTPUTS panel in the software.



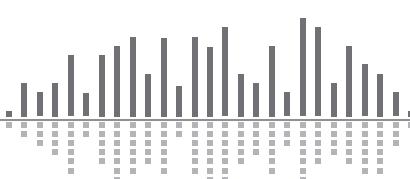
## Control

### ETHERNET

Using a standard straight-through CAT5 cable terminated with RJ45 connectors, connect Jupiter's ETHERNET port to either your computer's Ethernet port or to an existing Ethernet network. You may wish to review the Network Configuration section for more information. When Jupiter has a physical network connection, the amber "link" LED on the ETHERNET connector will be lit solid. When there is network communication, the green "activity" LED on the ETHERNET connector and the NETWORK LED on the front of the device will flash accordingly.

**NOTE:** Jupiter's Ethernet port will automatically sense a device-to-device connection so that a standard straight-through Ethernet cable may always be used. A cross-over cable is not required.

**NOTE 2:** The Ethernet connection is also available for 3rd party control. Refer to the control protocol document available on the Symetrix web site or within the Jupiter software help file for more information.



### ARC

Using a standard straight-through CAT5 cable terminated with RJ45 connectors or standard shielded twisted pair terminated with a terminal block on one end, connect your ARC Wall Panels according to the guidelines in the ARC Network Design section of the ARC's documentation or the Jupiter help file.

When an ARC Wall Panel network is connected to Jupiter, the green ARC LED on the front of the device will be lit solid green.



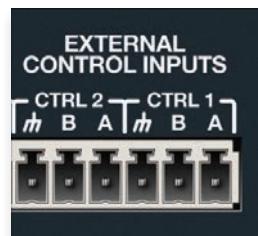
**WARNING:** When designing an ARC network, one must be careful not to double power any ARCs. If all pins on the CAT5 connections are used, power can travel over the CAT5 cable and reach any ARC on that particular chain. Power over CAT5 could potentially come from the ARC that is powered locally and then daisy-chained via CAT5 to other ARCs or directly from a particular ARC's terminal block connections. In general, we recommend using only one type of power connection on the ARCs, either the RJ45s (with CAT5 cable) or the terminal blocks but not both.

**CAUTION:** DO NOT plug the RJ45 connectors of an ARC Wall Panel into any RJ45 connector labeled "ETHERNET", "COBRALINK" or "SYMLINK" **(See warning on page 4)**



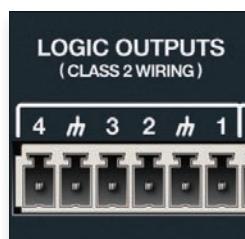
### EXT CTRL 1 and 2

Using standard shielded twisted pair terminated with a terminal block on one end, you may connect up to two contact closures or one potentiometer to each EXTERNAL CONTROL input. Configuration of the EXTERNAL CONTROL inputs is done with the External Controller Wizard. These ports may also be used to integrate with an alarm or emergency system.



### LOGIC OUTPUTS

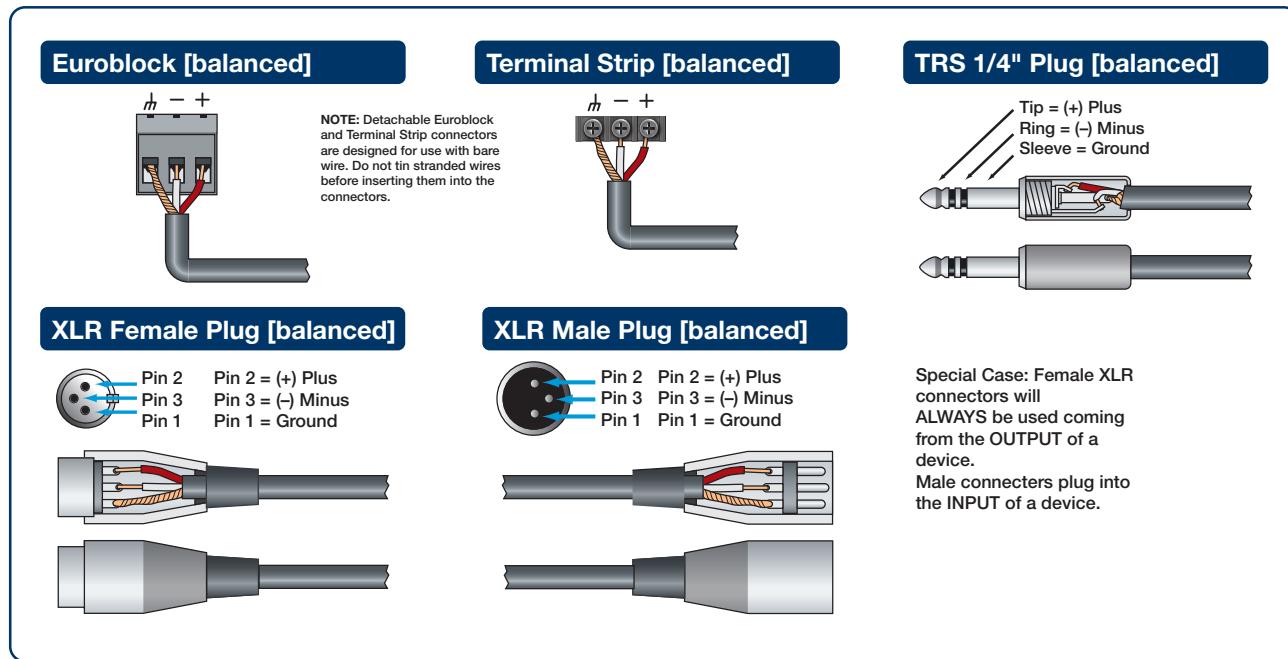
Using standard shielded twisted pair terminated with a terminal block on one end, you may connect up to four logic controlled devices such as relays, LEDs or camera switchers. Configuration of the LOGIC OUTPUTS is done with the External Controller Wizard. These ports may follow most buttons and LEDs in software.



