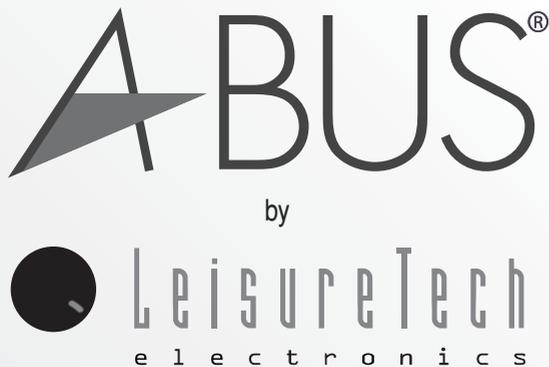


# A-BUS Installation Instructions

For Custom Installations



Welcome to A-BUS Multi-Room Audio. When combined with your source equipment (receiver, CD player, etc.) and speakers, A-BUS creates a versatile whole-house audio system that will fill your home with high-quality music for years to come.

## A-BUS SYSTEM OVERVIEW:

**A-BUS Hub:** The A-BUS hub is the core of the system, distributing audio signal, system power and status indication to A-BUS power modules installed in rooms throughout the home and sends IR commands from the power modules back to the source components. It is usually located near the main sound system (Amplifier/Receiver, CD, DVD, Tape, Cable, etc.) Typically they have four room outputs with expansion ports (IN/OUT) so multiple hubs can be connected to tailor the system to individual requirements.

- Audio input from the main amplifier's tape output or second zone output.
- 4 Infrared (IR) outputs to remote controllable source components and the main amplifier (to allow for input selection). Dual emitters may be used.
- Power supply for system power (supplied). (Should not to be connected to the amplifiers switched output.)
- Status optional (see below).
- Zone outputs to go to four A-BUS power modules.
- Expansion ports – to add additional rooms
- OUT: Connects to additional hubs to add more rooms. (Each hub requires it own power supply)
- IN: Connects to the direct input of an A-BUS/READY amplifier. Connects to an A-BUS input selector
- Local infrared input (Xantech™ compatible) to relay IR commands if the main system amplifier is concealed (single zone amplifiers only).

**A-BUS Power Modules:** A-BUS power modules are stereo amplifiers with level control that power a pair of speakers in each room. Only one Dataline cable is required between the hub and the power module. Speaker cable is run from the power module to the speakers except when the A-BUS power module is located on the speaker itself. Standard rotary A-BUS power modules do not include infrared repeating. IR-equipped modules relay 38KHz codes to the source components for input track/channel selection, etc. They also include infrared talkback and status indication. An LED indicator indicates when the A-BUS system is on (See Power/Status below) and it flashes signifying an infrared command has been received. The volume level on touch-button A-BUS modules can also be operated by the ABR-60 remote control handset. The IR repeater system is always active regardless of system status.

**Audio, IR Data and Status Connections:** A-BUS/READY amplifiers are equipped with an RJ-45 A-BUS output socket enabling direct connection to either a single A-BUS power module for one extra zone or to an A-BUS hub for multiple-zones. The A-BUS/READY outlet supplies audio, status and infrared data connection. Some A-BUS/READY amplifiers can power one power module independently while others require a separate power supply. The A-BUS/READY jack may also be connected to the Expansion Input of an A-BUS hub to enable multiple zones.

**IMPORTANT:** When purchasing a new amplifier or home theater receiver look for the A-BUS/READY logo on the front. That means a simple RJ-45 connection on the back immediately connects you to the whole-house system, as long as the house is wired for A-BUS.

**Power/Status:** There are several ways to activate an A-BUS system. When not in operation the A-BUS system is in standby mode. It is activated by:

- Automatic Signal Sensing (Default): The Hub automatically detects when audio signal is present and activates the A-BUS system. 30-seconds after the audio signal ends the system returns to standby.
- Main System Sensing (Preferred): A-BUS also activates automatically when the main sound system is switched on (including source components). A PS-1 power pack should be plugged between the main amplifier's switched power outlet and the hub's Status input.
- A-BUS/READY: The hub can be directly connected to an A-BUS/READY amplifier via the Expansion Input port. The A-BUS system automatically powers up when an A-BUS/READY amplifier is switched on. This may be done via remote control from any room. Note: The hub power supply is still required.

**A-BUS Local Input Module (LIM):** The LIM provides "local" input capability for sources such as TV sound, MP3 player, computer sound cards, etc. located in the zone.

When the Audio/TV slide switch on the rear of the board is switched to "Audio", there is a delay of 30 seconds after local audio signal ceases until default audio signal cuts in. When the switch is in this position it's mainly used for a CD or MP-3 player, a computer with a line level output signal, or similar audio product.

When the slide switch is moved to "TV" position on the rear of the board a composite video lead connected from a TV or video player will switch audio over from A-BUS to local input, eliminating drop outs occurring in the quiet passages of a movie, and when switched back from TV it will return to the A-BUS zone source after 3 seconds.

