

Technical data February 1981

**TRIAMP 1024A
MONITOR SPEAKER****GENERAL DESCRIPTION**

The TRIAMP 1024A monitor speaker is a three-way speaker system with three integrated power amplifiers and active crossover network. It is intended to large broadcasting, recording and music studios.

Low frequency system utilizes a 385 mm driver in 110 dm³ vented box. Together with the active filter stage the resulting response is of 6th order Butterworth shape and extends to 30 Hz (- 3 dB).

Midrange is reproduced with a 80 mm soft dome unit. Crossover frequencies are 320 Hz and 3 000 Hz.

Treble driver is a 21 mm soft dome loaded with a short horn. Electrical overload protection is incorporated in the treble amplifier.

Crossover network consists of three parallel bandpass filters. Each channel has a level control operating in 2 dB steps in order to change the system overall sound balance in different acoustic conditions. Active symmetric input stage with continuously variable volume control precedes the filter group.

FEATURES

- * basic tool for music monitoring
- * three integrated power amplifiers
- * reliable
- * ± 3 dB from 30 Hz to 20 kHz
- * 1 W acoustic power output
- * 115 dB SPL per pair in a normally damped 70 m³ control room
- * symmetric input, + 9 dBm
- * compact size, 200 liters

Maintenance is made very easy through the straightforward mechanical construction. The whole amplifier deck is fitted to the enclosure with quick release hinges and is thus removable in seconds. The same mounting method is used in fitting the circuit board to the deck plate resulting easy access to both sides of the board. A diagnostic connector is provided for rapid checking of all essential operating voltages.

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Specifications	Min	Typ	Max						
SPEAKER SECTION									
Three-way, vented-box (B6) system, dynamic drivers									
Lower cutoff frequency, -3 dB, Hz	29	30	33						
Upper cutoff frequency, -3 dB, kHz	17	19							
Response tolerance, ± dB		3							
Maximum continuous acoustic output at 1 m on axis, in free field, dB	110	112							
Harmonic distortion at 100 dB SPL at 1 m on axis	f < 200 Hz	2	3						
	f > 200 Hz	0.5	1						
Treble radiation loss at 45° off axis, dB	at 5 kHz	4	5						
	at 12 kHz	6	8						
Drivers	<table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">Bass</td> <td>385 mm, 1500B</td> </tr> <tr> <td>Mid</td> <td>80 mm, SM75-150</td> </tr> <tr> <td>Treble</td> <td>21 mm, D21</td> </tr> </table>			Bass	385 mm, 1500B	Mid	80 mm, SM75-150	Treble	21 mm, D21
Bass	385 mm, 1500B								
Mid	80 mm, SM75-150								
Treble	21 mm, D21								
Enclosure finish	Black								
AMPLIFIER SECTION									
Three class AB power amplifiers with active 3-way crossover filter, mounted with the mains supply on the cooling plate that is also the amplifier mechanical frame.									
Bass output at 8 ohms load, V _{RMS}	continuous	24							
Mid output at 8 ohms load, V _{RMS}	continuous	24							
Treble output at 8 ohms load, V _{RMS}	continuous	11							
	for 100 ms		22						
Slewing rate, V/μs	Bass	5	10						
	Mid	20	30						
	Treble	40	60						
System distortions at nominal output, %	SMPTE-1M	0,1	0,3						
	CCIF-1M	0,15	0,3						
	DIM	0,2	0,3						
	THD	0,15	0,3						