## Balanced Connections

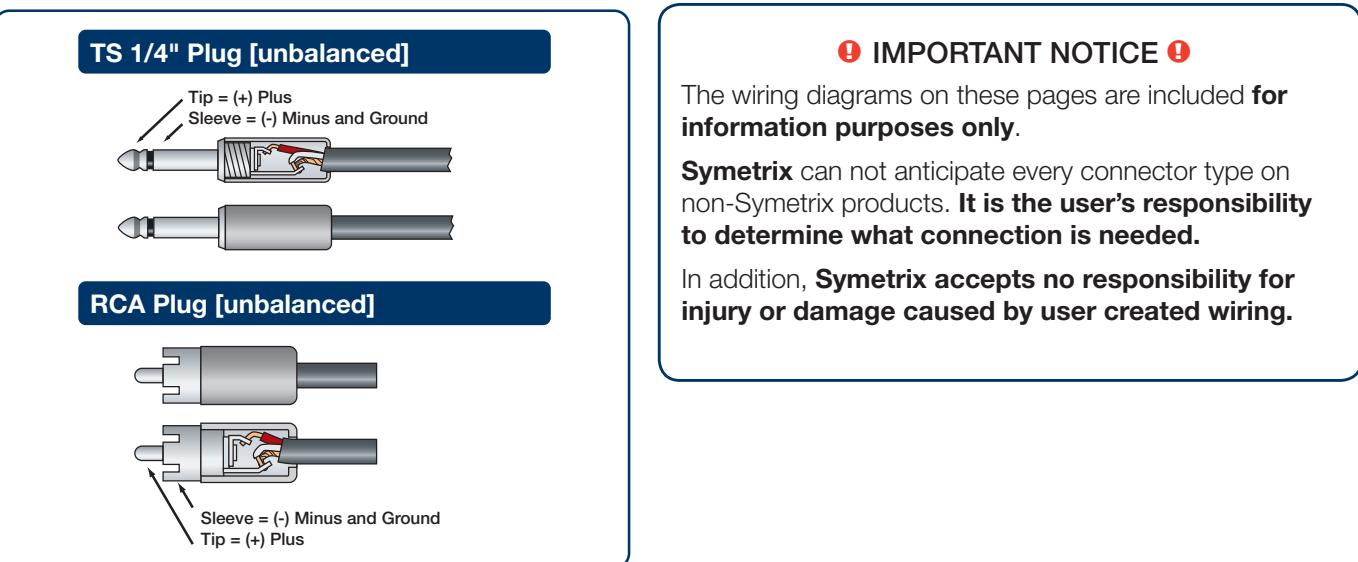
Any of these connectors can appear on either side of a balanced connection.

**NOTE:** In the case of an XLR connector, the Female attaches to an output, while the Male attaches to an input.



## Unbalanced Connections

The RCA connector and the 1/4" TS connector are unbalanced connectors, wired with a single strand shielded wire and can be placed on either end of an unbalanced connection



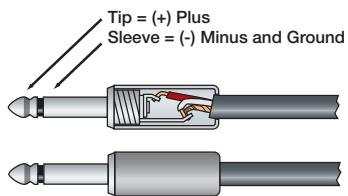
### Unbalanced Connections

#### Unbalanced out to balanced in:

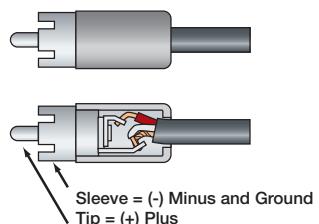
The RCA connector and the 1/4" TS connector are unbalanced connectors. However, the wiring differs depending on if they are sending to, or receiving from a balanced connector. In this example, the unbalanced connector is sending signal to a balanced connector.

When wiring this connection, use a shielded twisted pair cable. The balanced side wires the same as a standard, balanced connection. On the unbalanced side, you wire the white (minus) wire together with the ground. This provides some common mode rejection at the balanced input.

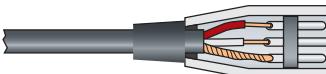
#### TS 1/4" Plug [unbalanced out to balanced in]



#### RCA Plug [unbalanced out to balanced in]



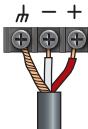
#### XLR Male Plug [balanced]



#### Euroblock [balanced]



#### Terminal Strip [balanced]



#### TRS 1/4" Plug [balanced]



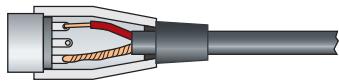
#### Balanced out to unbalanced in:

When your output requires a balanced connector, but you are sending signal to an unbalanced input, the rules change. Use a single strand shielded wire. Wire only to the plus and

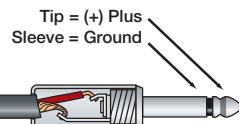
ground terminals of what would typically be the balanced connector.

#### XLR Female Plug [unbalanced]

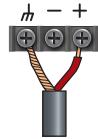
Pin 2 = Pin 2 = (+) Plus  
Pin 3 = Pin 3 = Unused  
Pin 1 = Pin 1 = Ground



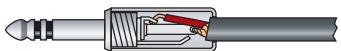
#### TS 1/4" Plug [balanced out to unbalanced in]



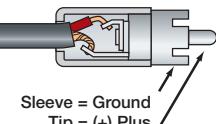
#### Euroblock [unbalanced] Terminal Strip [unbalanced]



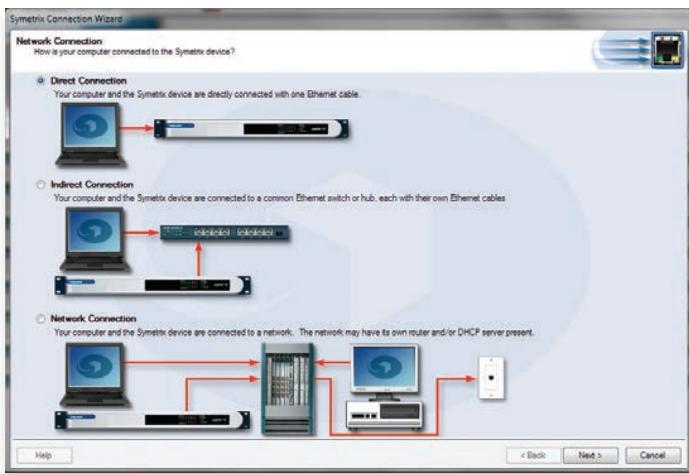
#### TRS 1/4" Plug [balanced]



#### RCA Plug [balanced out to unbalanced in]



## Network Configuration



Jupiter is setup and controlled by a host computer via Ethernet. This requires the host computer to be connected to Jupiter directly via a standard CAT5 Ethernet cable, indirectly via an Ethernet switch, or via an existing Ethernet network.

The primary difference between the three methods of connection is that in the first two, the Jupiter software assumes there is no DHCP server or other network infrastructure in place. It assumes Jupiter is using a self-generated IP address and adjusts its connection steps appropriately. In the third method, it is assumed that a DHCP server and/or router with DHCP server are already present on the existing network so Jupiter may already have obtained an IP address. Consult your network administrator if in doubt.

