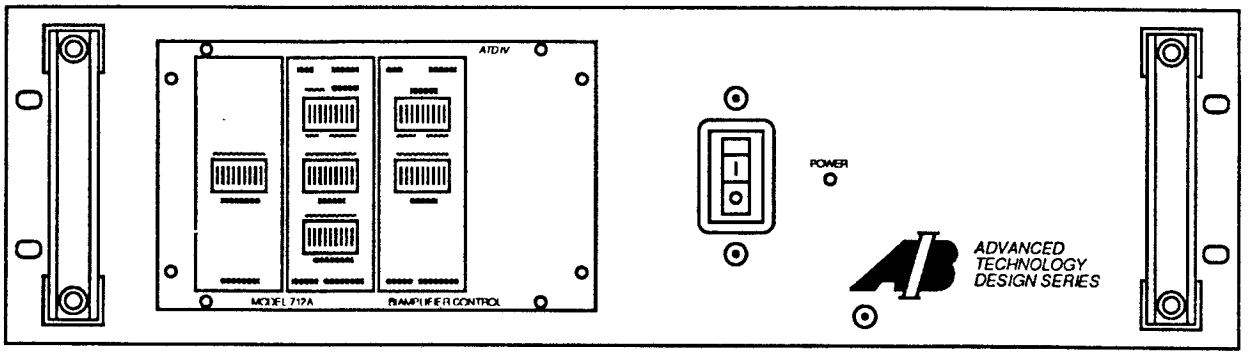
ADVANCED TECHNOLOGY DESIGN SERIES

712A BIAMPLIFIER



ADVANCED TECHNOLOGY

Advanced Technology Design Series IV from AB International is a modular system of high performance power amplifiers and electronic signal processing that may be precisely tailored to the specific requirements of professional loudspeaker components.

The experience gained from building three generations of signal-processing power amplifiers brings new features and new standards of performance to ATD IV. The low frequency power amplifier of the 712A is fully complementary and operates from a six-level logic-gated power supply that adapts to the input waveform to provide only the DC rail voltages necessary for undistorted amplification. The result is tremendous output capability, cool operation and unconditional stability over an unusually wide range of load conditions. A delayed-ON, instant-OFF muting control circuit allows internal supply voltages to stabilize before loudspeakers are connected. Speaker connections are instantly removed, should there be an interruption of AC power.

Included in the 712A are two apportioned power amplifiers, selectable system high pass filters, precision step attenuators, fourth-order Bessel active crossovers, an adjustable all-pass delay network for LF-HF time-phase correction at crossover, adjustable low frequency Thiele-Small alignment equalization, balanced and unbalanced inputs with looping provision and high frequency power response compensation for professional compression drivers.

For users desiring specific non-standard features and/or signal processing, a wide range of options are available, including high pass frequencies, crossover frequencies and filter topology and HF power response equalization. See 'Optional Equipment' brochure for details.

SPECIFICATIONS

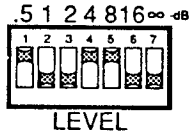
Type:	Biamplifier system with on-board signal processing	
Power output:[1]	LF:	500 w at 8 Ω 750 w at 4 Ω 1000 w at 2 Ω
	HF:	150 w at 8 Ω
Gain:	32.5 dB, LF-HF	
Input sensitivity:[2]	1.5 Vrms (referred to rated 8Ω LF output)	
Input impedance:	15 kΩ, balanced or unbalanced	
Noise level:	100 dB below rated outputs, unweighted	
Crossover:[3]	800 Hz, 4-pole (24 dB/octave) Bessel response	
Signal processing:[3]	System high pass (40 or 80 Hz) 2nd-order M-derived w/adjustable underdamping for assisted Thiele-Small alignments	
	Adjustable low-pass delay for LF output	
	Adjustable equalization for HF power response compensation	
Controls:	Power, system level LF: Delay, level, high pass/EQ HF: level, EQ	
Input connectors:	XLR-3 (bal.) with loop-thru and ground lift switch, 1/4-inch (unbal.)	
Power requirements:	120/240 VAC, 50/60 Hz, 400w (avg.) 1500 w (max.)	
Physical:	5-1/4" (13.3cm) H x 19" (48.3cm) W x 13-1/2" (34.3cm) D; 42 lbs. (19.1 kg.)	

1. Continuous power output at less than 0.1% THD, 20 Hz to 20 kHz, outputs normalized for full-range operation.

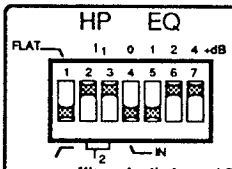
2. With all level controls adjusted for zero attenuation, normalized response to a swept input signal will be 'flat'.

3. A wide range of optional crossovers and signal processing is available. Please refer to 'optional equipment' for details.

FEATURES AND CONTROLS

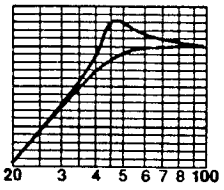


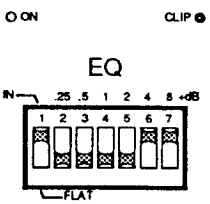
One of the three precision level controls in the 712A. Each switch position is calibrated for dB insertion loss, and the selected values sum directly. 12.5 dB attenuation shown.



High pass filter and associated EQ control is at left. The high pass filter is 'in' at 40 Hz (f_1).

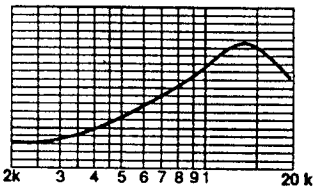
The EQ is enabled, with 6 dB boost. At right is the response, with EQ in and out.

