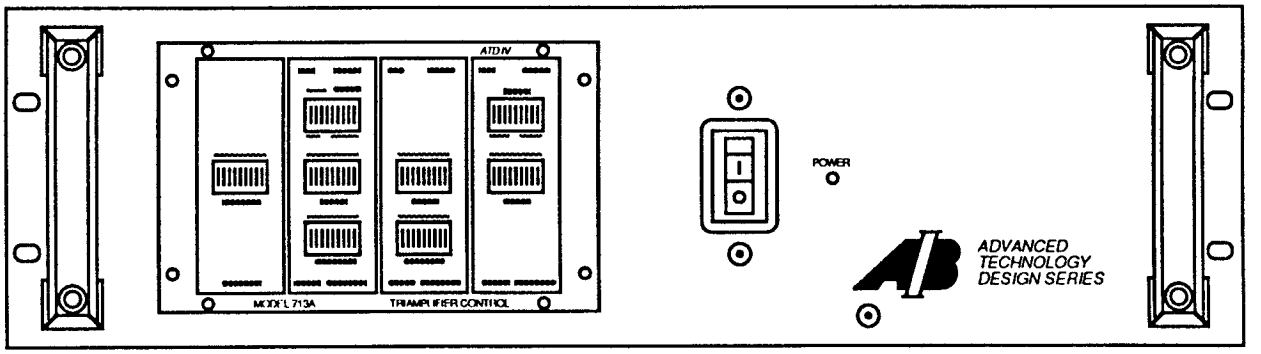
ADVANCED TECHNOLOGY DESIGN SERIES

713A TRIAMPLIFIER



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. In the 713A, the low frequency power amplifier is fully-complementary and operated from a six-level logic-gated power supply that adapts to the input waveform, providing only the DC rail voltages that are required 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.

The 713A provides power amplification, signal processing and precise control for high-performance three-way loudspeaker systems, while avoiding the interface and operational problems usually encountered with separate components. Included are three apportioned power amplifiers, system high pass filters, precision step attenuators, fourth-order Bessel active crossovers, all-pass delay networks for time-phase correction, low frequency Thiele-Small alignment equalization and exacting 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 for this purpose. See 'Optional Equipment' brochure for details.

SPECIFICATIONS

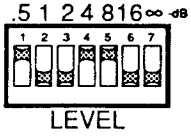
Type:	Triamplifier with on-board signal processing	
Power output:[1]	LF:	500 w at 8 Ω 750 w at 4 Ω 1000 w at 2 Ω
	MF:	300 w at 8 Ω 500 w at 4 Ω
	HF:	150 w at 8 Ω
Gain:	32.5 dB, LF-MF-HF	
Input sensitivity:[2]	1.5 Vrms (referred to rated 8Ω LF output)	
Input impedance:	15 kΩ, balanced or unbalanced	
Noise level:	100 dB below rated outputs, unweighted	
Crossovers:[3]	800 Hz and 7 kHz, 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 and MF outputs Adjustable HF equalization for power response compensation	
Controls:	Power, system level LF: Delay, level, high pass/EQ MF: Delay, level 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, 500w (avg.) 1800 w (max.)	
Physical:	5-1/4" (13.3cm) H x 19" (48.3cm) W x 13-1/2" (34.3cm) D; 45 lbs. (20.5 kg.)	

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

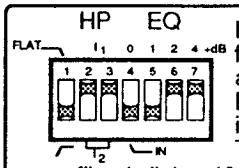
2. With all level controls adjusted for zero attenuation, normalized response to a swept input signal will be 'flat'.

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

FEATURES AND CONTROLS

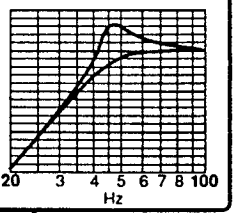


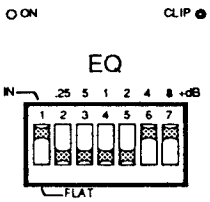
One of four precision level controls used in the 713A is shown above. The switch positions are marked for insertion loss in dB, and sum directly. 12.5 dB attenuation is shown above.



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

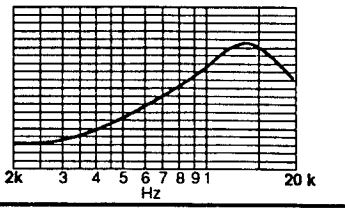
The EQ is enabled, with 6 dB boost. At right is the response, with EQ in and out.

