



Electronic
components
and materials

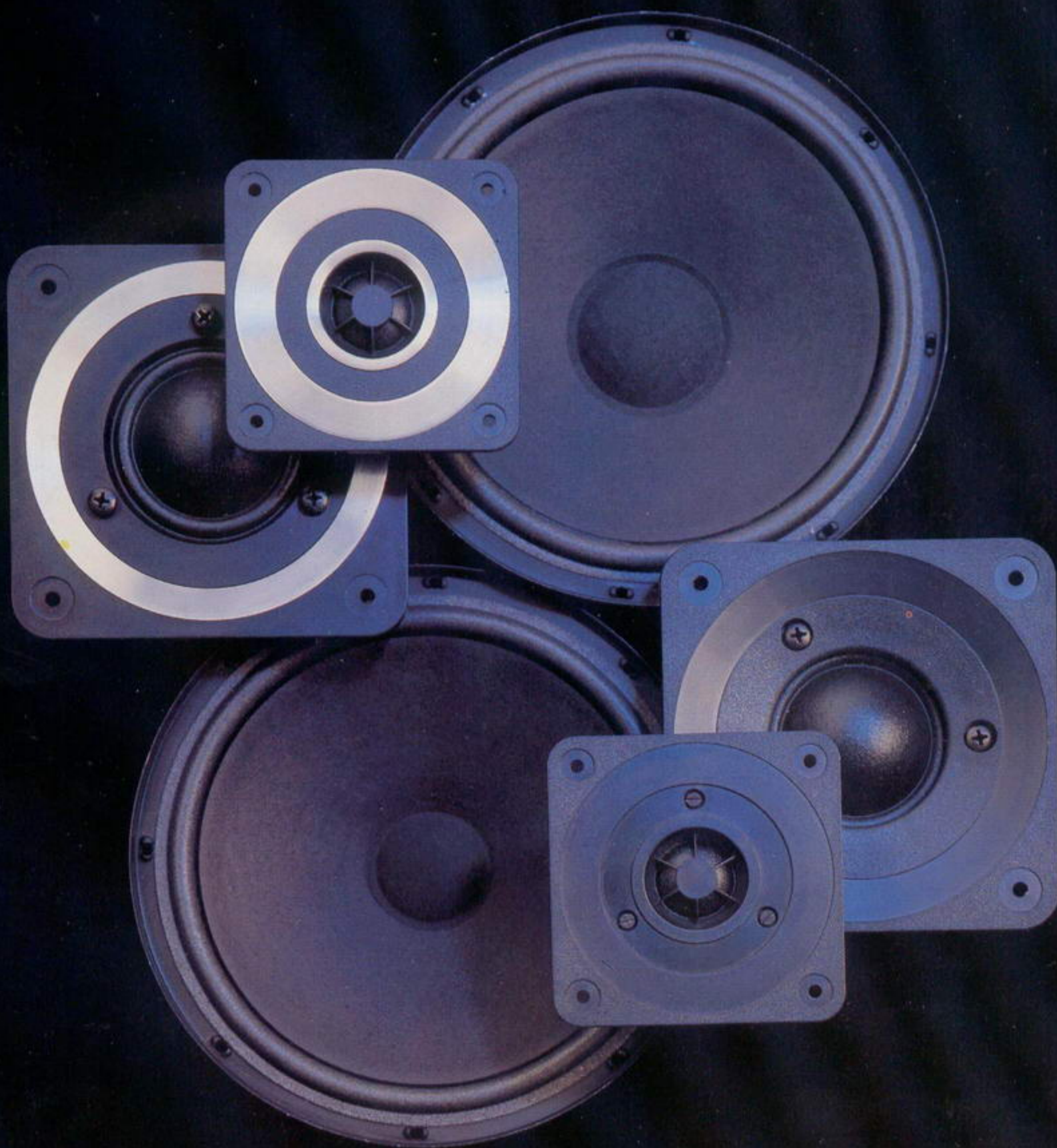
PHILIPS



**LOUD-
SPEAKERS
1980**

The status code letters in this catalogue indicate the status of the products at 1 February 1980.

- N** = **New design type.** Recommended for new equipment design; production quantities available *after date of publication*.
- D** = **Design type.** Recommended for equipment design; production quantities available *at date of publication*.
- C** = **Current type.** No longer recommended for equipment design; available for equipment production and for use in existing equipment.
- M** = **Maintenance type.** No longer recommended for equipment production; available for maintenance of existing equipment.
- O** = **Obsolete type.** No longer available.





Command performance!

from the faintest whisper to a voice like thunder

To command the highest performance from your audio system choose from the more than 250 loudspeakers in this catalogue. For your convenience they are presented as three ranges:

high power, for high fidelity systems

Top line woofers, squawkers, and tweeters for the most demanding systems and with power handling capacities from 10 to 100 W. A list of recommended combinations with enclosure volumes and the requisite cross-over networks is included. Of special note are the AD80651 and AD80652 8'' woofers with their complementary AD8001 passive radiator for compact high performance systems.

For juke boxes, musical instruments, public address and other systems requiring robust construction and high power handling capacity at a reasonable price there is a series of full-range loudspeakers. They, too, comply with DIN 45 500.

Types available from stock
are shown in colour

medium power, for radio and television sets

With power handling capacities of from 3 to 10 W these loudspeakers are ideal for mains-fed radio and television sets. Both oval and round versions are available. Apart from our well known steel alloy and screened ceramic magnet systems for television we now offer loudspeakers with an additional compensating magnet that effectively nullifies stray fields remaining after screening.

low power, for portables and intercoms

These low power loudspeakers have a power handling capacity of up to 3 W. The range includes square and round types with diameters up to 4''.