### General Notes

1. The Jupiter boots up with DHCP enabled by default. This means that as soon as you connect it to a network, it will look for a DHCP server in order to obtain an IP address. If a DHCP server is present, Jupiter will get its IP address from it. This process may take several minutes. With your PC attached to the same network and thus getting its IP address from the same DHCP server, all will be ready to go.
2. If your network does not have a DHCP server, Jupiter will not be able to obtain an IP address. While waiting, Jupiter will default to a private IP address in the range of 169.254.x.x where x.x is the last four alphanumeric characters of Jupiter's MAC address (MAC address hex value is converted to decimal for IP address). The Jupiter's MAC address can be found on a sticker on the bottom of Jupiter. When there is no DHCP server

present to assign IP addresses to either Jupiter or your PC, you may need to configure your PC with a static IP in the range of 169.254.x.x with a Subnet Mask of 255.255.0.0 in order to communicate with Jupiter in a direct connect mode. However, if your PC is using the default network settings, it should also have automatically self-assigned a similar private IP address in the range of 169.254.x.x, and if this is the case, you should be able to connect to Jupiter directly. Even if the PC's default settings have been changed, Jupiter will try to establish communications by setting up appropriate routing table entries to reach devices with 169.254.x.x addresses.

3. In the case of the first two methods (direct connection and indirect connection), the Jupiter software will attempt to set-up appropriate routing table entries for a seamless connection regardless of the IP addresses of your PC and Jupiter. However, under Windows® Vista or higher, administrative privileges are required to allow the Jupiter software to modify the routing table. For best results, launch the Jupiter software while logged in as an administrator, or choose to run the software as an administrator. **Note:** To run a program as the Administrator under Vista or higher, right click on the program's icon or shortcut and choose "Run as administrator".

### Network configuration of Jupiter:

#### Connecting to Jupiter from a host computer on the same LAN

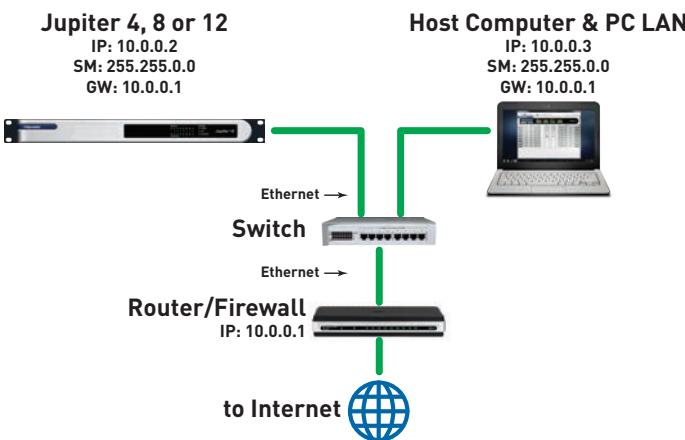
Both Jupiter and the host computer require the following 3 items:

1. IP Address - The unique address of a node on a network.
2. Subnet Mask - Configuration that defines which IP Addresses are included in a particular subnet.
3. Default Gateway (optional) - The IP address of a device that routes traffic from one subnet to another. (This is only needed when the PC and Jupiter are on different subnets).

If you are putting Jupiter on an existing network, a network administrator will be able to provide the above information or it may have been provided automatically by a DHCP server. For security reasons, it is not recommended to put Jupiter directly on the Internet. If you do, a network administrator or your Internet Service Provider can provide the above information.

If you are on your own private network, directly or indirectly connected to Jupiter, you may allow Jupiter to choose an automatic IP address or you may choose to assign it a static IP address. If you are building your own separate network with static assigned addresses, you may consider using an IP Address from one of the "Private-Use" networks noted in RFC-1918:

1. 172.16.0.0/12 = IP Addresses 172.16.0.1 through 172.31.254.254 and a Subnet Mask of 255.240.0.0
2. 192.168.0.0/16 = IP Addresses 192.168.0.1 through 192.168.254.254 and a Subnet Mask of 255.255.0.0
3. 10.0.0.0/8 = IP Addresses 10.0.0.1 through 10.254.254.254 and a Subnet Mask of 255.255.0.0

