What Ships in the Box

- An ARC-2e hardware device
- This Quick Start Guide

What You Need to Provide

- Windows PC with the following minimum specifications:
  - 1 GHz or higher processor
  - Windows 10 or higher
  - 410 MB free storage space
  - 1024x768 graphics capability
  - 16-bit or higher colors
  - Internet connection
  - 1GB or more of RAM as required by your operating system
- CAT5e/CAT6 cables to connect any ARC to any device with an RJ45 ARC port

Getting Help

All Symetrix software, the Windows applications that control all Symetrix hardware, include a help module which acts as a complete User's Guide for both hardware (including the Menu ARC) and software. If you have questions beyond the scope of this Quick Start Guide, contact our Technical Support Group in the following ways:

Tel: +1.425.778.7728 ext. 5

Web: https://www.symetrix.co

Email: support@symetrix.co

Forum: https://www.symetrix.co/Forum

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
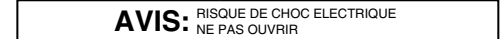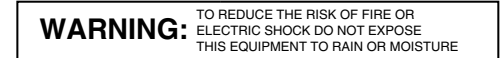
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

Cet appareil numerique de la classe B 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. 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. Ensure proper ESD control and grounding when handling exposed I/O terminals.
11. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. Only use attachments/accessories specified by the manufacturer.
13. 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.
14. Unplug this apparatus during lightning storms or when unused for long periods of time.
15. 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 reparee 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 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.

- **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.

Device Addressing

Every RS-485 device connected to the same RS-485 bus must be uniquely identified. The ARC-2e use two rotary switches (S4 and S5) to designate one of 32 device addresses. S4 determines the device's ones address and S5 determines the device's tens address. For example: to set an ARC-2e to device address 24, you would place S1 in the 4 position and S2 in the 2 position.
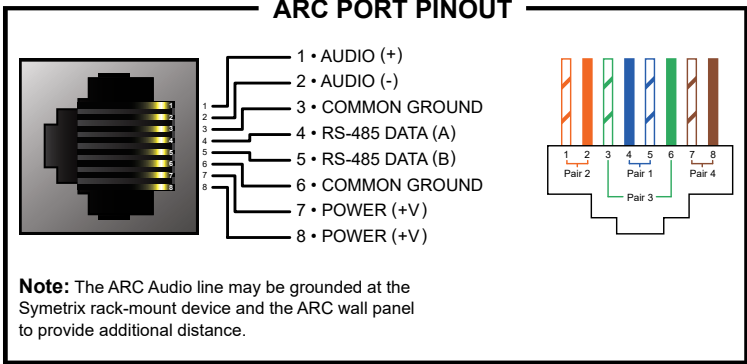
Connection to Symetrix DSP Devices

For ARC devices or device chains being powered from the ARC port on a Symetrix DSP device, simply connect the CAT5/6 cable between ARC port and the ARC Wall Panel's RJ45 ports (J5/7 on the Modular ARCs, J5/6 on the ARC-2/2i, and J4/5 on the ARC-2e).

For ARC devices or device chains being powered locally, power must be injected into the RJ45 connectors using a custom wired CAT5/6 cable following the ARC port pinout in the following section.

ARC Pinout

The RJ45 jack distributes power and RS-485 data to one or more ARC devices. Uses standard straight-through UTP CAT5/6 cabling.

! Warning! Refer to the RJ45 Warning for compatibility information.

ARC PORT PINOUT

- 1 • AUDIO (+)
- 2 • AUDIO (-)
- 3 • COMMON GROUND
- 4 • RS-485 DATA (A)
- 5 • RS-485 DATA (B)
- 6 • COMMON GROUND
- 7 • POWER (+V)
- 8 • POWER (+V)

Note: The ARC Audio line may be grounded at the Symetrix rack-mount device and the ARC wall panel to provide additional distance.

The Symetrix ARC-PSe provides serial control and power distribution over standard CAT5/6 cable for systems with more than 4 ARCs, or when any number of ARCs are located long distances from an Integrator Series, Jupiter or Symetrix DSP unit.

RS-485 Termination

The ARC Wall Panels feature an RS-485 termination jumper. Jumper J2 at the top right of an ARC-2e board enables and disables termination. Jumping pins 1 and 2 = terminated. For maximum signal integrity, it is advisable to terminate the last ARC device in the chain if the total length of the chain is over 200 feet.
Note: Never terminate a single RS-485 bus at more than two devices.

