

A120

Adept 120W Modular Amplifier

Operating Instructions

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BALDWIN BOXALL
COMMUNICATIONS

A120 MODULAR AMPLIFIER

The A120 is a modular amplifier mainframe that can accept up to 8 input modules and 1 output module to suit most Public Address requirements.

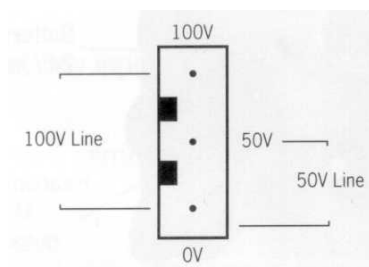
The A120 can be either mains (230V) or battery (24V) operated, and can be fitted with an internal 1 amp battery charger AC1A (optional).

Preparation for Use

AC Supply

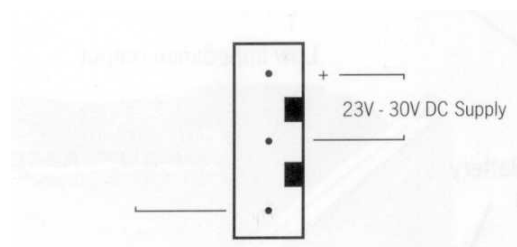
Connect to mains socket on rear of amplifier using the lead supplied.
IMPORTANT: This equipment must be earthed.

Loudspeaker Output



The amplifier provides connections for either 100V or 50V line

DC Supply Input (battery)

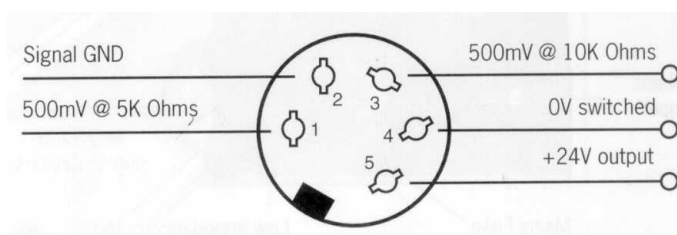


23V – 30V DC. Note: Negative Earth

Sub-Socket

The sub-socket found on the rear of the unit can be used for a variety of purposes: tape recording, feeding other Adept amplifiers, feeding mixers, operating busy lamps, relays etc.

Pin 1 Provides 500mV signal output for driving slave amplifiers or a tape recorder. This output is direct from the power amplifier input and after the master gain and tone controls.



Pin 2 Output Signal Ground

Pin 3 As pin 1 but signal is derived prior to master gain and tone controls. Output impedance 10K ohms.

Pin 4 Open collector 'busy' indicator: 0V switched output used in conjunction with pin 5.

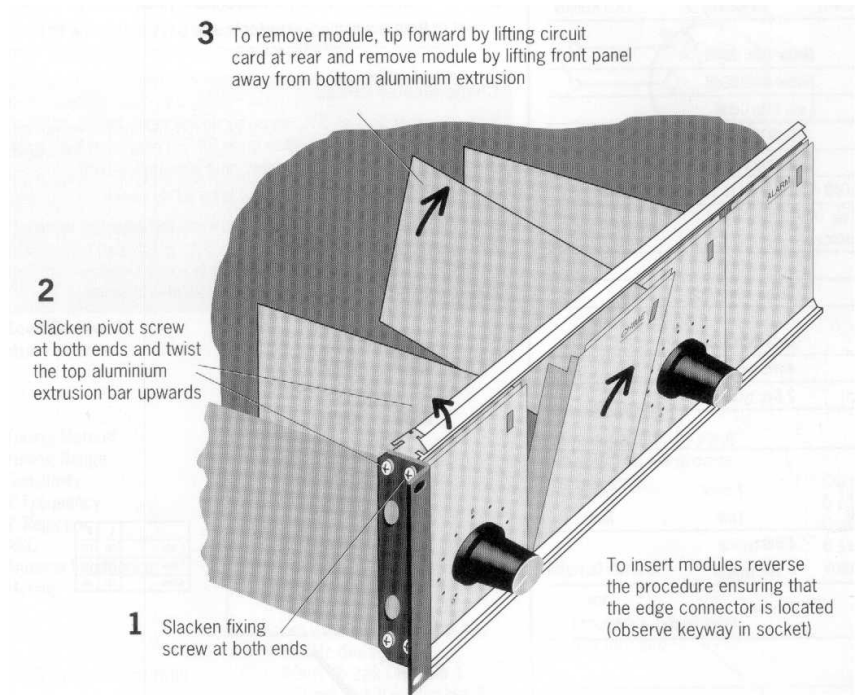
Pin 5 1A fused DC output at +24V, used in conjunction with pin 4 to provide an electrical relay control supply for zoning purposes, priority circuit indicators or DC power for an external tuner or signal processing and line pre-amplifiers.

Fitting Input (IMP) and Mixer (MS) Modules

Input Pre-amplifiers, Mixer Stages and Infill (BP) Front Panels are inserted into the front of the amplifier by slackening the four self-tapping screws (two on either side) which hold the top aluminium extrusion in place. Raise the front of the extrusion and insert the module by locating bottom tab on module into the bottom extrusion and press the PCB into the edge connector. When all Pre-amplifiers, Mixer Stage and Infill Panels are in position re-locate top extrusion and secure. See diagram below.