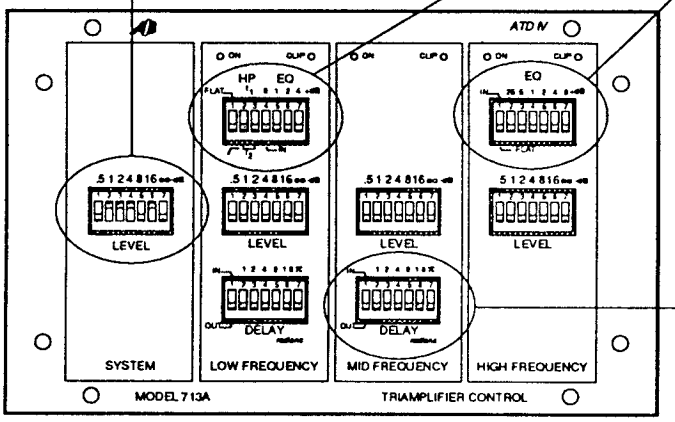




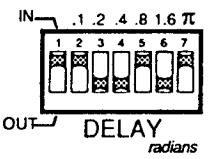
High frequency EQ control and HF indicators (left). The green 'on' LED indicates presence of HF signal, while the red 'clip' LED shows true clipping. These features are repeated for LF and MF channels. The EQ provides correction for driver power response.

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.

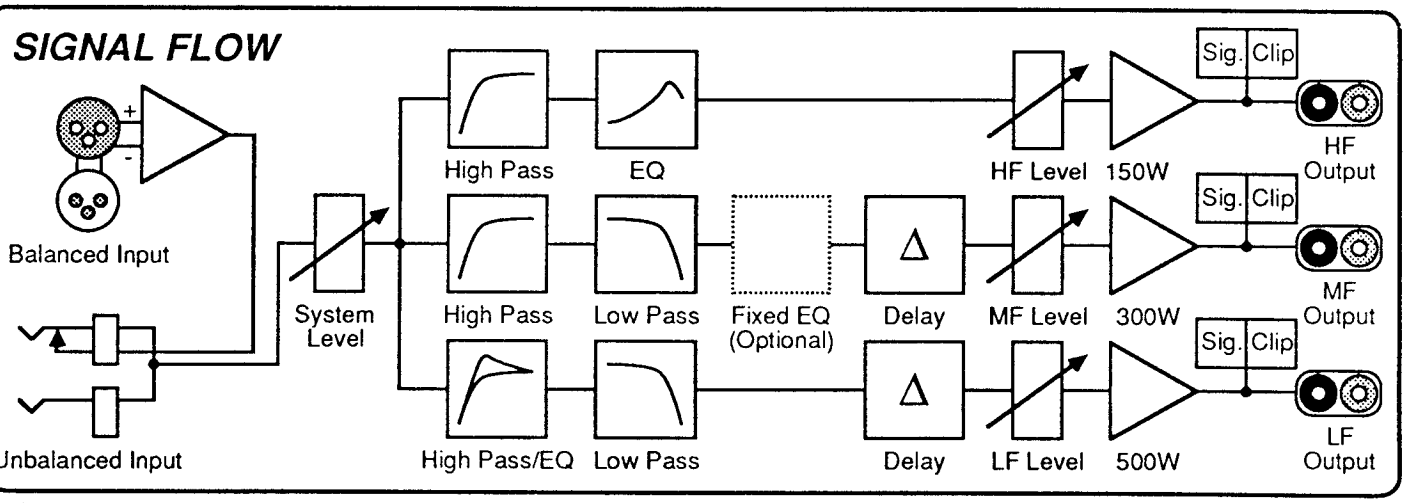




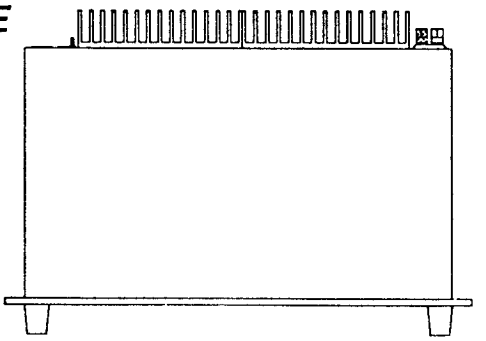
Low and mid frequency delay controls. Delay circuitry is included in the LF and MF channels to correct for time-phase offsets between the LF-MF-HF loudspeaker components. Switch positions are marked in radians relative to the channels low pass frequency. In the example, 4.04 radians have been selected, which corresponds to a physical offset (all other considerations being equal) of 10.7 inches at 800 Hz. Combined with ATD IVs fourth-order (24 dB/octave) Bessel crossover filters, the 713A will deliver virtually seamless, phase coherent performance when used with any well-designed three-way loudspeaker system. A 'in-out' switch allows direct comparisons, with and without the delay compensation.

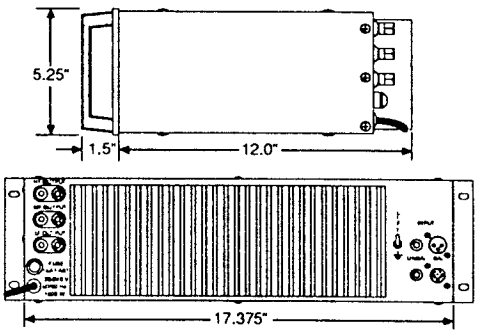


SIGNAL FLOW



APPEARANCE





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