

GENELEC

DATA SHEET

1022—0107—3

TRIAMP 1022A MONITORING SPEAKER



- new acoustic design for critical music monitoring
- no off-axis coloration
- ± 2 dB from 38 Hz to 20 kHz
- 110 dB SPL per pair in a normally damped 60 cu.m. control room
- three integrated power amplifiers
- active filters and symmetric input
- reliable
- cost effective

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DESCRIPTION

The TRIAMP 1022A monitoring speaker is a three-way system with three integrated power amplifiers and an active crossover network. This standard reference monitor is designed for medium size broadcasting, drama and music studios.

The low frequency system utilizes a 300 mm driver in a 50 litre vented box. Together with the active filter stage the system response has 6th order Butterworth characteristic extending to 38 Hz (-3 dB).

Midrange frequencies are reproduced with a 80 mm soft cone unit. Crossover frequencies are 380 Hz and 3,5 kHz. The treble driver is a 9×60 mm ribbon loaded with a short horn. Electrical overload protection is incorporated in mid and treble amplifiers.

The crossover network consists of three parallel band-pass filters. Tone control operates in all channels in 1 dB steps in order to change the system's overall sound balance in different acoustic conditions. Bass roll-off filter is also adjustable in 2 dB steps. Active symmetric input stage with continuously variable volume control precedes the filter group.

Maintenance is easy because of the simple mechanical construction. The amplifier deck is fitted into the enclosure with quick release hinges. The same mounting method is used in fitting the circuit board onto the amplifier deck plate, giving easy access to both sides of the board. A diagnostic connector is provided for rapid checking of all essential operating voltages. A short form operating and service information is printed on amplifier's rear panel.

SPECIFICATIONS

SPEAKER SECTION

Three-way vented box (B6) system with dynamic drivers.

		Min	Typ	Max
Lower cutoff frequency	-3 dB, Hz	36	38	40
Upper cutoff frequency	-3 dB, kHz	17	20	
Passband response tolerance, free field	\pm dB		2	
Maximum continuous acoustic output at 1 m on axis in free field	dB	108		
Harmonic distortion at 98 dB SPL at 1 m on axis	$f \leq 200$ Hz		2	3
	$f > 200$ Hz		0,5	1
Treble radiation loss at 30 degrees off axis	at 10 kHz, dB		3	
	at 15 kHz, dB		3	
Drivers	Bass Mid Treble	300 mm cone 80 mm cone 9×60 mm ribbon		
Enclosure finish		Black		

AMPLIFIER SECTION

Three class AB power amplifiers with an active 3-way crossover filter, mounted together with the mains supply on the cooling plate, which acts also as the amplifier's mechanical frame.

Bass output at 6 ohms load	continuous,	V	30	(150 Watts)
	transients,	V	34	(190 Watts)
Mid output at 8 ohms load	continuous,	V	16	(32 Watts)
	transients,	V	34	(150 Watts)
Treble output at 8 ohms load	continuous,	V	9	(10 Watts)
	transients,	V	34	(150 Watts)
System distortions at nominal output	THD,	%	0,05	0,1
	SMPTE,	%	0,05	0,1
	CCIF-IM,	%	0,05	0,1
	DIM,	%	0,05	0,1

CROSSOVER SECTION

Three parallel band-pass filters with common symmetric input stage and individual output controls. Frequency response determining components on a plug-in daughter PC board.

		Min	Typ	Max
Input impedance, balanced	kohm		10	
Input level for maximum output, continuously variable	dBu	-3		+16
Bass roll-off filter, adjustable in 2 dB steps	at 39 Hz, dB	-4		+0
Subsonic attenuation	at 15 Hz, dB		12	
Ultrasonic attenuation 2nd order	at 30 kHz, dB		3	
Crossover filter acoustic response			24 dB/oct	
Crossover frequencies			380 Hz 3,5 kHz	
Output controls, all channels	dB		+0/-6	

GENERAL

Input connector, female	XLR 3—31			
Self generated noise level, at 1 m on axis	dB (A)		20	
Height	mm		735	
Width	mm		405	
Depth	mm		365	
Weight	net, kg shipping, kg		25 33	
Volume	net, liters gross, liters shipping, cu m		50 86 0,18	
Mains voltage, specifications applicable	VAC		220	
Mains voltage, for normal operation	VAC	198		242
Power consumption,	VA	30		400

Fig. 1.

Sound pressure response in anechoic conditions at 1 m distance. Measured on axis, 30, 45 and 60 degrees off axis. Note: The measuring error of the anechoic chamber is less than $\pm 0,5$ dB down to 60 Hz but the rapid roll-off below 40 Hz is due to the room. The actual system — 3 dB frequency is 38 Hz.

