Installation and Operation
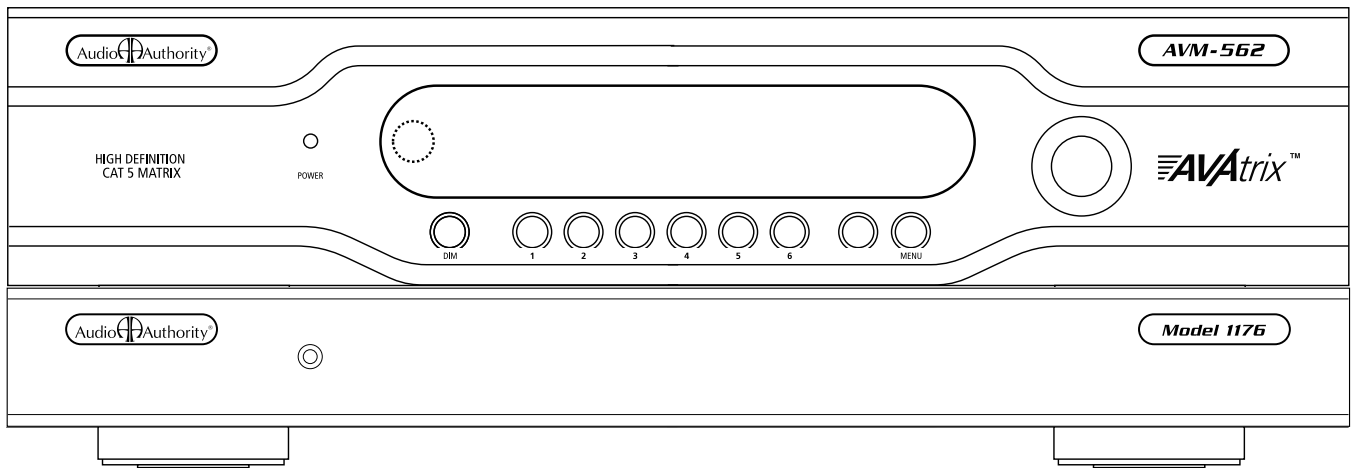

Model 1176BK
High Definition Cat 5 Matrix Router

Audio Authority®

<div align="center">

Installation and Operation Manual

Model 1176BK

High Definition Cat 5 Matrix Router Expander for use with the

≡AVAtrix ™

This document is consistent with features in AVX-562 and AVM-562 firmware version 1.0

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⬣ Warnings

To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

- Read this manual before installing or using this product.
- This product must be installed by qualified personnel.
- Do not open the cover—there are no user-serviceable parts inside.
- Do not expose this unit to excessive heat.
- Install only in dry, indoor locations.
- Do not obstruct the ventilation slots.
- Clean the unit only with a dry or slightly dampened soft cloth.

Specifications   Subject to change without notice.

Video Parameters

Signal Type	Component
Video Formats	480i/p, 720p, 1080i/p, 576i/p
Input/Output Impedance	100 ohms
Input Ground Isolation	Yes
Gain	1
Gain Accuracy	2%
3dB Bandwidth	100MHz
Input Coupling	AC
S/N Ratio	62dB
Max Gain/Equalization	1

Audio Parameters

Format	Digital/Analog
Digital Audio Output Type	Coaxial 75 ohms
Input Impedance	100 ohms/50K ohms
Min Load Impedance	75 ohms/10K ohms
Multi-channel Digital	Yes
Frequency Response	10-50KHz
S/N Ratio	75dB
THD+Noise	.025%
Crosstalk	75dB
DC Input Connector	
DC Input/Polarity	18V/center positive
Power Supply	571-015

Limited Warranty

If this product fails due to defects in materials or workmanship within one year from the date of the original sale to the end-user, Audio Authority guarantees that we will replace the defective product at no cost. Freight charges for the replacement unit will be paid by Audio Authority (Ground service only). A copy of the invoice from an Authorized Reseller showing the item number and date of purchase (proof-of-purchase) must be submitted with the defective unit to constitute a valid in-warranty claim.

Units that fail after the warranty period has expired may be returned to the factory for repair at a nominal charge, if not damaged beyond the point of repair. All freight charges for out-of-warranty returns for repair are the responsibility of the customer. Units returned for repair must have a Customer Return Authorization Number assigned by the factory.