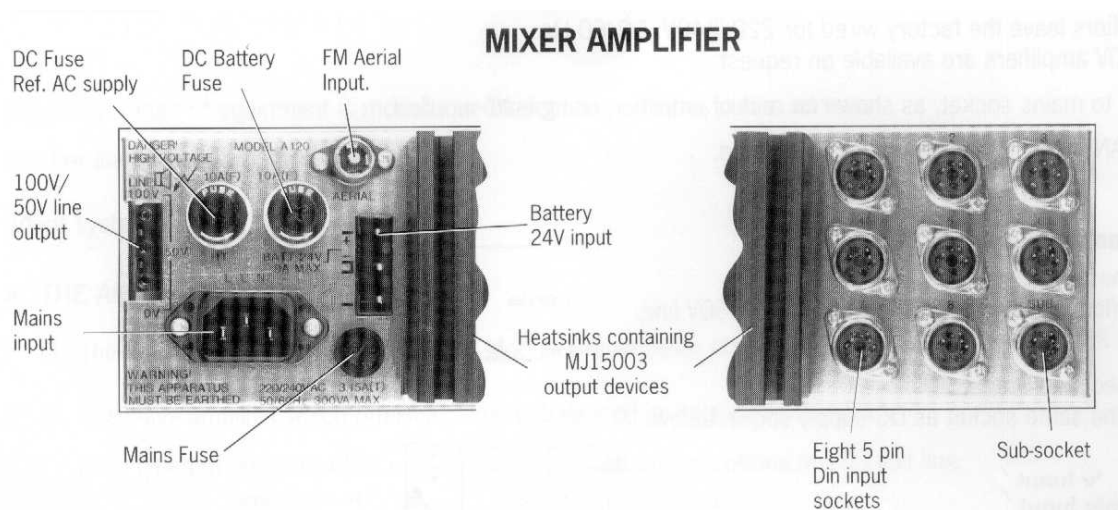
Prior to inserting inputs ensure that the dual in line switch has been adjusted in accordance with the notes on later pages - see relevant IMP data. All input modules have detachable knobs and spindles, thus any input module can be converted to a pre-set mode.

NOTE: Ensure that AC and DC power are disconnected before removing or inserting modules.



Rear Panel Connections

See relevant IMP or MS instruction manual for connection details.



MS and PA Dual Bus Lines

The input mother board on all mixer amplifiers has 2 Bus Lines, which are selectable via the DIL switch on most IMP modules.

Audio routed on the MS Bus passes through tone and gain controls on the MS stage.

Audio routed on the PA Bus pass directly to the power amplifier stage via a level raising amplifier on the mother board itself.

This bus is normally used to route critical audio signals such as 20 KHz for line surveillance, emergency announcements and alarm signals.

The following IMP modules feed this bus automatically IMP20, 21, and 33.

An MS1 need not be fitted if the MS Bus is not required.

If any of the IMP modules are configured to use the MS bus, then an MS stage must be fitted.

A120 Technical Specification

| | |
|---|--|
| Rated Output Power (RMS) ¹ | 120 Watt 83 Ohms |
| Output Voltages Obtainable | 50V & 100V |
| Output Regulation | <1.3dB |
| Distortion (1KHz @ rated output) ¹ | <0.5% |
| Frequency Response –3dB @ | 30Hz – 20KHz |
| Input Sensitivity | Depends on IMP module used |
| Output noise (ref rated output) | -80dB |
| Supply Voltages | |
| AC Supply 50 – 60Hz | 220 – 240V |
| DC Supply | 23 – 30V |
| Power Consumption | |
| Quiescent AC | 18VA |
| Quiescent DC | 0.25A |
| Rated Output @ 1KHz, AC | 300VA |
| Rated Output @ 1KHz, DC | 9A |
| Fuse Protection | |
| AC 5 x 20mm | 3.15A (T) |
| DC 6.3 x 31.75mm | 10A (F) |
| Battery 6.3 x 31.75mm | 10A (F) |
| 24V DC Aux output 5 x 20mm | 1A (F) |
| Terminations | |
| AC Supply Input | 3 pin DIN - IEC 6A |
| DC Supply Input (battery) | 3 pin screw terminated connector |
| Signal Input | 240 deg 5 pin DIN locking ² |
| Aux Input / Output | 240 deg 5 pin DIN locking ² |
| Loudspeaker | 3 pin screw terminated connector |
| Dimensions | |
| Depth (front to rear) | 380mm (15") |
| Width (rack mounting) | 482.6mm (19") |
| Width (free standing) | 455mm (18") |
| Height | 88mm (3½") 2U |
| Weight | 7.6Kg (16¾ lb) |

¹ 230V AC Supply

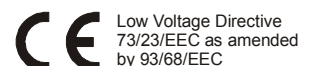
² For connection details see relevant IMP instruction manual

Installation Notes

1. The front of the amplifier is completed by the insertion of a combination of Input Modules and Infill Panels (BPI, BP3).
2. When a pre-amplifier is fitted, a Mixer Stage is normally used.
3. Always ensure amplifier is turned off when inserting modules.
4. Always earth equipment.
5. Ensure correct fuses are inserted.
6. Provide adequate air-flow around amplifier.
7. When fitting DIN plugs, ensure screen connection does not touch the casing of the plug, thus avoiding earth loops.

AVOIDING GROUND LOOPS: As supplied all Adept main frames have the common negative battery supply input bonded to the chassis, mains earth. For some applications it may be necessary to remove this bond to avoid for example ground loops by disconnecting the green yellow wire between pin 4 of input socket 8 and the chassis.

Ground loops on a system will cause a line frequency hum to be produced from the loudspeakers and is best avoided using isolated input modules (for example IMPX selected to line input, etc) especially if inputs are required to be wired in parallel.



Low Voltage Directive
73/23/EEC as amended
by 93/68/EEC

EMC Directive
89/336/EEC as amended
by 92/31/EEC and 93/68/EEC

Applies only when the items
are correctly fitted and operated
in or with products of our
manufacture and are installed
in a recommended enclosure