*Note: Care should be taken during pre-wire to run the Dataline cable from the hub to the power module via the LIM installation point. This is often a forgotten requirement, e.g. In the case of a local TV, the Dataline cable should be run past the room's aerial point.*

**A-BUS Four-Way Input Switcher:** The four-way input switcher can be used in a number of ways (see separate instruction sheet). It can be used as an input switcher eliminating the need for an amplifier to select sources. In addition to the four inputs there are four active outputs that extend the source signals to a main system amplifier without signal loss. With this configuration the A-BUS system has separate source selection to the main system creating an independent zone. Multiple input switchers may be used to create more sophisticated multi-source systems. Keep in mind that a separate hub is required with each input selector. Input selection is accomplished via A-BUS infrared commands.

## A-BUS COMPATIBILITY

This product complies with the A-BUS format. The A-BUS format has been adopted by other manufacturers who make a variety of products that can give your system added flexibility. When looking to expand and/or upgrade your home entertainment system, be sure to look for products that carry the A-BUS trademark.

## PRODUCT INSTALLATION NOTES

- All A-BUS RJ-45 connectors are wired to the 568A standard.
- The colour code order of punchdown connectors may vary.
- Standard A-BUS Dataline patch leads may be used.
- The infrared system will relay 38KHz commands.

**IMPORTANT:** Substitute power supplies are not recommended.

**Pre-Wiring:** All cabling between the A-BUS/READY amplifier/interface module, distribution hubs and power modules should be A-BUS Dataline cable. The recommended maximum cable run is 30M. Andrew's Audio Low Loss Speaker Cable should be run from the power module point to the speaker points; however, it is recommended that the A-BUS Dataline cable be extended to the speaker points as well to allow for the installation of an A-BUS/Direct speaker system which has the power module incorporated in the speaker (A-BUS power modules will accept up to 14 gauge cable). It is recommended that all Dataline cables at the hub end be terminated with wall mounted RJ-45 sockets with standard (568A) patch leads between the wall socket and the hub.

Before installing the Dataline cables check for Local Input Module requirements. Eg. in the case of a local TV, the Dataline cable should be run past the room's antenna connection point. A 1M taped loop of cable for access is recommended. The same could be applied to a point in a child's room next to a desk where a computer or MP3 player may be located.

**IMPORTANT:** These instructions contain directions for installers of A-BUS systems. The manufacturer or its agents shall not be liable to any person or entity for loss or damage, including consequential loss or damage, arising out of any error or fault in the installation of the A-BUS system or any of its component parts.