This is a limited warranty and is not applicable for products which, in our opinion, have been damaged, altered, abused, misused, or improperly installed. Audio Authority makes no other warranties either expressed or implied, including limitation warranties as to merchantability or fitness for a particular purpose. Additionally, there are no allowances or credits available for service work or installation performed in the field by the end user.

Getting Started

• Register your purchase at www.audioauthority.com/register to activate your warranty and for future up-grade notification. Write your registration password on the back cover of this manual.

• Read these instructions

• Unpack the product and its accessories

• Install batteries in the infrared remote control(s)

• Connect associated equipment (see detailed instructions in the AVM-562 manual)

• Connect the product to a suitable power outlet using only the power supply furnished

• Perform desired setup operations

General Information

The Model 1176BK Matrix Expander is a companion product to the Model AVM-562 Cat 5 Matrix. It provides outputs to six additional Cat 5 receivers. Each receiver is able to display any one of the six inputs of the AVAtrix at any time. Up to five Model 1176BK expanders may be stacked with its host AVM-562, providing outputs for a maximum 36 Cat 5 receivers.

≡AVAtrix™ HD Cat 5 Matrix

The AVM-562 is a six input, seven output high definition matrix router. It has one local output and six Cat 5 remote outputs, all offering component video with digital and analog audio. The Model AVM-562 performs selection of up to six audio/video input sources by infrared control, RS-232 signals, or by manual selection.

Three different Cat 5 wallplate/receiver styles are available (Models 9880, 9879 and 9878). The AVM-562 delivers component video, digital and analog audio to each wallplate/receiver over two Cat 5 cables.

Carton Contents

• Model 1176BK High Definition Cat 5 Matrix Expander

• 18-volt Power Supply

• User Manual

Suggested Accessories

• Patch cables (RCA, optical and 3.5mm)

• Infrared emitters and/or infrared remote control receivers—for remote wallplate/receiver IR functionality

• Cat 5e/6 cable—for remote outputs; consider buying a different jacket color for A and B cables

• RJ-45 plugs—for remote outputs; EZ RJ-45 plugs are recommended

• Professional network cable tester—continuity testing is not adequate for Cat 5 cables–twisted pairs must be properly matched for balanced line performance, so a tester capable of confirming pairs is required

> **We strongly recommend testing factory-made cables as well as site-fabricated cables!**
> All cables must have proper EIA-568B pairing (**not crossover configuration**) for proper function. (The EIA-568A standard can also be used, but mixing the two standards could result in confusion.)
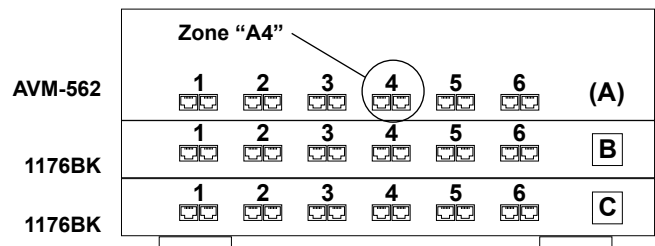
Installation

You may wish to consult with a qualified custom electronics installer if you are inexperienced with UTP wiring and cable termination. You should be familiar with Cat 5e/6 cable termination tools, techniques, testing, and wire routing principles.

1. **Assembling Expanders**. Follow these steps if you are installing Models 1172BK, 1176BK or other expanders with your AVAtrix. Refer to the diagram on the facing page. Otherwise, skip to Step 3.