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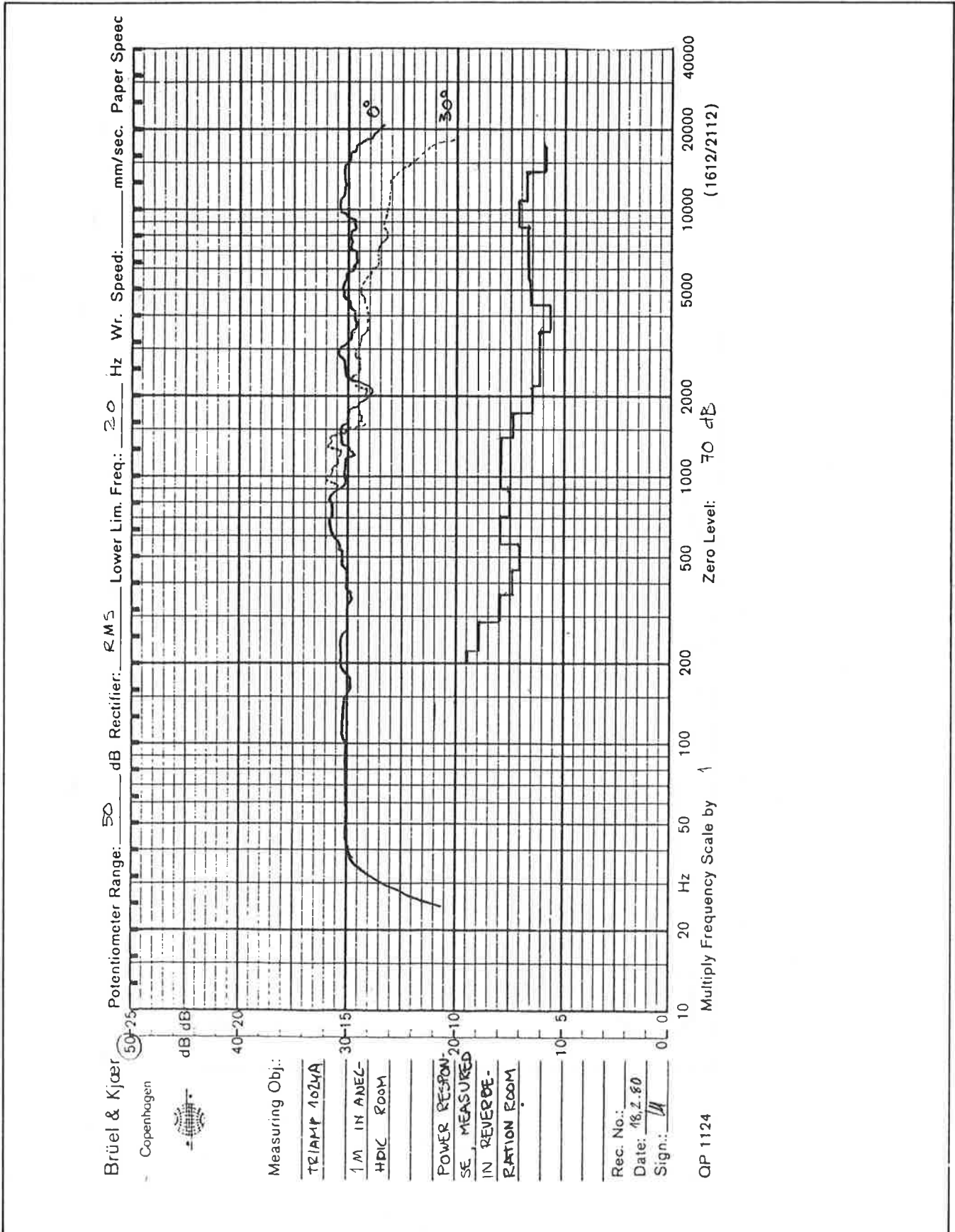
Specifications		Min	Typ	Max
Open-loop gain, dB	Bass		56	
	Mid		53	
	Treble		55	
Open-loop bandwidth, kHz	Bass	20	40	
	Mid	60	80	
	Treble	100	110	
Negative feedback, dB	Bass		26	
	Mid		25	
	Treble		22	
CROSSOVER SECTION				
<p>Three parallel bandpass filters with common symmetric input stage and individual output attenuators. Frequency response determining components on a plug-in daughter board</p>				
Input impedance, kohm			10	
Input level, dBm	for maximum output		10	
Bass high-pass	2nd order with adjustable damping providing system responses of 0 dB, -2 dB, -4 dB and -6 dB at 35 Hz			
Subsonic attenuation, dB at 15 Hz			12	
Bass Low-pass, Hz	3rd order Bessel		320	
Mid High-pass, Hz	3rd order Bessel		320	
Mid Low-pass, kHz	3rd order Bessel		3	
Treble High-pass, kHz	3rd order Bessel		3	
Treble Low-pass, kHz	2nd order Butterworth		40	
Input controls	Volume, continuously variable .			
Output controls	+ 6 dB in 2 dB steps in each channel plus 4-position bass response switch			