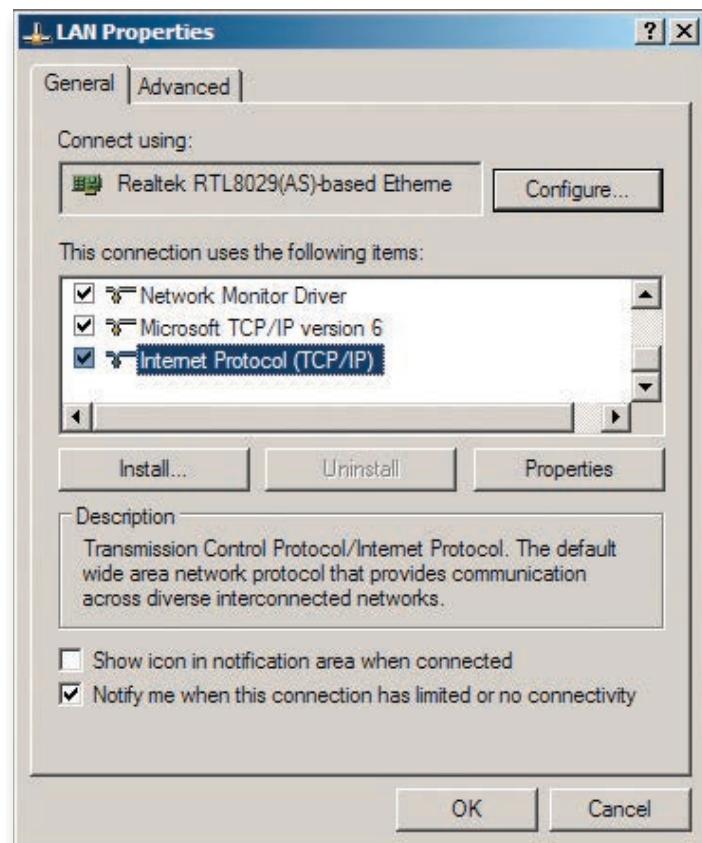


### Connecting to Jupiter through a Firewall/VPN

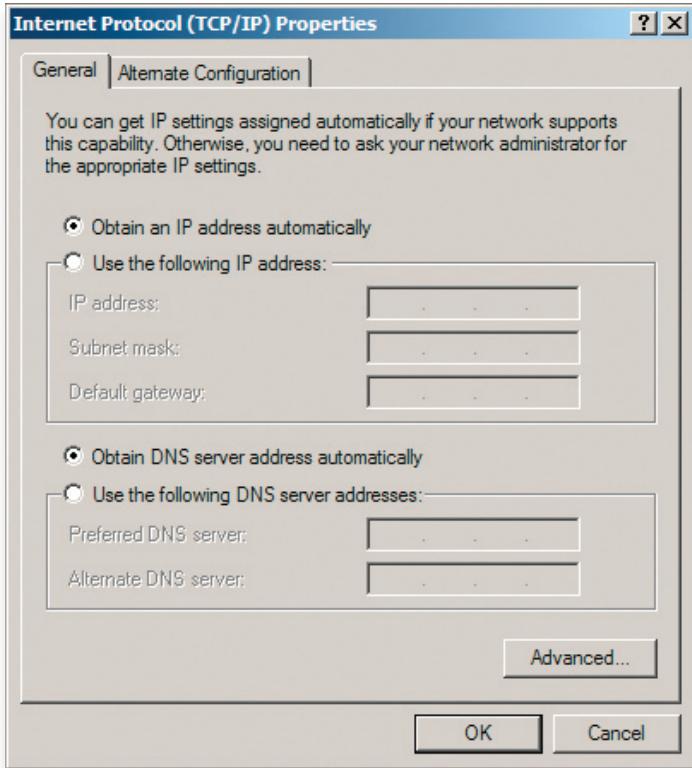
We have successfully tested control of a Jupiter hardware through a firewall and VPN, but are unable to guarantee performance of these types of connections at this time. Configuration instructions are specific to each firewall and VPN, so specifics are not available. Additionally, wireless communications are not guaranteed, though have been successfully tested.

### Configuring your computer for a network connection: Windows® XP

1. Select "Start->Control Panel".
2. Open the "Network Connections" Control Panel.
3. Right click on your "Local Area Connection" and select ""Properties".
4. Under "This connection uses the following items", select "Internet Protocol (TCP/IP)" and press "Properties".



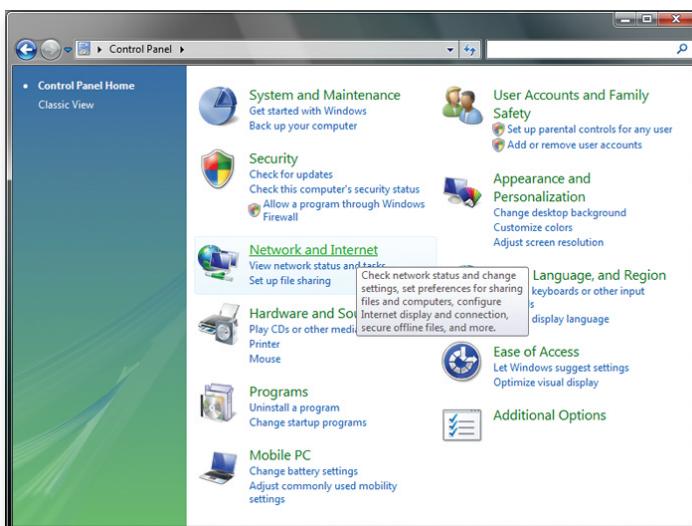
5. On the “General” tab, you may select “Use the following IP address” to enter in the appropriate information if using static assigned addresses. (DNS server is not required for connection to Jupiter hardware). Otherwise, leave set to “Obtain an IP address automatically” if using DHCP.



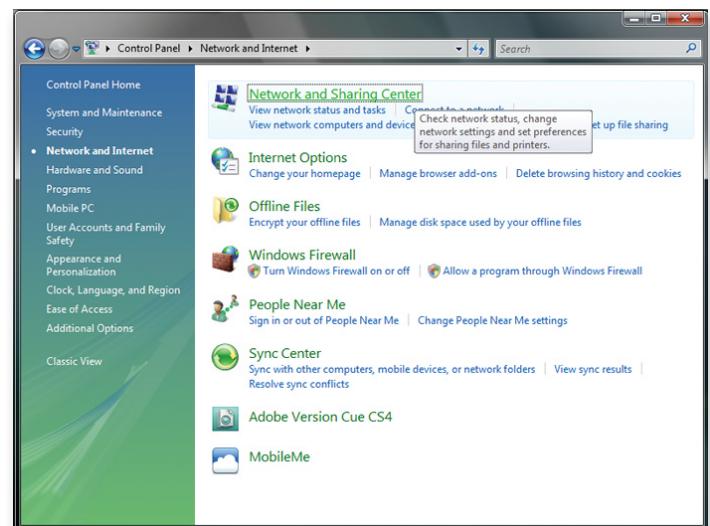
6. Press OK to save and “Close” to exit out of the “Local Area Connection Properties”.

### Configuring your computer for a network connection: Windows® Vista or higher

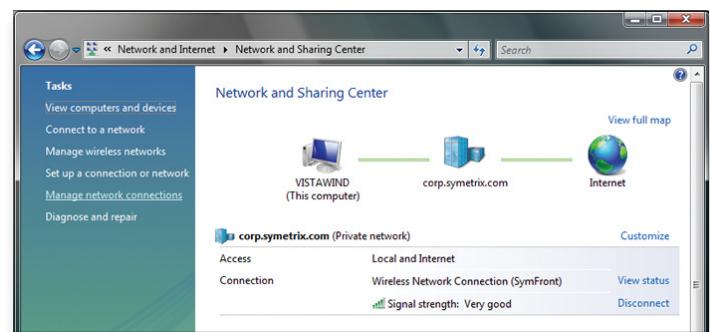
1. Select “Start->Control Panel”.
2. Select “Network and Internet”.



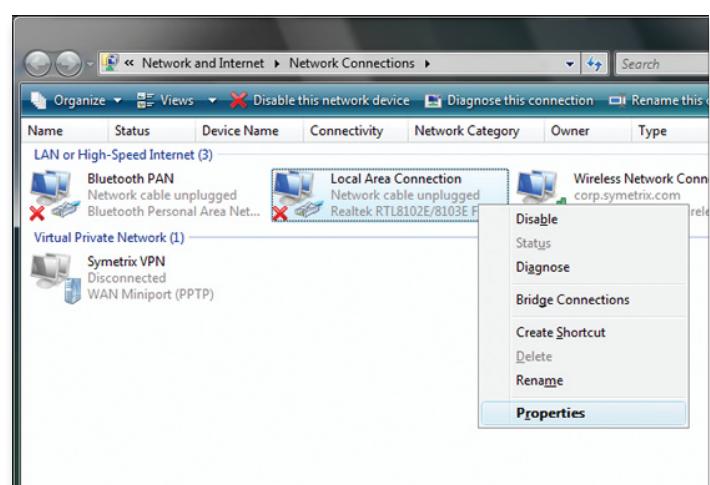
3. Open the “Network and Sharing Center”.