ARC Distance Table

The following table provides at-a-glance cable length limitations based on DC power (the table is not relevant if only RS-485 is distributed) and assumes 24 gauge CAT5/6 cabling. The lengths for multiple ARCs on a single chain assume equal distance for each cable segment between ARCs. Table is intended for quick reference only. For more detailed configuration scenarios, Symetrix has made available a

Microsoft Excel spreadsheet to help system designers determine power requirements based upon cable length, number of ARCs, and the power supply to be used. This spreadsheet can be downloaded from the Symetrix Technical Support pages at: symetrix.co/knowledge-base.

| APPROXIMATE CABLE LENGTH LIMITATIONS FOR ARC DC POWER OVER CAT5/6 CABLE ||
Number of ARCs in chain	Total cable length (to end of chain)
1	3000'
2	1200'
3	700'
4	350'

Special note: for multiple ARCs on single chain, the listed value is assumed to be the cable length between each device. For example, a value of 600' means 600' between the DSP unit and the first ARC, 600' between the first and second ARCs, etc. The total cable length will be the listed segment length multiplied by the number of ARCs on the chain.

! Warning! When designing an ARC network, one must be careful not to double power any ARCs. If all pins on the CAT5/6 connections are used, power can travel over the CAT5/6 cable and reach any ARC on that particular chain. Power over CAT5/6 could potentially come from the ARC that is powered locally (via a custom wired cable using the pinout above) and then daisy-chained via CAT5/6 to other ARCs, or from a powered ARC port on a Symetrix unit or ARC-PSe (preferred). In general, we recommend only supplying power from the start of a chain (a Symetrix unit or an ARC-PSe).

⚠️ WARNING! ⚠️

The RJ45 connectors labeled "ARC" are only for use with the ARC series of remotes.

DO NOT plug the ARC connectors on Symetrix products into any RJ45 connector labeled "DANTE" or "ETHERNET".

The "ARC" RJ45 connectors on Symetrix products can carry anywhere from 6 to 24 VDC which can damage Dante and Ethernet circuitry.
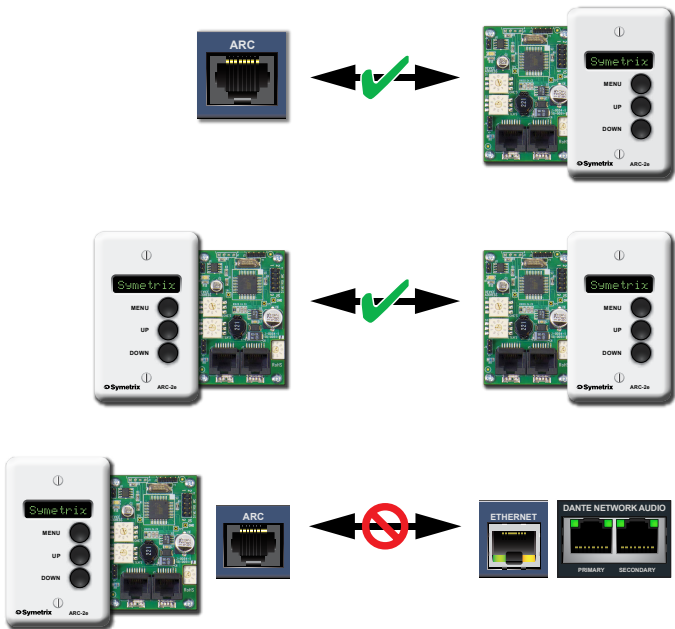
Software Installation

Composer® software provides real-time set-up and control of Composer-Series DSPs, controllers, and endpoints from a Windows PC environment.

1. Download the Composer software installer from the Symetrix web site (https://www.symetrix.co).
2. Double-click on the downloaded file and follow the on-screen directions to install.

After installing the software, refer to the Help File for full connection and configuration information.

Networking PHY Dante Devices

Devices with a single Dante port don't have an internal Ethernet switch and the RJ45 jack is connected directly to the Dante Ethernet physical transceiver (PHY). In these cases you must connect the Dante port to an Ethernet switch before connecting to another PHY Dante device to avoid audio dropouts on Dante channels. Dante PHY devices include many Ultimo-based devices and Symetrix hardware: Prism, xIn 4, xOut 4, xIO 4×4, xIO Stage 4×4, xIO Bluetooth, xIO Bluetooth RCA-3.5, xIO XLR-Series.