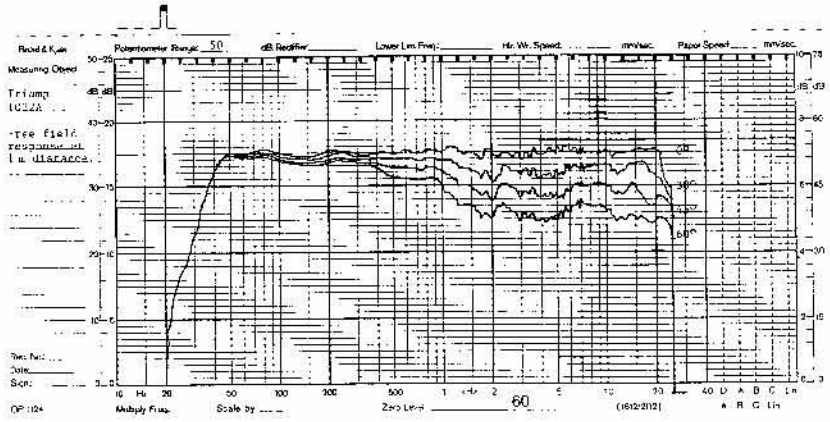


Fig. 2.

Total harmonic distortion measured at 100 dB SPL at 1 m on speaker axis in anechoic conditions.

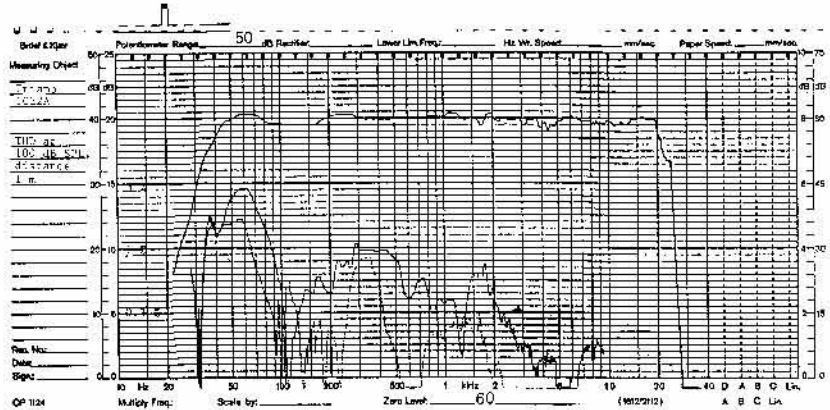


Fig. 3.

Total radiated acoustic power (in all directions) measured in 1/3 octave steps in a reverberation chamber.

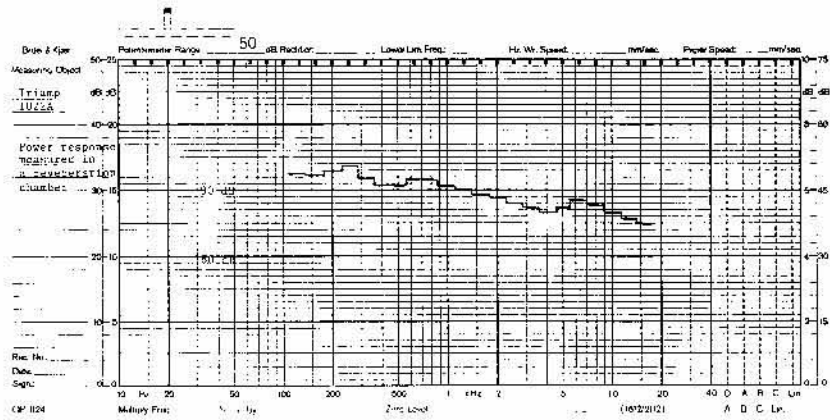
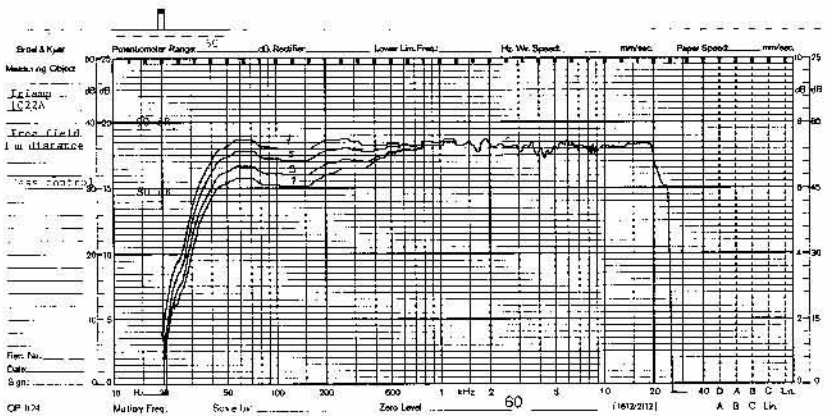


Fig. 4.

Operation range of bass control. Measuring conditions as in fig. 1.



All data subject to change without prior notice.

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