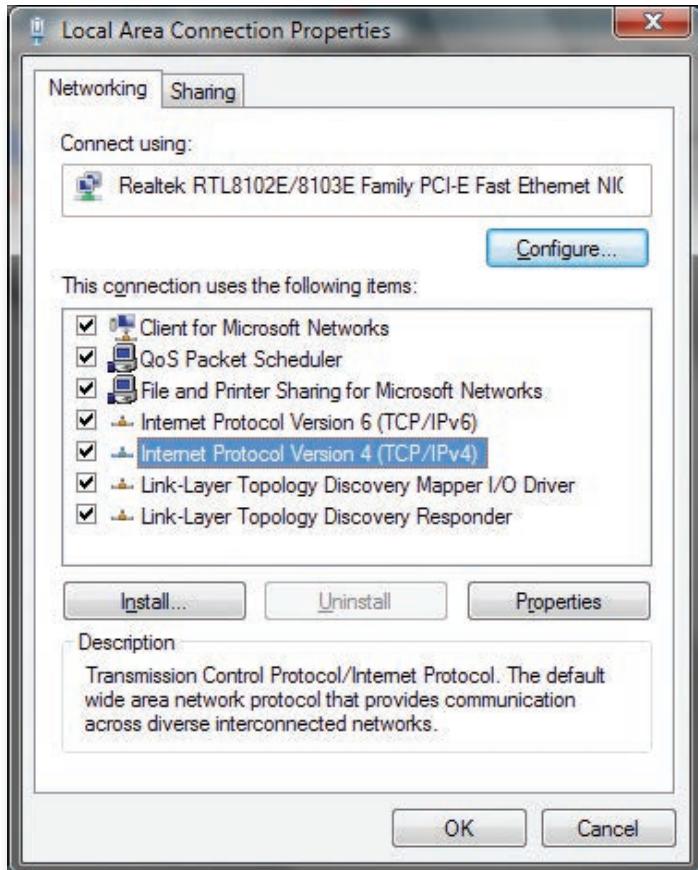
4. Choose “Manage network connections” (“Change adapter settings” in Windows 7) on the left.



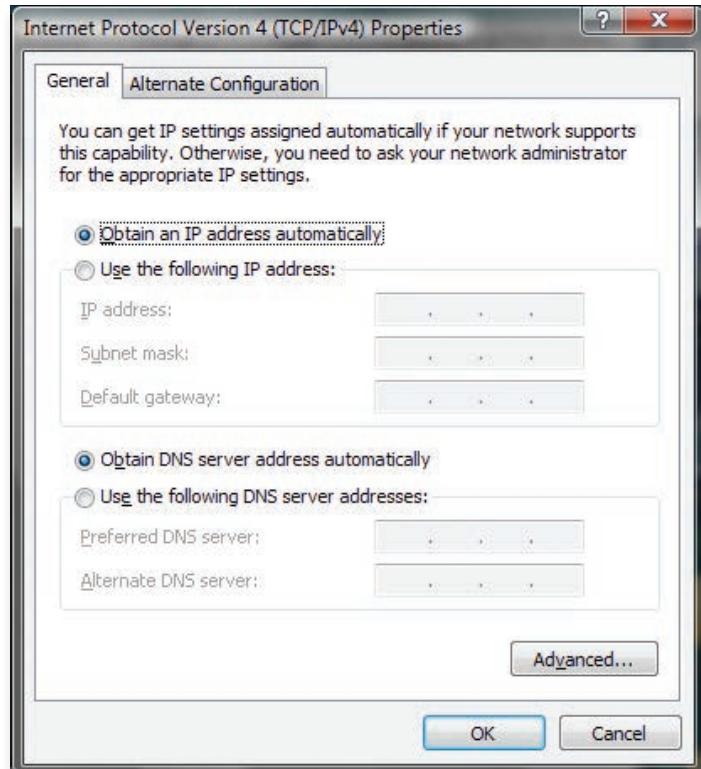
5. Right-click the desired connection and choose “Properties”.



6. Under “This connection uses the following items”, select “Internet Protocol Version 4 (TCP/IPv4)” and press “Properties”.



7. On the “General” tab, you may select “Use the following IPv4 address” to enter in the appropriate information if using static assigned addresses. (DNS server is not required for connection to Jupiter hardware). Otherwise, leave set to “Obtain an IPv4 address automatically” if using DHCP. Press OK to close.



8. Repeat steps 6 and 7 for “Internet Protocol Version 6 (TCP/IPv6)” if on an IPv6 network. Consult your IT staff if you are unsure.  
 9. Press OK to save and “Close” to exit out of the “Local Area Connection Properties”.

For more information about configuring the host computer, visit <http://www.microsoft.com>.

**Note:** Typically, only Admins or users belonging to the Network Configuration Operators group can alter networking configurations in Windows Vista or higher.

Once you have completed the setup of your network and any network hardware/interfaces, you may install the Jupiter software or launch the software if you have already installed it, then run the Connection Wizard.

## Jupiter Software Installation

### Installation

The Jupiter software provides real-time set-up and control from a Windows PC environment.

Use one of the following procedures to install the Jupiter software on your computer.

From the CD-ROM:

1. Insert the CD into your computer's CD-ROM drive.
2. Open "My Computer". The "My Computer" icon is typically on your desktop or in the "Start" menu.
3. Double click on your CD-ROM drive. This is typically drive "D:\\". If your CD-ROM drive isn't "D:\\"", then substitute its drive letter.
4. Double-click "Setup.exe".

### From the Symetrix web site

(<http://www.symetrix.co>):

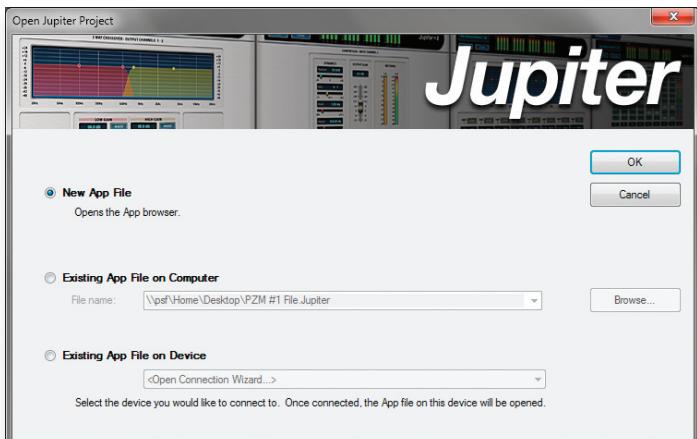
1. Download the Jupiter software installer from the Symetrix web site.
2. Double-click on the file you just downloaded and follow the on screen directions to install.

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 device files that you create to your hard drive and transfer them to hardware later.

After installing the software, browse the rest of the Help File, or move on to Launch the Software to dive right in.

### Launch the software

You can launch the Jupiter software via either the Start Menu or the Desktop icon. Once launched, the Jupiter software presents the following options:



You may choose to create a **New App File** selecting the App of your choice.