    All video, audio, and communication signals between sources, Cat 5 outputs, and audio system outputs travel through the special ribbon bus cable. The AVAtrix normally ships with a 4-port bus cable, leaving two open ports for expanders. If you need to add more than two expanders, order AVM-562E or call Audio Authority Technical Support.
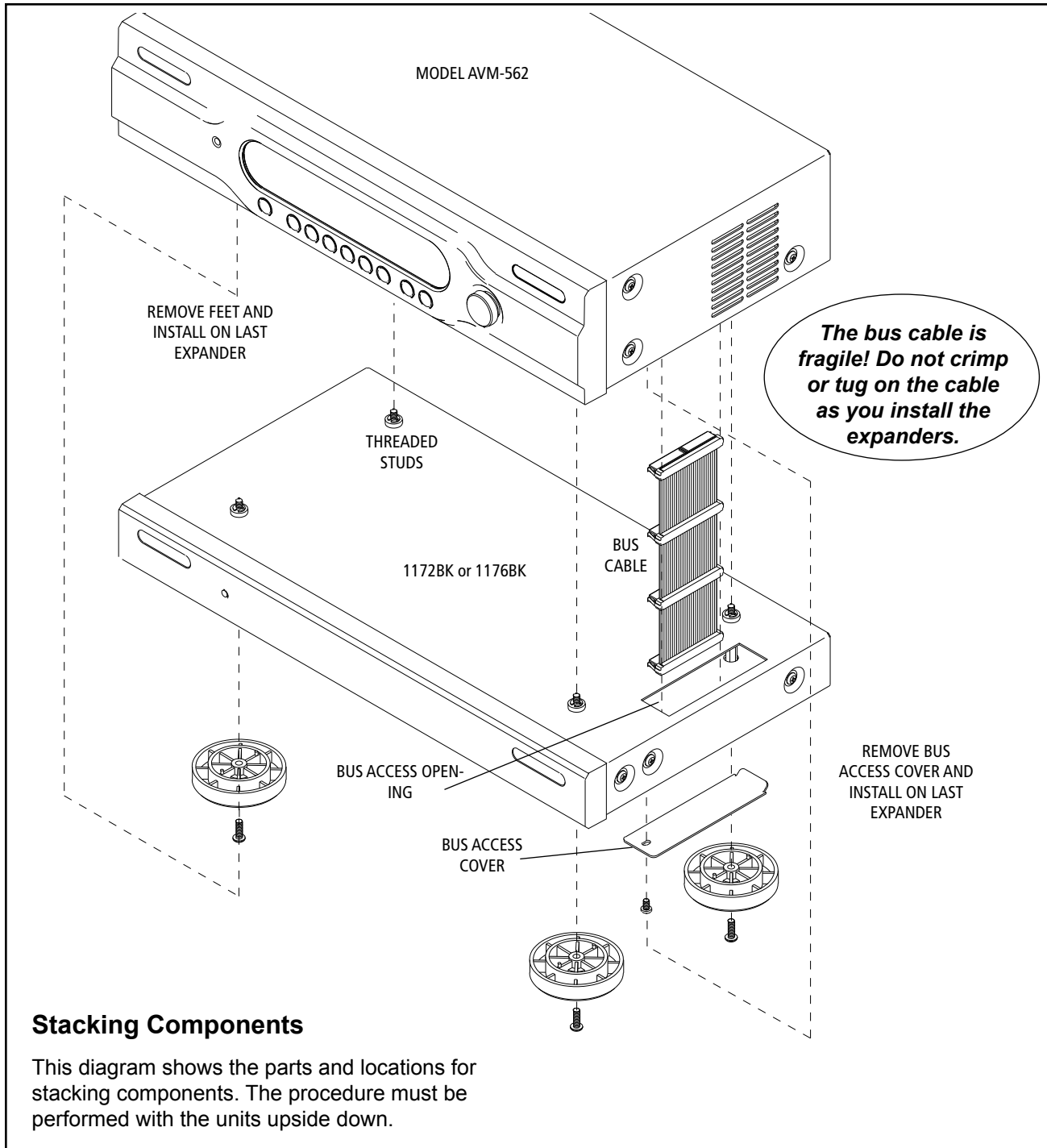
    a. Lay the Model AVM-562 upside down on a protective surface, such as a terry cloth towel.

    b. Remove the four feet and the bus access covers (save them and their attaching screws).

    c. Gently feed the loose end of the bus cable out of the bus access opening.

    d. Plug the next connector into the port visible through the expander case opening—apply enough pressure with fingers or a plastic tool to assure that the plug is completely seated.

    e. Turn the next product to be stacked upside down (e.g. Model 1172BK or 1176BK), thread the bus cable through its bus access openings, and engage its four threaded studs with the four threaded holes in the Model AVM-562 formerly occupied by the feet.

    f. Tighten the hex head screws in the bottom of the stacking product in sequence a few turns each, until they are all snug.

    g. Carefully plug the ribbon cable into the bus port. Continue this stacking procedure until all units have been assembled. View the bus through the bus port to be sure all plugs are fully seated.

    h. After plugging the last connector of the bus into the bottom unit, carefully tuck any excess cable into the empty space inside the last unit. Be certain the back of the connector does not contact the metal case. To disconnect a bus plug, squeeze the side latches.

    i. Install the bus port cover and feet you removed from Model AVM-562 onto the bottom unit and turn the stack right side up.