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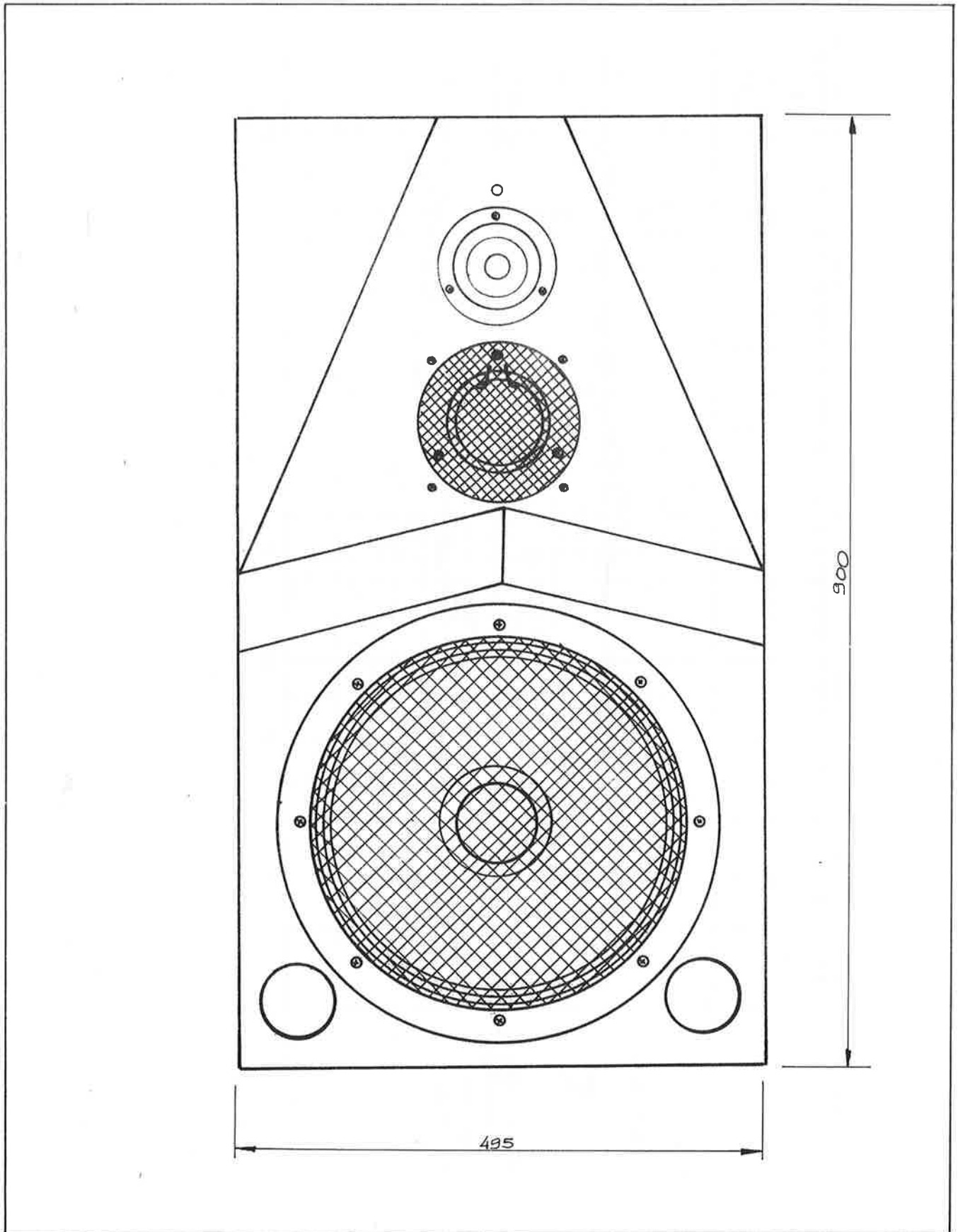
Specifications		Min	Typ	Max
GENERAL				
Input connector	XLR 3-32			
Self generated noise level, at 1 m on axis, dB(A)			15	
Operating temperature, °C		0		45
Specifications applicable, °C		15		30
Relative humidity, %		20		85
The amplifier system has passed the following tests				
Dry heat, stock	IEC 68-2, Bb			
Dry heat, operation	IEC 68-2-2, Bb			
Shock	IEC 68-2-29, Eb			
Vibration	IEC 68-2-6, Fc			
Damp Heat, cyclic	IEC 68-2-30, Db			
Cold, operation	IEC 68-2-1, Ab			
Cold, stock	IEC 68-2-1, Ab			
Temperature changes	IEC 68-2-14, Nb			
Height, mm		900		902
Width, mm		495		497
Depth, mm		460		462
Weight, kg	net shipping		60 65	
Mains voltage, VAC	specifications applicable operation		220	242
Power consumption, VA		30		300