If you choose to open an **Existing App File on Computer**, a list of recently used files is presented. A Browse button is also available to manually locate the file of your choosing from a local drive or network share.

If you choose to open an **Existing App File on Device**, a list of recently connected-to devices is presented. An "Open Connection Wizard" choice is also available in the event that you are unsure of which device to connect to, or your device is not listed among the recently connected to devices.

After installing and launching the software and choosing your operating mode above, you may browse the rest of the Help File, or move on to the Connection Wizard to get connected to your Jupiter hardware.

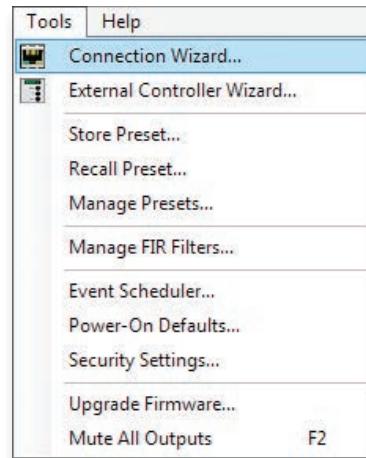
### Connection Wizard

Once you have completed the Hardware Connections and connected your network (refer to Network Configuration), you may open Jupiter software and run the Connection Wizard.

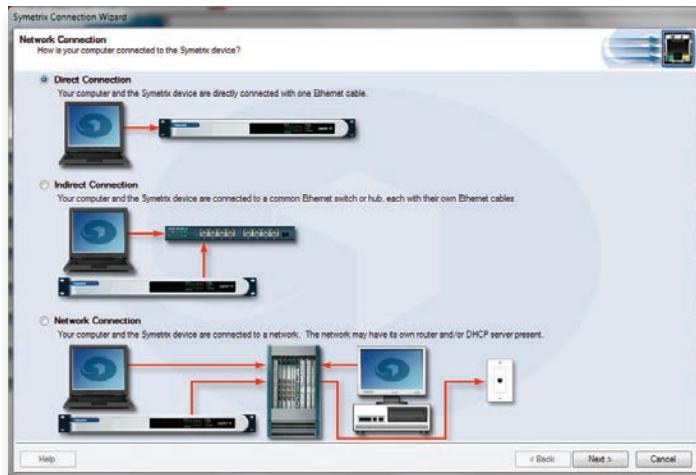
The Connection Wizard can be run by clicking on its icon in the toolbar...



...or from the Tools menu:

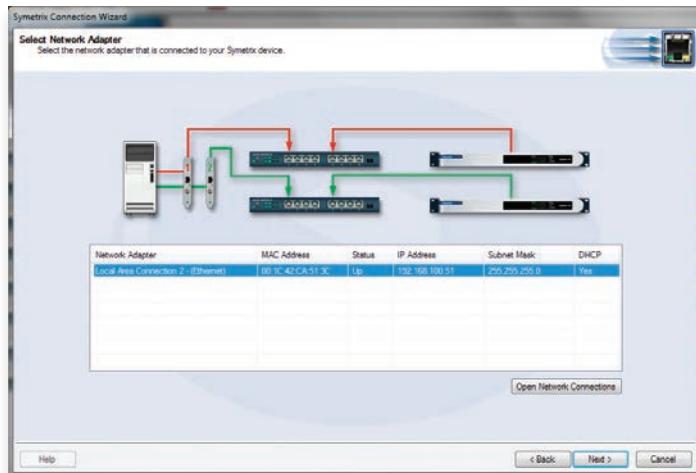


The Connection Wizard opens with the following screen:



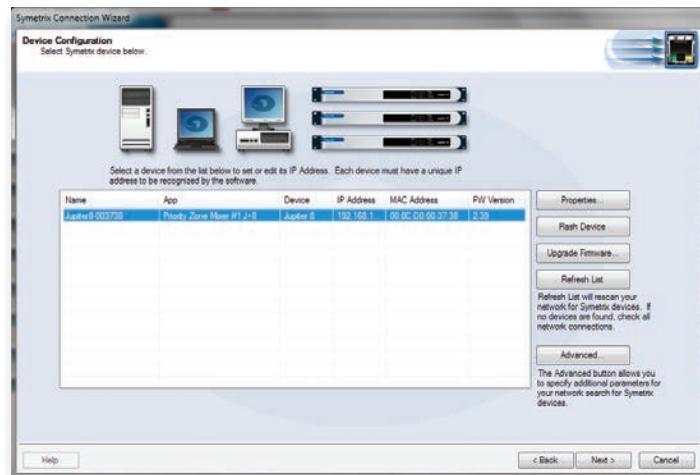
Select the option that best represents your network topology and then click the Next button. (Refer to Network Configuration for further help.)

In the event that your computer has multiple Network Interfaces Cards (NICs), the following screen will allow you to select the network you wish to search for Jupiter devices. Note that only valid NICs will be selectable (those with a network connection and valid IP address).



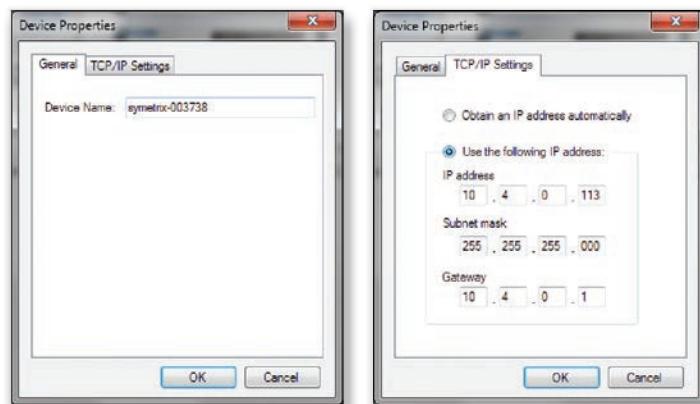
Select the NIC you wish to use and then click the Next button. If you are unsure which NIC to use or need to configure a NIC, you can view the NICs currently configured on your PC by pressing the Open Network Connections button which will open the Windows network connections window.

The following screen displays a list of Jupiter devices found on your network. At the very least, you can select the device you wish to connect to and click the Next button. However, there are a few more functions on this screen worth mentioning...



### Properties:

The (device) Properties dialog allows you to give a device a unique name to help identify it. It also allows you to switch the device between dynamic (DHCP) IP addressing and static IP addressing.



### Flash Device:

Clicking the Flash Device button will cause all LEDs on the front of the device to flash for a short time. This can be helpful to distinguish devices which have the same or similar names.

