



V-27 NEO



V-28 NEO

StuDiomaster Professional Speakers Guideline

Have you ever blown a loudspeaker? Then you probably don't want to do it again. Here's how not to shred your cones.....


- There are two ways in which a moving coil drive unit may be damaged. One is to drive it at too high a level for too long. The coil will get hotter and hotter and eventually will melt at one point, breaking the circuit ('thermal damage').
- The drive unit will entirely cease to function. The other is to 'shock' the drive unit with a loud impulse. This can happen if a microphone is dropped, or placed too close to a theatrical pyrotechnic effect. The impulse won't contain enough energy to melt the coil, but it may break apart the turns of the coil, or shift it from its central position with respect to the magnet ('mechanical damage'). The drive unit will still function, but the coil will scrape against the magnet producing a very harsh distorted sound.
- Many drive units can be repaired, but of course damage is best avoided in the first place. The trick is to listen to the loudspeaker. It will tell you when it is under stress if you listen carefully enough.
- To get the best performance from a loudspeaker, the amplifier should be rated higher in terms of watts. It wouldn't be unreasonable to connect a 500 W amplifier to a 350 W (V-27 NEO), and 700 W amplifier to a 500 W (V-28 NEO) speaker, and it won't blow the drive units unless you push the level too high.
- It is up to the sound engineer to control the level. Suppose, on the other hand, that a 250 W amplifier was connected to a 350 W (V-27 NEO), and a 300 W amplifier was connected to a 500 W (V-28 NEO) loudspeaker. The sound engineer might push the level so high that the amplifier started to clip.

Clipping produces high levels of high frequency distortion & will easily damage the speaker (especially the HF diaphragms).


Technical Specifications:

Model		V-27 NEO	V-28 NEO	
Nominal diameter		300/12	300/12	mm/inch
Rated impedance		8	8	Ω
Peak power		350	500	watts
RMS power		700	1000	watts
Sensitivity (SPL1w@1m)		98	98.5	dB
Frequency Response		59~3500	60~3500	Hz
Minimum impedance		5.8	5.4	Ω
Voice coil diameter		75/3	86/3.4	mm/inch
Voice coil material		PIALW	PIALW	-
Voice coil winding depth		16.5	16.5	mm
Kind of layer, Former material		Inside / Outside 1 Layer	Inside / Outside 1 Layer	Glass fibre
Magnet size		72 x 15 x 10 NEO	4 x 25 x 10 NEO	mm
Magnet type		Neodymium	Neodymium	-
Basket		Cast Aluminium	Cast Aluminium	
Thiele-Small parameters				
Resonance frequency		59	60	
DC resistance	Fs	5.8	5.4	Hz
Mechanical Q factor	Re	4.5	9.2	Ω
Electrical Q factor	Qms	0.46	0.31	-
BL factor	Qes	15	16.3	-
Effective moving mass	BL	54	41	-
Equivalent cas air load	Mms	52	67	gram
Effective piston area	Vas	53	53	liters
Max.linear excursion	Sd	± 3	± 3	m2 (sqm)
Mounting & Shipping information				
Overall diameter		315/12.4	315/12.4	mm/inch
Bolt circle diameter		295/11.6	295/11.6	mm/inch
Bolt hole diameter		277/10.9	277/10.9	mm/inch
Front mount baffle cut-out		315/12.4	315/12.4	mm/inch
Rear mount baffle cut-out		295/11.6	295/11.6	mm/inch
Depth		126/4.9	134/5.3	mm/inch
Shipping box (single carton box)		345 x 345 x 180	365 x 365 x 210	mm
Net weight		3.7	4.7	Kg

Disclaimer: Specifications are subject to change without notice. Unauthorized reproduction of this manual is prohibited.

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