System Setup

Successful system setup requires first establishing communications with a Symetrix DSP (e.g., Radius NX, Prism).

Basic Connections

1. Connect the Control Ethernet port on the DSP to an Ethernet switch with a CAT5e/6 cable. Connect the Dante port on the DSP with a CAT5e/6 cable to the same Ethernet switch for shared Dante and Control networks, or to a different Ethernet switch for separate Dante and Control networks.
2. Connect the PC running Composer to the Ethernet switch used for Control with a CAT5e/6 cable.
3. To power a PoE Dante device, connect the Dante port on the device to a PoE-enabled port on the Dante switch. Alternately, connect the Dante port on the device to a PoE injector and then from the PoE injector to the Dante switch.
4. To power a PoE Control device, connect the Control port on the device to a PoE-enabled port on the Control switch. Alternately, connect the Control port on the device to a PoE injector and then from the PoE injector to the Control switch.

Network Setup

About DHCP

Symetrix network-enabled devices boot with DHCP enabled by default. When connected to a network, they will look for a DHCP server to obtain an IP address. This process may take several minutes. Computers attached to the same network, and getting IP addresses from the same DHCP server will be ready to go.

When no DHCP server is present to assign IP addresses, and Windows default network settings are used, the PC will set an IP in the range of 169.254.x.x with a subnet mask of 255.255.0.0 to communicate with the device. This default to an automatic private IP address uses the last four alphanumeric characters of the device's MAC address (MAC address hex value converted to decimal for IP address) for the 'x.x' values. MAC addresses can be found on a sticker on the back of the hardware.

Even if the PC's default settings have been changed, the device will try to establish communications by setting up appropriate routing table entries to reach devices with 169.254.x.x addresses.

Connecting to Device from Host Computer on Same LAN

The Symetrix device and host computer require the following:

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 device are on different subnets.)

If you are putting a device on an existing network, a network administrator should provide the above information or it may have been provided automatically by a DHCP server. For security reasons, it may not be recommended to put AV system devices 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 the device, you may allow it 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:

- 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
- 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
- 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

Configuring IP Parameters

Locating Hardware

- or -

- or -

Discover and connect to device hardware with the Composer Locate Hardware dialog (found in Hardware menu), or click the Locate Hardware icon in the tool bar, or on a particular unit icon. Composer directly locates DSPs and control devices. Dante devices are located by an already located, and online, DSP in the Site File.

IP Configuration with Composer®

The Composer Locate Hardware dialog will scan the network and list available components. Select the unit you wish to assign an IP address to and click the Properties button. If you wish to assign the device a static IP address, select "Use the following IP address" and enter the appropriate IP address, subnet mask and gateway. Click OK when finished. Now, back in the locate hardware dialog, ensure the device is selected and click "Select Hardware Unit" to use this hardware in your Site File. Close the Locate Hardware dialog.

Reset Switch

To be used under the supervision of technical support, the device has the ability to reset its network configuration and completely revert to factory defaults. Locate the reset switch using the illustrations in this guide and/or the product data sheet.

1. Short press and release: Resets network configuration, returns to DHCP.
2. Apply power while holding, release after unit boots then reboots: Factory resets unit.

Symetrix Limited Warranty

By using Symetrix products, the Buyer agrees to be bound by the terms of this Symetrix Limited Warranty. Buyers should not use Symetrix products until the terms of this warranty have been read.

What is Covered by this Warranty:

Symetrix, Inc. expressly warrants that the product will be free from defects in material and workmanship for five (5) years from the date the product is shipped from the Symetrix factory. Symetrix's obligations under this warranty will be limited to repairing, replacing, or partially crediting original purchase price at Symetrix's option, the part or parts of the product which prove defective in material or workmanship within the warranty period provided that the Buyer gives Symetrix prompt notice of any defect or failure and satisfactory proof thereof. Symetrix may, at its option, require proof of the original date of purchase (copy of original authorized Symetrix Dealer's or Distributor's invoice). Final determination of warranty coverage lies solely with Symetrix. This Symetrix product is designed and manufactured for use in professional 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 from an authorized Symetrix Dealer or Distributor. This limited warranty gives the Buyer certain rights. The Buyer may have additional rights provided by applicable law.

