Custom Hub
ABX-88

Multi-Source Hub
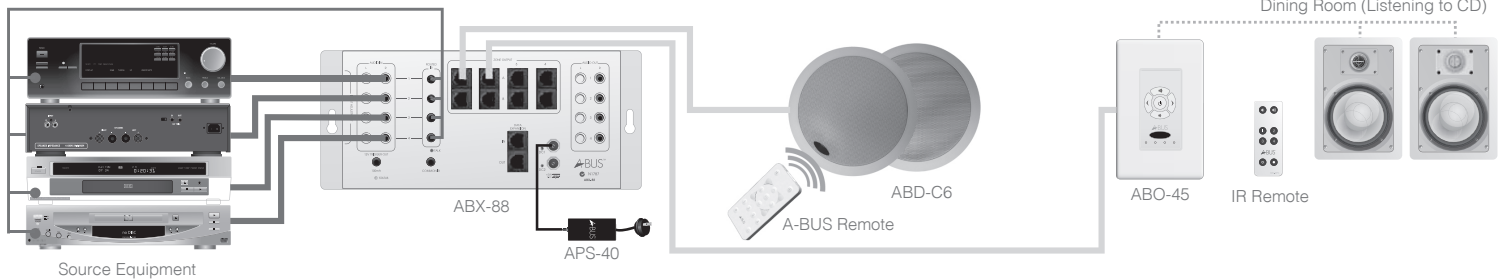**Installation Manual / Warranty Information**

forté
A-BUS®

Thank you for your Forté A-BUS purchase

To complete your Forté A-BUS installation, also refer to the manual of the room units either the volume control module or the A-BUS/*DIRECT* speaker.

ABR-43 IR Learning Remote Keypad - Please see individual manual for additional instructions

AB-45 Volume Control Module - Please see insdividual manual for additional instructions

System Design

Dining Room (Listening to CD)

Source Equipment

ABX-88

APS-40

A-BUS Remote

ABD-C6

ABO-45

IR Remote

The ABX-88 Multi-Source Hub is compatible with any A-BUS room unit, either an IR Volume Control Module or A-BUS/*DIRECT* speaker. It is possible to mix Multi-Source Hubs with single source Hubs.

There are many reasons you may want to do this, the most common reason is because in an open plan house you may have interconnecting areas which are acoustically the same (family rooms, dining rooms and kitchens). So if you change the source in one area the other rooms can track the same

source. Another example is bedrooms with ensuites. In the master bedroom, the full-function Volume Control Module would normally be used; however, in the bathroom a less featured Volume Control Module may be all that is needed. The Multi-Source Hub has a second output port (the second bank requires a separate power supply) in each zone to cater for this requirement. If additional areas are required within the zone the second output port may be connected to a separate 4-Room Hub to expand that zone.

Operation

The ABX-88 Multi-Source Hub is controlled by A-BUS infrared (IR) commands. When the Hub receives a command for any one of the four inputs in any zone, the Hub will switch on. This will be indicated by the green status indicator. The 12 volt trigger will also activate. If source components are activated by a power strip switched by the trigger, they will also activate.

Each zone with a Volume Control Module must have a keypad that includes buttons with A-BUS functions (inputs 1-4 or input Up/Down, Room Mute and System Mute commands). Alternatively, any Volume Control Module containing an IR receiver may be used in conjunction with an A-BUS remote

that has these IR commands built-in. Volume Control Modules without Room On/Mute switches will activate when any Zone is turned on. Other modules with individual ON/MUTE capability require either an ON command or a volume Up/Down command to activate the module. These units will reset to a low volume level the next time the system is turned on. The A-BUS MUTE command will only mute the room unit. To mute the whole system, the SYSTEM MUTE command must be used.

Specifications

| Hub	**ABX-88**	Four-Source, Multi-Zone Hub
Inputs	Audio	4 x Stereo (RCA Sockets) 1 Vrms Adjustable (-6dB)
	Control	ABX Control (RJ-45 Socket)
	Power	2 x 2.5 mm DC Sockets + V Centre (Banks A and B)
Outputs	Audio	4 x Stereo (RCA Sockets) 1 Vrms
	Control	ABX Control (RJ-45 Socket)
	A-BUS	2 x 4 Zones (RJ-45) (Bank A and B)
	Trigger	12 VDC 100 mA (3.5 mm Socket)
	Infrared	4 x Routed, 1 x Common (3.5 mm Sockets)
Size (WHD)		241mm (9-1/2") x 106mm (4-1/8") x 38mm (1-1/2")

Power Supply	**APS-40**	Power Supply (1 Req. for each bank, 1 Supplied)
Inputs	Power	120~240 VAC 50/60Hz 96w
Outputs	Power	24 VDC 4A (2.5mm DC plug)
Size (WHD)		70 mm (2.8") x 151.5 mm (6") x 36.4 mm (1.4")

Remote	**ABR-43**	Learning Remote Keypad with Cradle
Colour		White
Battery		2 x 3v DL2032
Size (WHD)	Cradle	73.8 x 117.8 x 10mm
	Remote	49.8 x 99.9 x 7.8mm

The A-BUS ABX-88 4 source 4 zone (x2) Multi-Source Hub with expansion
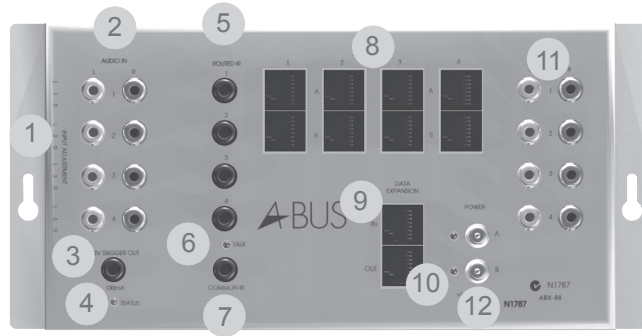
Audio input [1] [2] - There are four stereo line-level source inputs [2]. Each input has individual level adjustments [1] (left and right).

