

Stu**di**omaster[®]

PROFESSIONAL

TITAN SERIES

Professional Transducers



THF 0208



TMB 1535



TMB 1555



TWF 1580



TWF 1811



TWF 1815

Stu**di**omaster 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 Loudspeakers.**

- 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 200 W amplifier to a 100 W 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, a 100 W amplifier was connected to a 200 W loudspeaker. The sound engineer might push the level so high that the amplifier will start clipping. Clipping produces high levels of high frequency distortion & will easily damage the speaker (especially the HF diaphragms).

Technical Specifications:

Model No.	TMB 1535	TMB 1555	TWF 1580	TWF 1811	TWF 1815
General specification					
Nominal diameter (mm/inch)	380/15	380/15	380/15	460/18	460/18
Rated impedance (Ω)	8	8	8	8	8
RMS Power (Watts)	350	550	800	1100	1500
Peak Power (Watts)	700	1100	1600	2200	3000
Sensitivity (SPL1w@1m) (dB)	98	97.6	98.2	98	97.8
Frequency range (Hz)	41-4000	49-3000	45-3000	30-2000	30-2000
Voice coil diameter (mm/inch)	76.5/3	100/4	100/4	127.6/5	127.6/5
Voice coil material	CCAW	CCAW	CCAW	Copper	Copper
Kind of layer	inside /outside	inside /outside	inside /outside	inside /outside	inside /outside
Basket	Al. Die-Cast	Al. Die-Cast	Al. Die-Cast	Al. Die-Cast	Al. Die-Cast
Thiele-Small parameters					
Resonance frequency (Fs) (Hz)	41	49	45	30	30.4
DC resistance (Re)	5.6	5.5	5.5	5.5	5.5
Mechanical Q factor (Qms)	5.124	11.139	10.695	17.028	18.03
Electrical factor (Qes)	0.393	0.529	0.412	0.247	0.26
BL factor (BL) (T.M)	14.154	17.413	19.348	27.195	26.99
Effective moving mass (Mms) (Gr)	54.693	99.642	94.642	178.164	178.2
Equivalent cas air load (Vas) (Liters)	229	144.86	166.562	340.254	330.85
Effective piston area (Sd) (M2) (Sqm)	76.454	96.211	96.211	123.163	123.16
Magnet size (mm)	190*90*20	200*110*25	220*110*25	275*150*25.4	275*150*25.4
Magnet material	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Magnet Weight (Kg)	2.2	2.683	3.49	5.2	5.2
Mounting information					
Overall diameter (mm/inch)	387/15	387/15	387/15	463/18	463/18
Bolt circle diameter (mm)	372	372	372	442	442
Bolt hole diameter (mm/inch)	8-6.5mm x 11.5mm	8-6.5mm x 11.5mm	8-6.5mm x 11.5mm	8-8mm x 8mm	8-8mm x 8mm
Shipping Information					
Net weight (Kg)	7.5	10.5	12	20	20

Model No.	THF 0208	Mechanical Q factor (Qms)	6.9799
General specification		Electrical factor (Qes)	3.7894
Nominal diameter (mm/inch)	50.8/2	Flux Density (T)	1.75T
Rated impedance (Ω)	8	Magnet material	Ferrite
RMS Power (Watts)	80	Magnetics (Magnet Weight)	33.4
Peak Power (Watts)	160	Mounting information	
Sensitivity (SPL 1w@ 1m) (dB)	106	Overall Diameter (mm/inch)	134mm
Frequency Range (Hz)	1000-20000	Overall Height (mm/inch)	79.5mm
Voice coil diameter (mm/inch)	51.6/2	Mounting (mm/inch)	screw on 1 ^{3/8"} or bolt-on
Voice coil Material	titanium	Shipping Information	
Voice coil Former Design	round & ribbon aluminium wire	Net weight (kg)	2.83kg
Kind of Layer	outside		
Thiele/ small parameter			
Resonance frequency (Fs) (Hz)	1K \pm 15%		
DC. Resistance (Re) (Ω)	7.0 Ω \pm 20%		

* Design and specification are subject to change without notice.

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