### Upgrade Firmware:

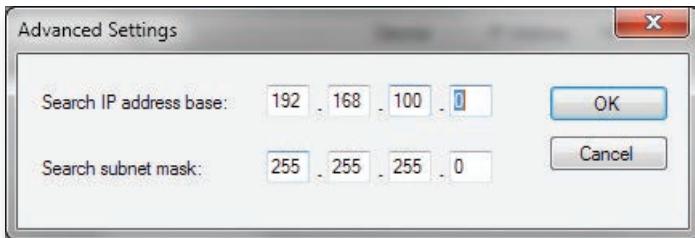
The Jupiter firmware must be matched with the version of the Jupiter software you are using. The correct firmware for the software is always distributed with the software and installed on your hard drive by the software's installer. If there is ever any doubt, follow the instructions in the Upgrade Firmware topic to check your firmware version or to upgrade the firmware.

### Refresh List:

Clicking the Refresh List button will re-scan the network for devices and refresh the list of devices. If at first your device is not located, double-check network connections and that the device(s) is/are powered on. Then click the Refresh List button.

### Advanced:

The Advanced dialog will allow you to broaden your network search for devices allowing you to manually designate a Search IP address base and Search subnet mask. These options can be used to search a network for devices (through a router) other than the one your computer is currently on.



Upon clicking the Next button, you are finished with the Connection Wizard. A summary of your actions appears on the following screen.



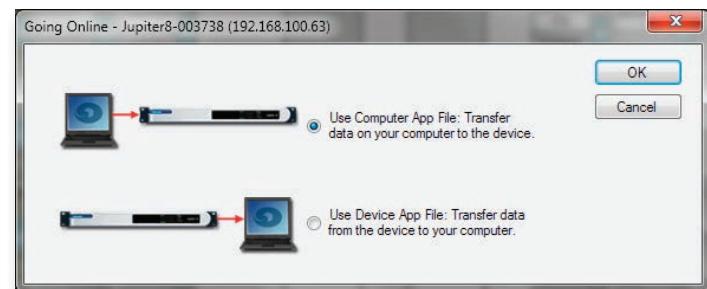
Click the Finish button to exit the Connection Wizard. You are now ready to Go Online.

### Going Online

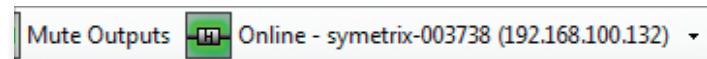
Once you have completed the Hardware Connections, connected your network (refer to Network Configuration), launched the Jupiter software and run the Connection Wizard, you should be ready to Go Online with your device.

The process of Going Online with a device can go one of two ways: either you are transferring a file currently open on your computer to the device, or you are transferring a file on the device to your computer. Either way, the Jupiter software must “know” about the device first, which is what the Connection Wizard accomplishes.

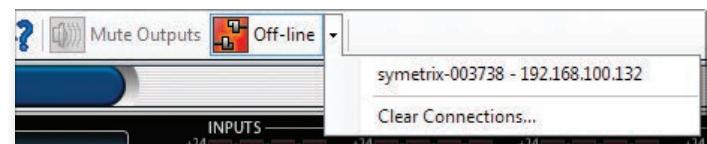
After you have successfully run the Connection Wizard and determined the device you will be going online with, you can click the “Offline” button in the toolbar to toggle it to “Online”. The following dialog will appear, offering you the two choices detailed in the previous paragraph:



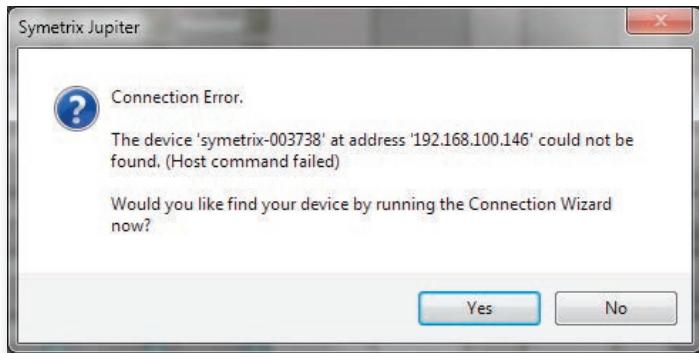
Make your choice and click OK. You are now online and the “Online/Offline” button in the toolbar will display “Online” as well as the device’s name and IP address with which you are online:



Additionally, the Jupiter software keeps a list of recently connected devices which you can use to quickly get online with a specific device – if you already know the name and/or IP address of the device you wish to connect to and that device is currently available on the network:

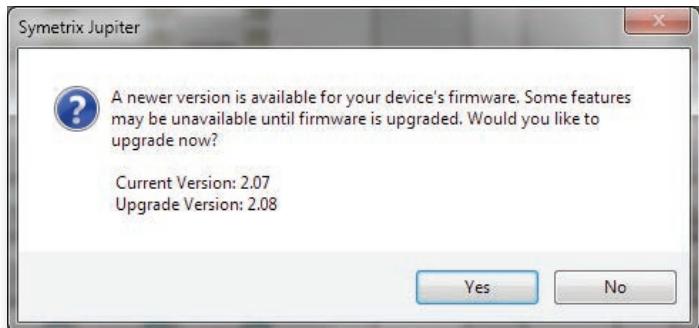


If the specified device can not be found on the network, you will be prompted to run the Connection Wizard to discover a device to go online with:



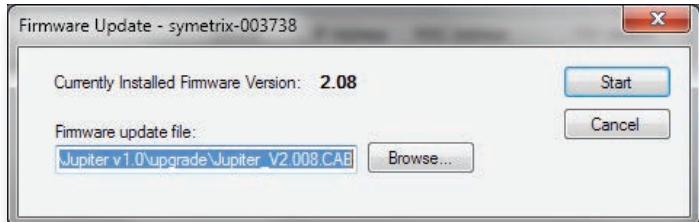
### Upgrade Firmware.

**IMPORTANT:** The Jupiter firmware must be matched with the version of the Jupiter software you are using. The correct firmware for the software is always distributed with the software and installed on your hard drive by the software's installer. If there is every any doubt, follow the instructions below to check your firmware version or to upgrade the firmware. Additionally, the software will notify you if a newer version of firmware is available than what is currently on the hardware.

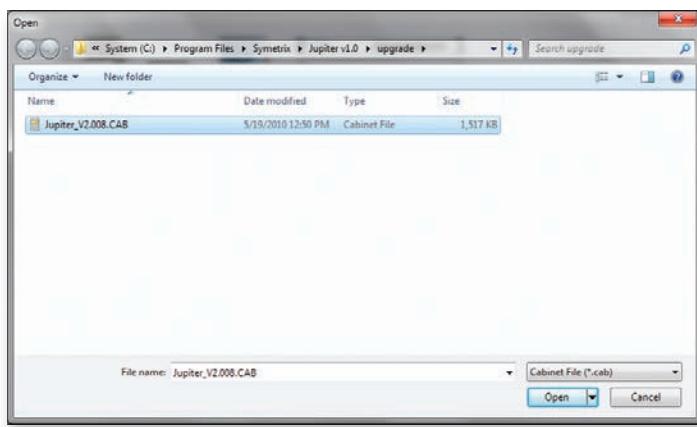


Firmware may be updated while online using the Upgrade Firmware dialog found in the Tools pull down menu, or from the Connection Wizard by selecting a device in the Device Configuration step and clicking the Upgrade Firmware button.