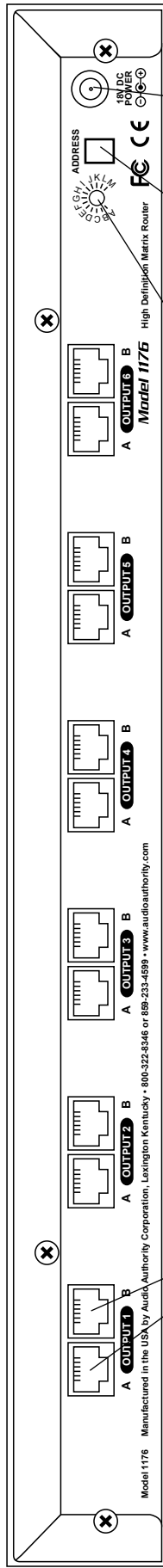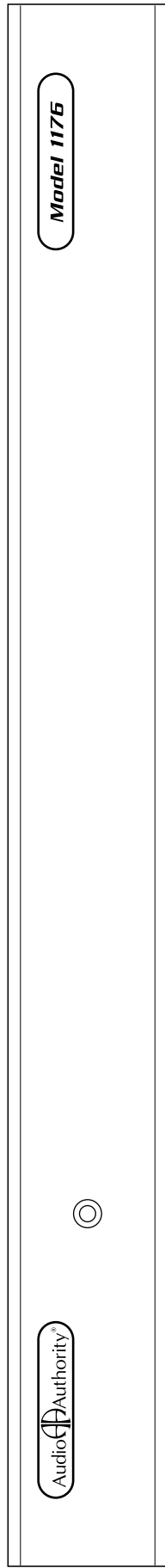AVAtrix opening screen shows expanders recognized.

2. Addressing and Initial Testing.

a. Set the Address dial on each Model 1172BK and/or 1176BK: set the upper-most Model 1176BKaddress to "B", the next one to "C", and so on. The AVM-562 Cat 5 output row is permanently addressed "A". Follow 1172BK manual for addressing 1172BK. AVX-561 and AVX-661 require a different address scheme; refer to the AVX-561 manual.

b. Temporarily plug in the power supplies of all units to a plug strip so that you can turn them all on at one time. The opening screen on the Model AVX-562 display indicates that the unit is powered and shows the number of expanders that have been recognized. If this number is different from the number actually present, look for the bus not being fully plugged into a unit or a unit incorrectly addressed.

MODEL AVM-562

REMOVE FEET AND INSTALL ON LAST EXPANDER

The bus cable is fragile! Do not crimp or tug on the cable as you install the expanders.

THREADED STUDS

BUS CABLE

1172BK or 1176BK

REMOVE BUS ACCESS COVER AND INSTALL ON LAST EXPANDER

BUS ACCESS OPENING

BUS ACCESS COVER

Stacking Components

This diagram shows the parts and locations for stacking components. The procedure must be performed with the units upside down.

Panel Descriptions

Shown below are the front and back views of the 1176.

Audio Authority®

Model 1176

Model 1176   Manufactured in the USA by Audio Authority Corporation, Lexington Kentucky • 800-322-8346 or 859-233-4599 • www.audioauthority.com

