

standard panel

#	1	2	3	4	5	6	7	8
post	0	761	838	1165	2072	2548	2551	2712
builder	BurntCoil (french panel)	BurntCoil (London panel)	Veleric	BurntCoil (Tall Blond)	Davelang	Anie (Tallboy)	Jarrothhaas (Tonewood DML Speaker)	Aagas
link		#761	#838	#1165	#2072	2548	#2551	#2712
membran (material, thickness)	4mm poplar plywood	610x1200mm 3mm thick Beech Ply 'Laserboard'	Revolution Ply underlayment plywood	Scandinavian Birch plywood 1160x300mm	plexiglass / balsa (trebles)	plywood		aluminium honeycomb
dimensions (WxH)			16" x 23" (406 x 584mm) x .2" (5mm)		plexi : 24"x48" (609x1218mm) 1/4"(6.35mm), balsa : 6"x32" (152x813mm) 1/8"(3.2mm)			70 3/4" high x 20 1/4" wide (1,80 x 0,51m) 3/8" (9,5mm)
coating			Minwax "natural" stain and 3 light coats of Formby's Tung Oil Finish on the face					yes
shape detail			square angle					square angle
spline			yes with absorber between exciters and spline					no
exciter			two Dayton Audio DAEX25FHE-4		Dayton Audio Thruster 32mm exciter 40w 4 ohm			
exciter gluing								
exciter position			The exciters are both at about 0.47 along the long side and at 0.3 and 0.44 across the short side.					center
bandwith			see post 848 (close range measurement)					
mounting method		horizontal, 160mm from rear wall	frame with EPDM foam (12" and 9" long)					3 points (2 at the botton, one on the top)
equalization								no
bass protection								no
bass extention	IB sub	IB sub			Sub			
Filter			yes					no
HP filter	200Hz	200Hz	160Hz		100Hz			
LP filter								
H m			0,58		1,22			1,80
W m			0,41		0,61			0,51
A m ²			0,24		0,74			0,92
H/W			1,44		2,00			3,49

standard panel_2

#	1	2	3	4	5	6	7
post	4116	4120	4204	4270	4270	4309	4328
builder	Homeswinghome	Negativeghostrider	Aagas	Veleric	Veleric	spedge	Toddincabo
link	#4116	#4120	#4204	#4270	#4270	#4309	#4328
membran (material, thickness)	3mm poplar plywood	3mm Birch Ply	plexiglass	Homemade balsa plywood	balsa core 1/16" (1.6mm) + CF (spread tow twill weave, 0.23 mm)	5mm XPS (35kg/m³) + epoxy	Hybrid dense EPS + T cross plywood (7x7")
dimensions (WxH)	420 x 1200mm	305 x 762mm (12x30 inch)	18" x 24" (457 x 609mm) x 1/16" (1.6mm)	16" x 24" (406 x 609mm) x 3 layers 1/16" (1.6mm)	16" x 23" (406 x 584mm) x 1/16" (1.6mm)		
coating	highly diluted varnish	3 thin coats of aerosol water-based poly				epoxy	
shape detail	rounded corner R80mm	square angle					trapezoidal rounded angles
spline	yes	no (frog legs)					cross
exciter	Dayton Audio DAEX25FHE-4	Dayton DAEX25Q-4	single Thrusters				Dayton Audio DAEX25FHE-4
exciter gluing	original double side tape						
exciter position	offcenter H0.,39, V 0,36 (inspired by the IEC baffle)	basic 3/5, 2/5 node					
bandwith	about 150Hz to 20k	about 90Hz to 16kHz with sub					
mounting method	frame with full 17x17mm foam suspension	surface mounted with foam tape to poplar frames					1" of the 3/4" thick weatherproofing foam at the cardinal points of the cross
equalization	no	a little bit of parametric eq to smooth out the peaks and dips					
bass protection	no						
bass extention	no	2.1 configuration with a 10" velodyne sub	OB sub				
Filter	no	Dayton DSPB-K					
HP filter		3rd order 110Hz	about 200Hz				
LP filter		?					
weigth						85g raw, 122g coated	
H m	1,2	0,762	0,61	0,61	0,58		
W m	0,42	0,305	0,46	0,4	0,4		
A m²	0,50	0,23	0,28	0,24	0,23		
H/W	2,86	2,50	1,33	1,53	1,45		

canvas type

#	1	2	3
post	4050	4071	4177
Builder	Jaxboy	Spedge	Homeswinghome
post	#4050	#4071	#4177
membran (material, thickness)	canvas	canvas	canvas
dimensions (WxH)	305 x 406 (12x16inch)	30cm x 42cm	33cm x 41cm
coating	both sides with acrylic paint instead of pva/water, thinned to 30-50:70-50		raw
mounting pad	4x6 rounded piece of paneling	plywood 2mm x15cmx10cm (16g)	balsa 1mm 1 layer 15cmx10cm rounded + 1layer 10x10cm @90° (<2g)
spline	yes (soft mounting) melamine sponge to fill the gap		no
exciter	Dayton Audio DAEX25FHE-4		Dayton Audio DAEX25FHE-4
exciter gluing	original double side tape		epoxy
exciter position	center		center
bandwith			40/20k
mounting method	Hang the panels about 3 feet apart and a foot from a window, with doubled drapes		put on a low piece of furniture
equalization			
bass protection	100µF		
bass extention			
Filter			
HP filter			
LP filter			
H m	0,41	0,42	0,41
W m	0,30	0,3	0,33
A m²	0,12	0,13	0,14
H/W	1,33	1,40	1,24