Trigger [3] - The trigger is activated when any part of the system is on; its output is 12 volts at 300 mA.

Emitter Ports [5] [6] - Each source input has its routed emitter port [5], if more than one component of the same type is used the Remote Control commands will not be confused. Eg. Two tuners. There is also a common emitter port [7] to control components that are common to all zones.

Indicators [4] [6] [10] - The green status indicator [4] is on when the system (one zone or all zones) is in operation. The red emitter indicator [6] flashes when there is an infrared data command passing through the Hub. The power indicators [10] indicate when the corresponding power supply is on.

A-BUS Outputs [8 A & B] - Each of the A-BUS Outputs provides the power, audio and data signals to feed a room unit. There are four output zones; each zone may independently select from any of the four sources. Each zone has two outputs, bank 'A' and bank 'B'. One power supply is supplied with the Hub to power the outputs for bank A. A second power supply can be added to power the bank B or alternatively the second output can used as an expansion port to feed one or more single source Hubs with expansion capability.

CAUTION: Only an approved A-BUS 4-Room Power Supply [12] should be used. Substitutes which may appear to be suitable are not recommended and will void the warranty.

DC Power Input Sockets [12] - There are two power sockets one for each output bank 'A' and 'B'.

ABX Control Ports (In/Out) [9] - Another ABX-88 Multi-Zone hub may be connected to this port if additional zones are desired. Up to four ABX-88 Multi-Source Hubs may be connected together, providing for a maximum of 16 zones.

CAUTION: The ABX Control Ports pass the control data between Multi-Source Hubs and may not be used for any other purpose.

Audio Outputs [11] - The RCA Audio Outputs allow sharing of the audio sources with the main system amplifier or to expand to additional ABX-88 Multi-Source Hub. The audio levels adjusted at the input will be the same on the output so no level adjustment will be required on the additional Hub(s).

IR Remote Control [13] - ABR-43 Learning Remote Keypad with Cradle. Can be used as a handheld remote or on wall keypad. Built-in A-BUS commands are incuded and additional keys have learning capability. Please see separate instructions.

Setup

Input Level Adjustments [1] - The ABX-88 Multi-Zone Hub is supplied with the input level adjustments set fully clockwise. If one source is noticeably louder than the other sources, turn both the Left and Right Input Level Adjustments for that source counterclockwise, reducing the input level to match the volume level of the lowest source. Repeat this procedure for any other sources that are too loud, until all sources are balanced. Some audio sources such as computer sound cards may have very low output. In these cases it is recommended that the volume be turned up at the output of the source. Check for either a physical volume control or an IR remote volume control on such devices.

Trigger Output [3] - The Trigger Output may be used to activate a relay or other device that responds to a steady-state 12volt trigger signal. This output may be used to power a Power Strip, which may be used to power the source components. When the System Mute command is pressed, the 12 Volt Trigger Output will be inoperative. Source components that are plugged into a trigger-controlled power strip will be switched off. Care should be taken to ensure that components will not lose their memories (clocks, etc. or presets) after long periods of non-use.

Infrared (IR) Emitter Ports [5] [7] - There are 5 emitter ports, 4 are routed ports. The routed outputs will only emit commands from a zone that has selected that source. This will allow more than one source device with the same code set to be used. If this is the case, light-blocking emitter caps should be used to prevent infrared commands from straying into the infrared receivers of adjacent components. The common emitter port will generate all commands from any zone with infrared capability. Some components have an IR IN socket on the back, it is recommended that this direct connection be used.

CAUTION: Do not confuse a serial data port connection with an infrared port.

TIP: 1. Finding the infrared receiver location in some components can be difficult. To find the right place, place a large card with a hole the size of a folder punch hole in it over the front of the component and while generating a command from the components Remote Control handset move the card around until the unit responds to the command.

2. In situations where the unit is not responding to the commands from the emitter or if the response is erratic the signal level may be too high. If the operation improves when the emitter is held away from the component a filter will be required such as some exposed camera film.

3. Some source components may not respond to repeated infrared commands. This is rare and may require a change in component

Status [4] - The green status light indicates when the system is turned on. The system is activated when the Hub receives a source-select command from any zone. Once a command has been received by the Hub to activate, a 12 volt signal will be available at the Trigger Output [3]. Other zones may be activated at any time. Individual Volume Control Modules have to be turned on separately before sound can be heard. Regardless of which Volume Control Modules are on or muted, the 12 volt trigger will remain active until a System Mute command is sent to the Hub.

Infrared Talkback [6] - The Red Talkback indicator flashes when an infrared data command is passing through the Hub.

Power [12] - The two red power lights indicate when the power supplies connected to bank A or bank B are active. These indicators do not indicate the system is active (see System Indicator [4]).

Warranty

Please contact your place of purchase for warranty information.