A OUTPUT 1 B   A OUTPUT 2 B   A OUTPUT 3 B   A OUTPUT 4 B   A OUTPUT 5 B   A OUTPUT 6 B

Model 1176   High Definition Matrix Router

ADDRESS

18V DC POWER

CAT 5 OUTPUT JACKS
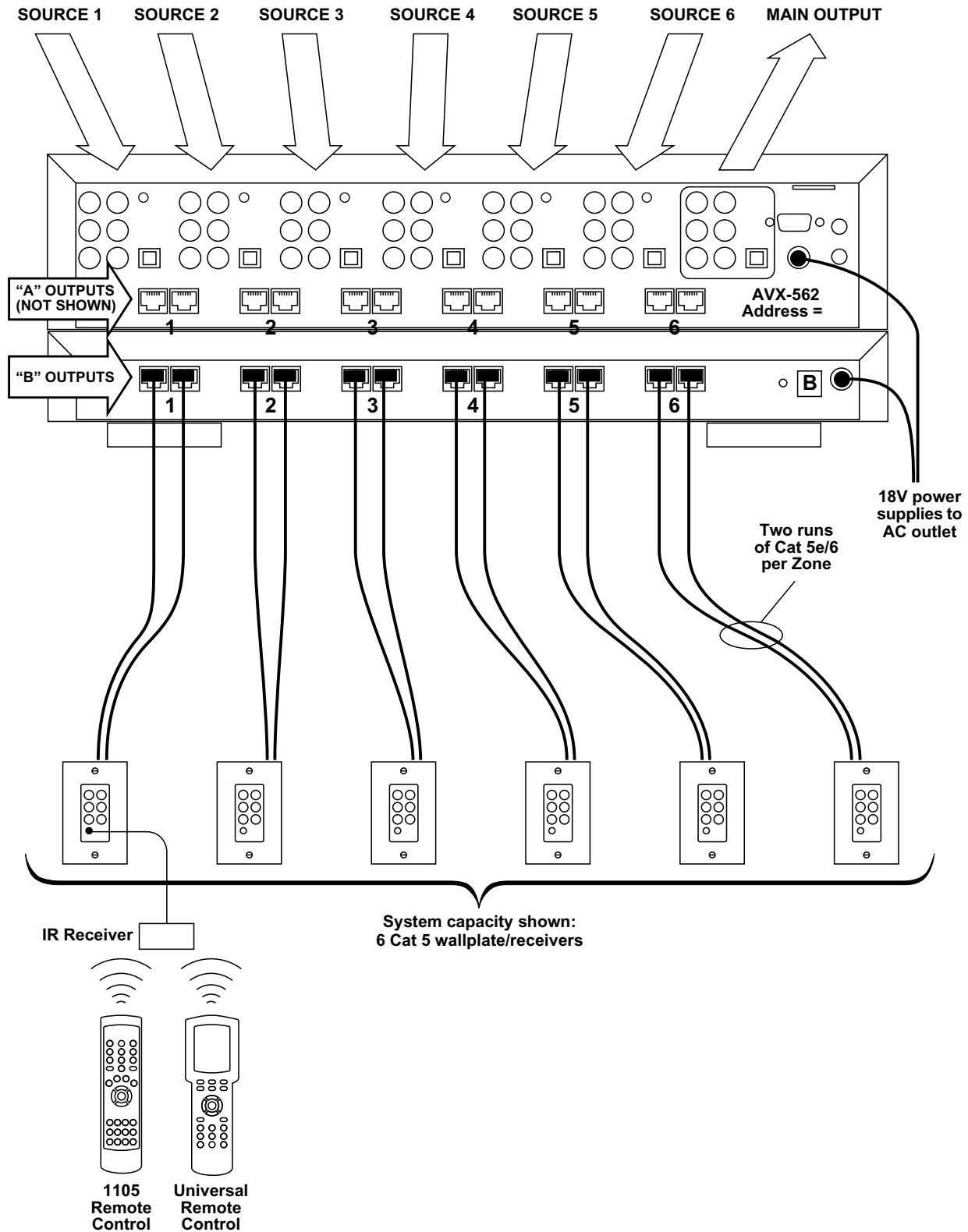Two Cat 5 cables must be connected to each Model 9878 Wallplate

ADDRESS SETTING
The 1176BK directly beneath the 1166 should be addressed "A", the next 1176BK should be "B", etc.

ADDRESS RECORDING BOX
It is helpful to record the correct address setting for future reference.

POWER JACK
Use only the included 18V power supply

1176BK Matrix Expander Connections

To add Cat 5 outputs to an AVM-562 matrix, install up to five Model 1176BK matrix expanders. The illustration below shows Cat 5 outputs 1-6 of the 1176BK expander (Addressed "B"). A single 1176BK adds six Cat 5 outputs. If more than two expanders are to be added to an AVM-562, you must order a seven-port ribbon cable.

SOURCE 1   SOURCE 2   SOURCE 3   SOURCE 4   SOURCE 5   SOURCE 6   MAIN OUTPUT

"A" OUTPUTS
(NOT SHOWN)

1   2   3   4   5   6

AVX-562
Address =

"B" OUTPUTS

1   2   3   4   5   6

B

18V power
supplies to
AC outlet

Two runs
of Cat 5e/6
per Zone

System capacity shown:
6 Cat 5 wallplate/receivers

IR Receiver

1105
Remote
Control

Universal
Remote
Control

AudioⒶ Authority®