What is not Covered by this Warranty:

This warranty does not apply to any non-Symetrix branded hardware products or any software even if packaged or sold with Symetrix Products. Symetrix does not authorize any third party, including any dealer or sales representative, to assume any liability or make any additional warranties or representations regarding this product information on behalf of Symetrix. This warranty also does not apply to the following:

1. Damage caused by improper use, care, or maintenance or failure to follow the instructions contained in the Quick Start Guide or Help File (In Composer: Help > Help Topics).

2. Symetrix product that has been modified. Symetrix will not perform repairs on modified units.

3. Symetrix software. Some Symetrix products contain embedded software or apps and may also be accompanied by control software intended to be run on a personal computer.

4. Damage caused by accident, abuse, misuse, exposure to liquids, fire, earthquake, acts of God, or other external causes.

5. Damage caused by improper or unauthorized repair of a unit. Only Symetrix technicians and Symetrix international distributors are authorized to repair Symetrix products.

6. Cosmetic damage, including but not limited to scratches and dents, unless failure has occurred due to a defect in materials or workmanship within the warranty period.

7. Conditions caused by normal wear and tear or otherwise due to the normal aging of Symetrix products.

8. Damage caused by use with another product.

9. Product on which any serial number has been removed, altered, or defaced.

10. Product that is not sold by an authorized Symetrix Dealer or Distributor.

Buyer Responsibilities:

Symetrix recommends the Buyer make backup copies of Site Files before having a unit serviced. During service it is possible that the Site File will be erased. In such an event, Symetrix is not responsible for the loss or the time it takes to reprogram the Site File.

Legal Disclaimers and Exclusion of other Warranties:

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.

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 retail price of 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 Buyers 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 a Symetrix Product:

The remedies set forth herein shall be the Buyer's sole and exclusive remedies with respect to any defective product. No repair or replacement of any product or part thereof will extend the applicable warranty period for the entire product. The specific warranty for any repair will extend for a period of 90 days following the repair or the remainder of the warranty period for the product, whichever is longer.

Residents of the United States may contact the Symetrix Technical Support Department for a Return Authorization (RA) number and additional in-warranty or out-of-warranty repair information.

If a Symetrix product outside of the United States requires repair services, please contact your regional Symetrix distributor for instructions on how to obtain service.

A product may be returned by Buyer only after a RA number 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. 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.

Advance Replacements:

Units which are out of warranty or sold outside the United States do not qualify for Advance Replacement. In-warranty units that fail within 90 days, may be replaced or repaired depending on available service inventory at Symetrix's discretion. Customer is responsible for return shipping of equipment to Symetrix. Any repaired equipment will be shipped back to customer at Symetrix' cost. Advance replacements will be invoiced as a normal sale through authorized Symetrix dealers and distributors. The defective unit must be returned 30 days from RA issue date and will be credited against the replacement unit invoice after it has been evaluated by our service department. If no problem is found, an evaluation fee will be deducted from the credit.

Units returned without a valid Return Authorization number may be subject to significant delays in processing. Symetrix is not liable for delays due to equipment returned without a valid Return Authorization number.

Returns and Restocking Fees

All returns are subject to approval by Symetrix. No credit will be issued for any item returned after 90 days from the invoice date.

Return due to Symetrix Error or Defect

Units returned within 90 days will not be subject to a restocking fee and credited in full (including freight). Symetrix assumes cost of return shipping.

Return for Credit (not due to Symetrix error):

Units in a factory sealed box and purchased within 30 days can be returned without a restock fee in exchange for a PO of greater value. Symetrix is not liable for return shipping.

Restock Fee Schedule for Returns for Credit (not due to Symetrix error):

Factory Seal Intact

• 0-30 days from invoice date 10% if no replacement PO of equal or greater value is placed.

• 31-90 days from invoice date 15%.

• Returns not accepted after 90 days.

Factory Seal Broken

• May be returned up to 30 days and the restocking fee is 30%.

Symetrix is not liable for return shipping.

Out of Warranty Repairs

Symetrix will attempt to repair units outside of warranty for up to seven years from the invoice date, but repairs are not guaranteed.

The Symetrix web site lists partners who are authorized and qualified to perform repairs on units beyond seven (7) years from invoiced date. Repair rates and turnaround times for out of warranty Symetrix equipment are set solely by these partners and are not dictated by Symetrix.