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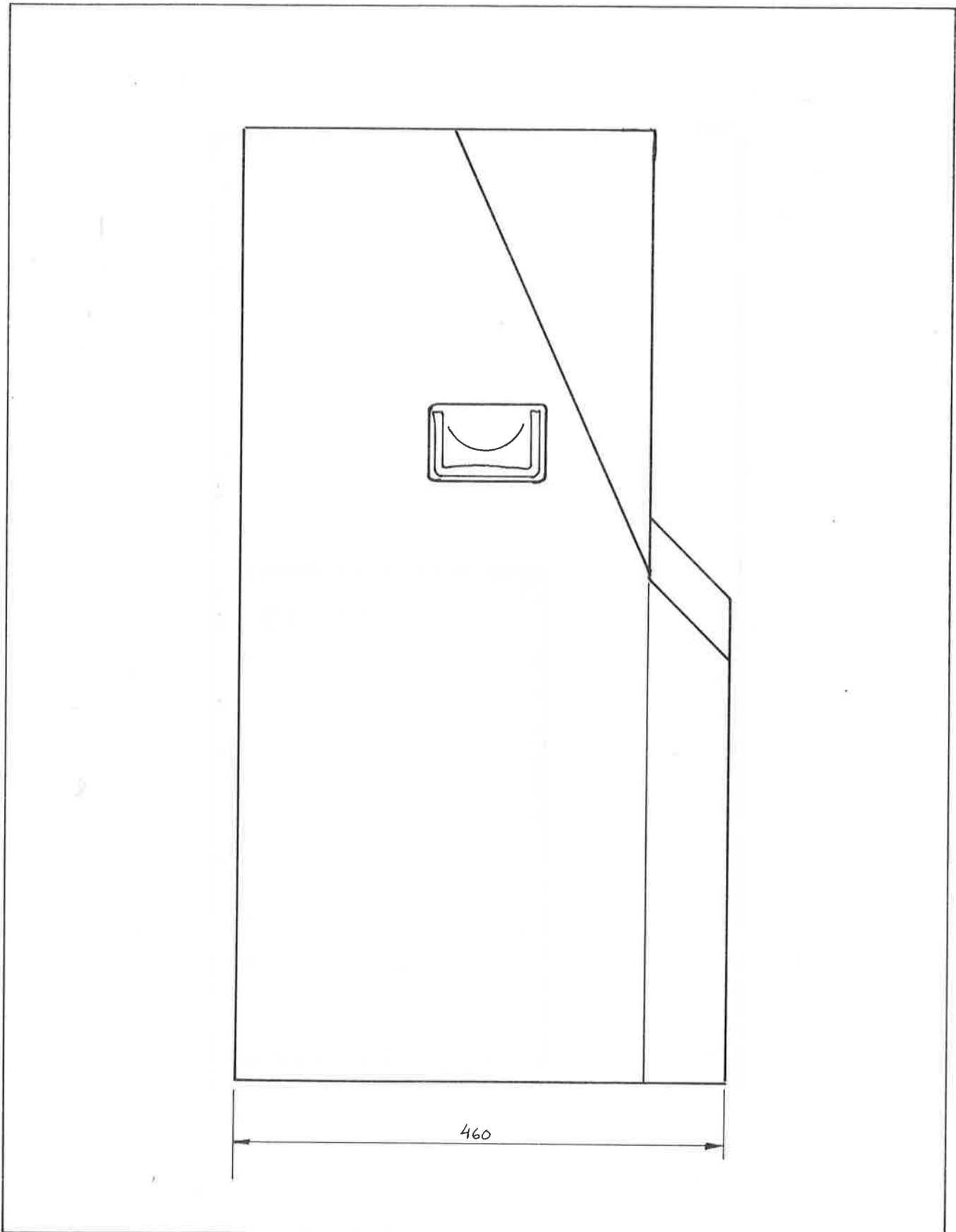
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