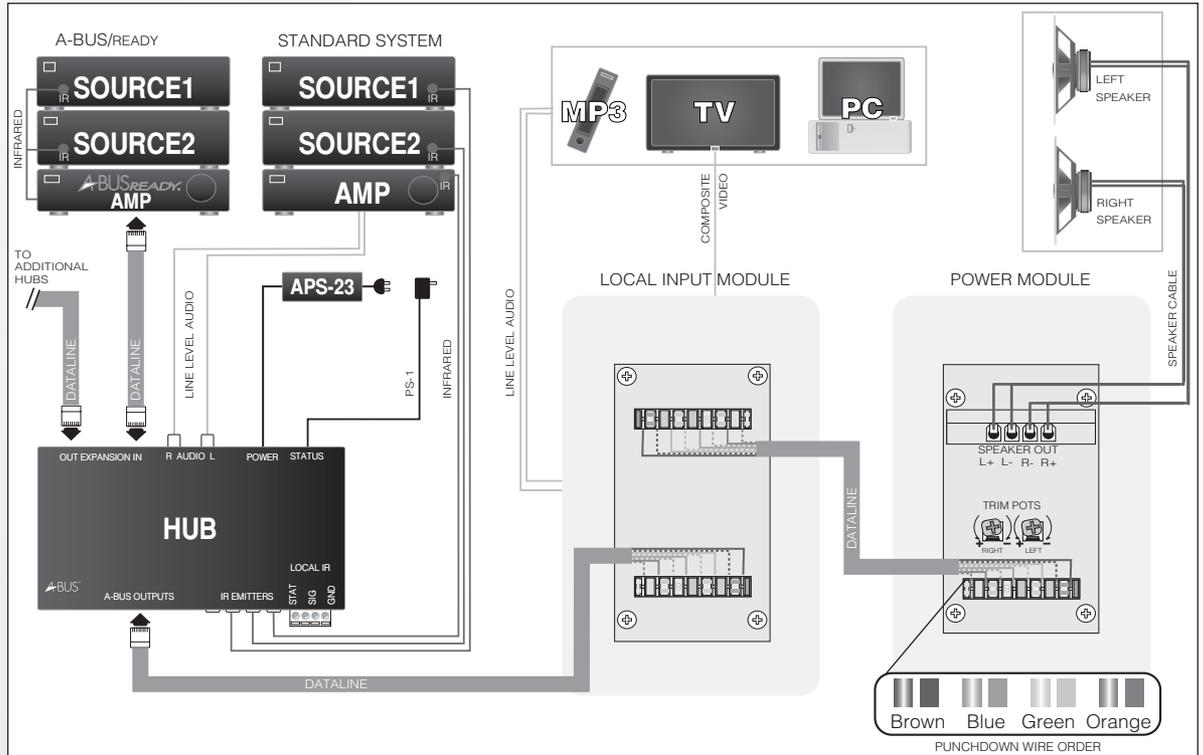
## IMPORTANT INSTALLATION GUIDELINES

Before installation, review the manuals included with each component in your system. If you are unsure of any of the installation procedures, it is recommended that you contact your dealer or a professional electronics installer. During installation, do not connect power to the hub. Before powering up the system, make sure all volume levels are on minimum level.

Note - before installing the power modules into the walls be sure to adjust the trim pots after all modules have been connected.

## SETUP

The A-BUS installation should be completed with all power modules connected but not installed into the walls. Follow these steps to give you maximum control flexibility over the volume of your A-BUS system. On the back of the power modules there are trim pots (Left & Right) that fine-tune the output level to compensate for the length of the cable run, the efficiency of the speakers and the size of the room. There are also situations where you may want to limit the output level in a particular room. With the trim pots adjusted to minimum, the main volume control should be adjusted to maximum level, then with popular music playing the trim pots should be brought up to a point just below the amplifier's clipping level. (Clipping is the point where the sound starts to distort). When the trim pots are all set to the desired level the installation may be completed.



## FAULT FINDING

- Most faults occur as a result of incorrect wiring.
- Check all connections carefully.
- Make sure all speakers are wired in phase.
- Disconnect power modules from hub and check operation one by one.
- A short in a line or incorrect wiring will cause the power module to shutdown until the fault is fixed.
- Status indicates the system is active. (LED indicator on infrared models only)

**Infrared** Your A-BUS infrared relay system is world standard using the most up-to-date technology. However, some infrared codes may present problems. Make sure the infrared emitters are properly placed on the IR receiver of the source components. Infrared systems are more likely to give trouble as a result of too much power. (Try moving the emitter away from the component). Cable boxes and Plasma screens often cause difficulties.

## FEATURES AND SPECIFICATIONS

### Power Module (ABM-20)

Speakers	Drives one pair of speakers (4-8 ohms)
Control	Rotary
Wall plate	Clipsal 2000
Terminals	Input: Dataline Punchdown Output: screw terminal (up to 14 gauge)
Infrared Repeating	None
Size	Depth 70mm Height 107mm Width 44mm

### Power Module (ABM-38R/ABR-42/ABR-40) Includes

Infrared Repeating	38KHz
Nominal Range	in sunlight < 5M, Indoors > 20M
Status	System ON Indicated by LED
Talkback	LED Flashes when in use.

### Power Module (ABR-42) Includes

- Control Touch button Up/Down volume
- Remote controllable volume level

### Power Module (ABR-40) Includes

- Remote Controllable Volume level

### Local Input Module (ABS-70/AV)

Auto switching when local audio signal is sensed.	
Inputs	Local Audio - RCA Phono jacks (1pr.) From hub - Punchdown Video Sensing - Composite Video
Output	To power module - Punchdown
Size	Depth 25mm Height 107mm Width 44mm

### Cable Requirements

Interface module to hub to power modules: Dataline Cable  
Power module to speakers: Andrew's Audio Low Loss Cable

### Remote Control (ARC-40)

A-BUS miniature remote control included with the ABS-40.	
Inputs	Buttons - Volume Up, Volume Down Source 1-4, Off, All Off
Battery	Voltage - 3V Type - Lithium CR2025
Size	Depth 6.8mm Height 86mm Width 33mm

### Remote Control (ABR-60)

A-BUS Learning Remote Control	
Inputs	64k Non-Volatile memory 6 Banks, 24 keys per bank 4 Macro keys 2 Rocker sets
Battery	Voltage - 3V (1.5V x 2) Type - AA
Size	Depth 25mm Height 215mm Width 43mm

### HUB (AB-62)

Inputs	Audio - Phono jacks (1pr.) Power - 2.5mm DC (+v centre) Status - 2.1mm DC (+v centre) Expansion - Input RJ-45 A-BUS ports - 4 x RJ-45 Infrared - 4 x 2.5mm TRS jacks Expansion ports - RJ-45
Outputs	568A
Wiring format	568A
Size	Depth 83mm Height 30mm Width 184mm

### Power Supply (APS-23)

Inputs	120 -240 Volt ~ 50/60Hz 1.5A
Output	24V - 2.3Amp
Size	Length 151mm Height 36mm Width 70mm