thread history

date	post	page	topic	author	comment
06/04/15	1	1	1st post	xrk971	
26/05/16	250	10			
12/08/19	410	21	how to maximize performance	Burntcoil	DML's sound like nothing else for the money with outstanding VFM and WAF.
17/09/19	500	25			
07/11/19	750	38			
09/11/19	761	40	London panel	Burntcoil	
17/11/19	838	42	Veleric's plywood panel	Veleric	I'm really encouraged. They sound better than I expected for a first attempt.
05/12/19	877	44	Canvas panel	OffGridKindaGuy	
19/12/19	969	49	ABH Acoustic Black Hole	Burntcoil	
12/01/20	993	50	London panel pictures	Burntcoil	
15/01/20	1000	50			
22/02/20	1165	59	Tall blondes	Burntcoil	
25/02/20	1121	62	Advice for recording	xrk971	Zoom HF1n : Something like this sounds amazingly like real life "you are there" recording.
26/02/20	1224	62	Suspension method comparison	Veleric	More methods 1230
28/02/20	1242	63	Carved XPS DML with a closed back	JMatt	They sound very good paired with a small subwoofer but they did lose a tiny bit of magic when I closed up the back. detail of the back 1244
01/03/20	1250	63			
07/03/20	1325	67	Panel dimensions comparison	Veleric	
08/03/20	1331	67	XPS with PVA	Veleric	Dual exciter One Dayton Ultra (better LF), one TEAX32C30-4/B (better HF).
08/03/20	1334	67	XPS panel	Bdjohns	Haapy with XPS (Formular 250 1p) but not enough bass (target = 100hZ), too high distorsion
27/03/20	1458	73	DML Patents	Burntcoil	
29/03/20	1500	75			
07/04/20	1750	88			
25/05/20	2000	100			
15/06/20	2072	104	Plexiglass panel with balsa extension	Davelang	I am very pleased with the sound, improved high frequency extension and midrange clarity.
20/08/20	2250	113			
29/08/20	2284	115	Advice : don't use DML below room transition frequency	bradleyprw	
30/08/20	2289	115	Link to MA recording	Geosand	MA recording
04/09/20	2299	115	Geosand's EPS panel	Geosand	
05/09/20	2305	116	Spedge's recording technique	Spedge	I'm just using HI-Q app for recording stereo on my old galaxy note 4. Converting from m4a to mp4 on VLC,that's it.
05/09/20	2306	116	Advice : don't go down to the lower resonance	Spedge	
10/11/20	2500	125			
01/12/20	2548	128	Tallboy (with pictures)	Anie	
28/02/21	2712	136	Alu honeycomb panel	Aagas	I don't have any idea what you've done, but this is f_____ing amazing
03/03/21	2750	138			
25/04/21	3000	150			
29/04/21	3024	152	Spedge's canvas picture	Spedge	
19/06/21	3251	163	Jaxboy's canvas panel picture	Jaxboy	
19/06/21	3252	163	Alu + foam receipe	Aagas	
28/07/21	3410	171	EPS panels records	Spedge	1cm x 23inchx 14inch low density eps panel with some 50x50 pva coating + dome (see #3385)
07/08/21	3431	171	Spedge's opinion about material	Spedge	
07/08/21	3433	172	Spedge's exciter	Spedge	TEAX25C10-8/HS - Tectonic . Picture #4419
14/08/21	3500	175			
30/08/21	3619	181	1st reflections and ABH (acoustic black hole)	Pway	
09/09/21	3729	187	Epoxy coating, sound of panels	Spedge	
10/09/21	3730	187	4 material tests	Lordtarquin	canvas, medium grade EPS (21kg/m3), 3mm poplar ply, high grade EPS (31kg/m3)
10/09/21	3732	187	9k spike and 2.5k spike	Spedge	
11/09/21	3750	188			
08/11/21	4000	200			
16/12/21	4116	206	Homeswinghome's ply panel	Homeswinghome	
17/12/21	4120	206	NegativeGhostrider's ply panel	NegativeGhostrider	
30/12/21	4177	209	Canvas panel, frequency response	Homeswinghome	
01/01/22	4183	210	Picture of ceiling DML	Cheapvega	Difficulties with the close ceiling (4 to 6 inches). FR in post #4147, pic #3234
01/01/22	4185	210	DML material characteristics measurements	Homeswinghome	Bending stiffness, arial mass : cantilever beam, 3 points method (Veleric, see #4180)
02/01/22	4204	211	Plexiglass panel	Aagas	Not nearly as majestic and immersive as my large aluminum panels, but very satisfying.
05/01/22	4250	213			
11/01/22	4328	217	Hybrid EPS/plywood panel	Toddincabo	BOOM!...that was it. see previous design #3076 (canvas + wood) and #3207 (dense EPS + back frame/spine)
24/01/22	4414	221	Spedge's spine for canvas	Spedge	picture of spine
30/01/22	4453	223	Carbon Fiber on Balsa core technique	Veleric	all about making a CF/balsa membrane
30/01/22	4454	223	CF/balsa DML characteristics	Veleric	frequency response see 4477 and plywood 4483
31/01/22	4484	225	Mass placement technique	Spedge	Against some low feq holes ?
01/02/22	4494	225	A blob of blue tack against HF peak	Spedge	More technique (foam, hole) 4502
	4500				

post graph

A Study of DML's as a Full Range Speaker

