

## Multi-exciter DML (m in series by n in parallel exciters)

R<sub>exc</sub>

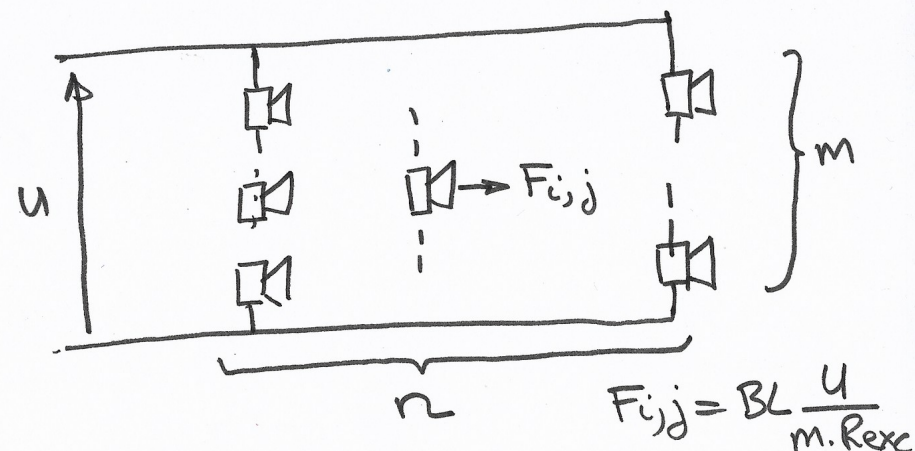
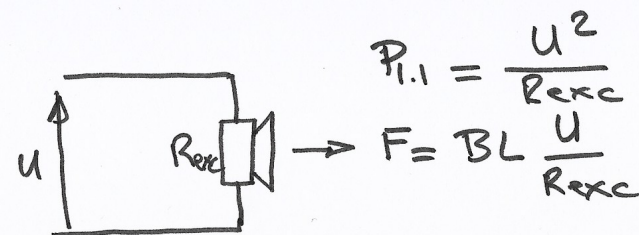
4 Ohms

m	n	m.n	R <sub>m,n</sub> ohm	SPLgain dB	P <sub>m,n</sub> /P <sub>1,1</sub>
1	5	5	0,8	14,0	5,0
1	4	4	1,0	12,0	4,0
1	3	3	1,3	9,5	3,0
2	5	10	1,6	14,0	2,5
1	2	2	2,0	6,0	2,0
2	4	8	2,0	12,0	2,0
3	5	15	2,4	14,0	1,7
2	3	6	2,7	9,5	1,5
3	4	12	3,0	12,0	1,3
4	5	20	3,2	14,0	1,3
1	1	1	4,0	0,0	1,0
2	2	4	4,0	6,0	1,0
3	3	9	4,0	9,5	1,0
4	4	16	4,0	12,0	1,0
5	5	25	4,0	14,0	1,0
5	4	20	5,0	12,0	0,8
4	3	12	5,3	9,5	0,8
3	2	6	6,0	6,0	0,7
5	3	15	6,7	9,5	0,6
2	1	2	8,0	0,0	0,5
4	2	8	8,0	6,0	0,5
5	2	10	10,0	6,0	0,4
3	1	3	12,0	0,0	0,3
4	1	4	16,0	0,0	0,3
5	1	5	20,0	0,0	0,2

ref = 1 exciter

Extract of the table above sorted by m.n (number of exciters = cost)

m	n	m.n	R <sub>m,n</sub> ohm	SPLgain dB	P <sub>m,n</sub> /P <sub>1,1</sub>
2	2	4	4,0	6,0	1,0
2	3	6	2,7	9,5	1,5
3	3	9	4,0	9,5	1,0
3	4	12	3,0	12,0	1,3
4	4	16	4,0	12,0	1,0
4	5	20	3,2	14,0	1,3
5	5	25	4,0	14,0	1,0



$$R_{eq} = \frac{m}{n} R_{exc}$$

$$P_{m,n} = \frac{U^2}{R_{eq}}$$

$$\frac{P_{m,n}}{P_{1,1}} = \frac{R_{exc}}{R_{eq}}$$

$$\boxed{\frac{P_{m,n}}{P_{1,1}} = \frac{n}{m}}$$

$$SPL_{gain} = 20 \log_{10} \left( \frac{\sum F_{i,j}}{F_{1,1}} \right)$$

$$\boxed{SPL_{gain} = 20 \log_{10} (n)}$$