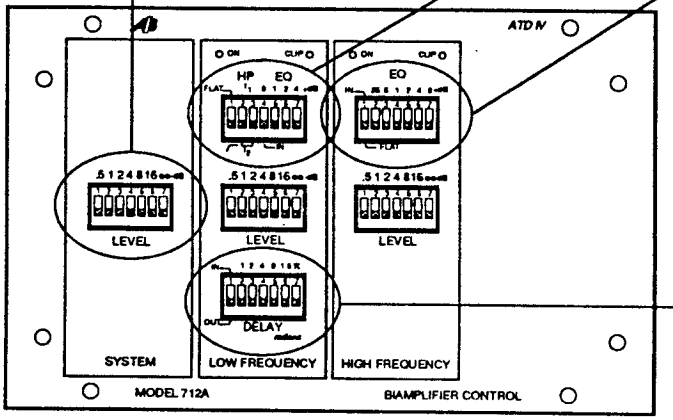




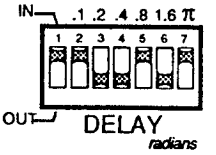
High frequency EQ control and HF indicators (left). The green 'on' LED indicates presence of HF signal, while the red 'clip' LED shows true clipping. These features are repeated for the LF output channel. The EQ provides correction for driver power response.

A wide range of options are available. Shown is 12 dB boost centered at 14 kHz beginning at 3.5 kHz for a popular 2" throat driver, with control settings above.

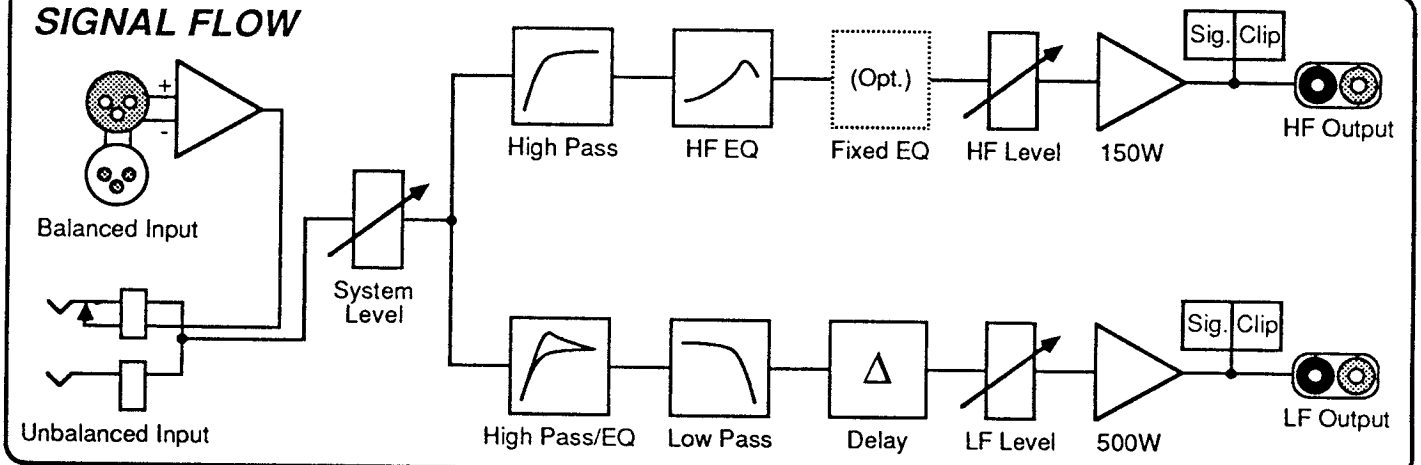




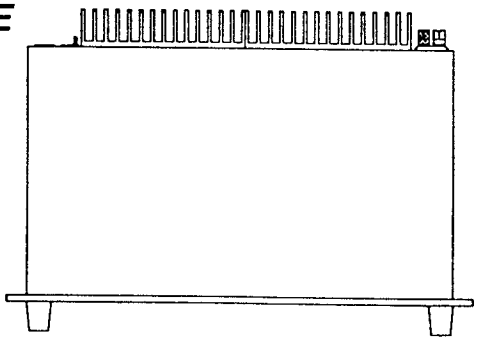
Low frequency delay control. Delay circuitry is included in the LF output channel to correct for time-phase offsets between the LF and HF loudspeaker components. Switch positions are marked in radians relative to the low pass frequency. In the example, 4.04 radians have been selected, which corresponds to a physical offset (independent of other considerations) equal to 10.7 inches at 800 Hz. With fourth-order (24 dB/octave) Bessel linear phase crossover filters, the 712A will deliver virtually seamless, phase coherent response in high-quality two-way loudspeaker system applications. An 'in-out' switch allows immediate response and listening comparisons, with and without the delay compensation.

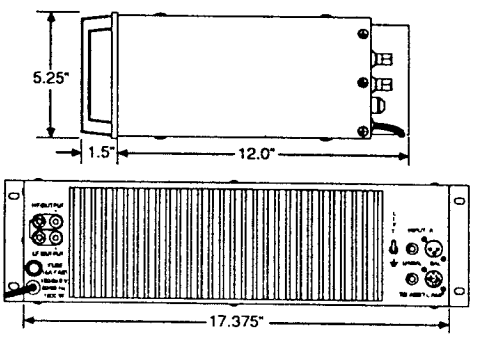


SIGNAL FLOW



APPEARANCE





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