Either method brings up the Firmware Update dialog. Click Browse... to locate the upgrade .cab file.



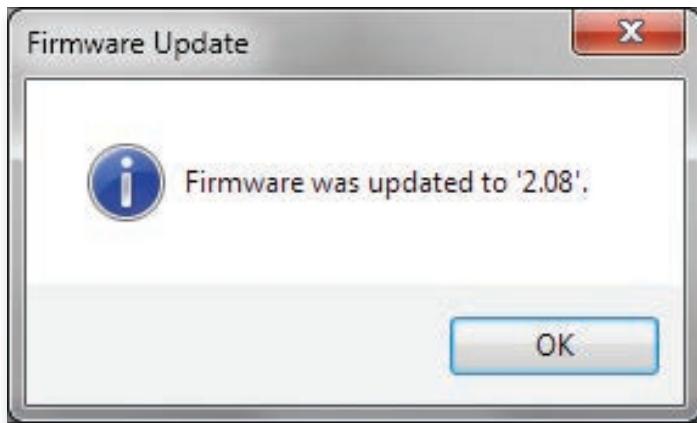
Select the firmware upgrade .cab file and click Open.



Click the Start button to begin the process and a status bar will show progress of the upgrade.



When finished a confirmation window will appear. Click OK to complete the Firmware Upgrade process.



After the firmware upgrade complete, the Jupiter hardware will reboot. When it finishes, you may go online again.

## Architects and Engineers Specifications

The device shall provide twelve, eight or four inputs (Jupiter 12, 8 or 4 respectively) that are selectable as line or mic level with phantom power and four, eight or four (Jupiter 12, 8 or 4 respectively) line level outputs. All signal processing, mixing and routing functions (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel 3.81 mm terminal block connectors.

The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or higher operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide the management of apps, device files and display and control of all signal processing and configuration functions including, but not limited to: Input and Output Gain • Highpass Filtering • Lowpass Filtering • FIR Filters • Crossovers • Parametric Equalization • Graphic Equalization • Expansion • De-Essing • Compression • Limiting • Automatic Gain Control • Ambient Noise Compensation • Feedback Elimination • Automatic Mixing • Priority Mixing • Signal Routing • Delay • Polarity.

The front panel shall include input and output signal level indicators as well as indicators for POWER, NETWORK, and ARC.

External control shall include preset selection as well as I/O level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors using the optional ARC wall panel remote controls. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on board real time clock to facilitate automatic, timed changing of presets. Third-party control systems may interface over IP using a published ASCII control protocol. Audio conversion shall be 24-bit, 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted.

The device shall have a captive power input socket for an external 24 VDC supply. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel and moulded plastic, and mount into a standard 19" 1U EIA rack. The device shall be a **Symetrix Jupiter model 4, 8 or 12**.

## Declaration of Conformity

We, **Symetrix Incorporated**, 6408 216th St. SW, Mountlake Terrace, Washington, USA, declare under our sole responsibility that the product:

### **Jupiter•4, Jupiter•8, and Jupiter•12**

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

**UL 60065, cUL 60065, IEC 60065, EN 55103-1, EN 55103-2, FCC Part 15**

The technical construction file is maintained at:

**Symetrix, Inc.**

6408 216th St. SW

Mountlake Terrace, WA, 98043 USA

The authorized representative located within the European Community is:

**World Marketing Associates**

P.O. Box 100

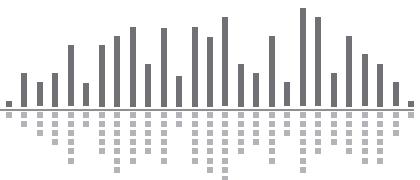
St. Austell, Cornwall, PL26 6YU, U.K.

Date of issue: April 26, 2010

Place of issue: Mountlake Terrace, Washington, USA

Authorized signature:

Dane Butcher, President, **Symetrix Incorporated**.



### The Symetrix Limited Warranty

Symetrix, Inc. expressly warrants that the product will be free from defects in material and workmanship for two (2) years 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 two (2) years 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 commercial carrier 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 or apps 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.

### Servicing Your Symetrix Product

If you have determined that your Symetrix product 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 discontinued manufacture.

Before sending anything to Symetrix, please contact our Customer Service Department for a Return Authorization (RA) number. The telephone number is +1.425.778.7728. Additionally, support is available via the web site: <http://support.symetrix.co>.

#### In-warranty Repairs

To get your Symetrix product repaired under the terms of the warranty:

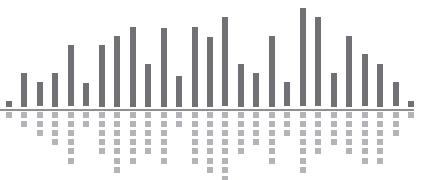
1. Call us for an RA number (have the serial number, shipping and contact information and description of the problem ready).
2. Pack the device in its original packaging materials.
3. Include your name, address, daytime telephone number, and a brief statement of the problem.
4. Write the RA number on the **outside** of the box.
5. Ship the device 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 device 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 device 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. Payment for all charges must be pre-arranged (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 device to Symetrix.





---

The Vision Behind the Sound

Item No. 53-0048

### Jupiter Quick Start Guide

© 2010 Symetrix, Inc. All rights reserved. Printed in the United States of America. The information in this document is subject to change without notice. Symetrix, Inc. shall not be liable for technical or editorial errors or omissions contained herein; nor is it liable for incidental or consequential damages resulting from the furnishing, performance, or use of this material. Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Symetrix assumes no responsibility with regard to the performance or use of these products. Under copyright laws, no part of this brochure may be reproduced or transmitted in any form or by any means, electronic or mechanical, without permission in writing from Symetrix, Inc. If, however, your only means of access is electronic, permission to print one copy is hereby granted. The following are either Trademarks or Registered Trademarks of Symetrix, Inc.: Symetrix, SymNet, SymNet Designer, SymLink, CobraLink, AirTools and Lucid. Windows is a Registered Trademark of Microsoft, Inc. Other product names mentioned herein may be trademarks and/or registered trademarks of other companies and are property of their respective owners.

Engineered and built in the USA by Symetrix