To simplify selection, this catalogue contains only brief data. Full details can be found in our Data Handbook CM3b. Information on loudspeaker design and measurement, as well as on the design and construction of reproduction systems appears in a number of our publications. Full information from the appropriate address on the rear cover.

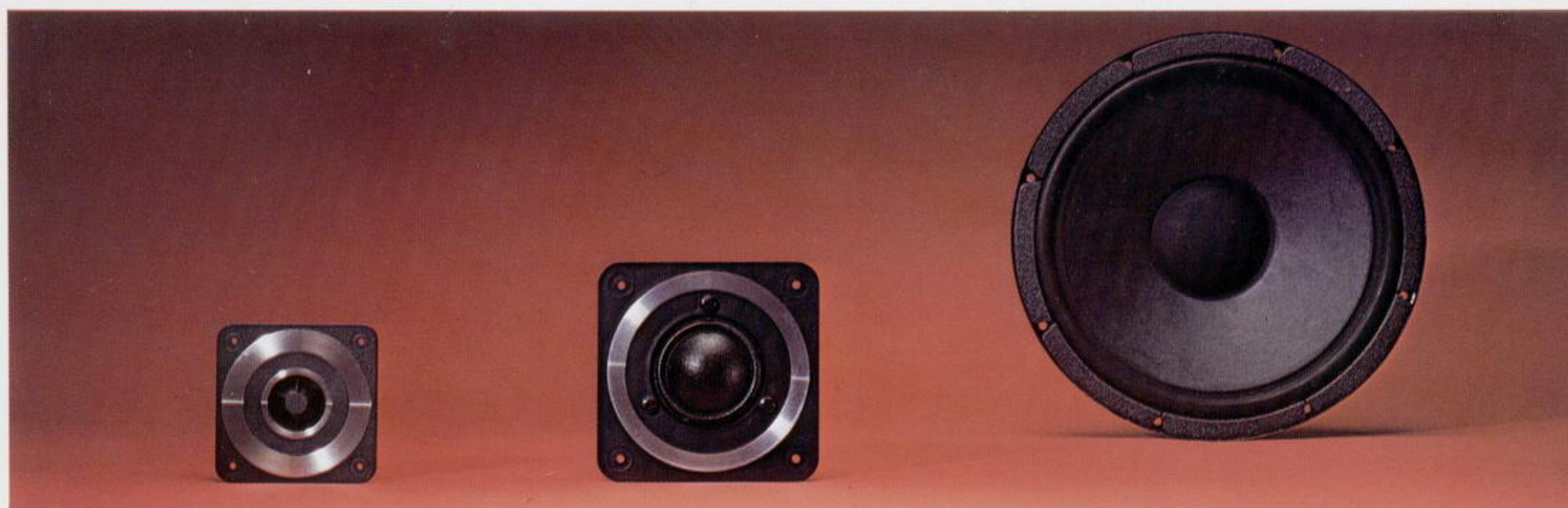
high power—high-fidelity

to DIN 45 500

System powers tabulated below are for complete two or three-way systems making use of the listed loudspeakers; corresponding cross-over networks and recommended enclosure volumes are listed on pages 4 and 5.



type	status	system power	resonance frequency	rated frequency range	overall dim.	baffle hole dia.	total depth	surround /dome material	magnet system
		W	Hz	kHz	mm	mm	mm		
Tweeter 3/4" (dome)									
square — non exposed									
AD 00400/T4; T8	N	70	1500	3 to 22	83 □	73	26	textile	ceramic
AD 00800/T4; T8	N	70	1500	3 to 22	83 □	73	23	textile	ceramic
AD 00900/T4; T8	N	70	1900	4 to 22	58 □	55	28	textile	screened ceramic
1" dome									
round — non exposed									
AD 0140/T4; T8; T15	D	20/40	1200	2 to 22	94 ∅	75	25	polycarb.	ceramic
AD 0141/T4; T8; T15	D	20/50	1450	2 to 22	94 ∅	75	25	textile	ceramic
AD 0162/T4; T8; T15	D	20/50	1000	2 to 22	94 ∅	75	32	polycarb.	ceramic
AD 0163/T4; T8; T15	D	20/50	1300	2 to 22	94 ∅	75	32	textile	ceramic
square — non exposed									
AD 01420/T4; T8; T15	N	50/70	950	1,5 to 22	96 □	85	36	paper	ceramic with pot
AD 01430/T4; T8; T15	N	50/70	1100	1,8 to 22	96 □	85	36	textile	ceramic with pot
AD 0146/T4; T8	N	20/50	1450	2 to 22	70/80 □	63	17	textile	ceramic
AD 01630/T4; T8; T15	N	20/50	1300	2 to 22	96 □	85	33	textile	ceramic
AD 01632/T4; T8; T15	N	50/70	1300	2 to 22	96 □	85	33	paper	ceramic
square — non exposed - with aluminium trim rings									
AD 01411/T4; T8	N	20/50	1450	2 to 22	96 □	85	25	textile	ceramic
AD 01421/T4; T8	N	50/70	950	1,5 to 22	96 □	85	36	paper	ceramic with pot
AD 01431/T4; T8	N	50/70	1100	1,8 to 22	96 □	85	36	textile	ceramic with pot
AD 01631/T4; T8; T15	N	20/50	1300	2 to 22	96 □	85	33	textile	ceramic
AD 01633/T4; T8; T15	N	50/70	1300	2 to 22	96 □	85	33	paper	ceramic
square — semi exposed									
AD 01610/T4; T8; T15	N	20/50	1250	2 to 22	96 □	85	32	textile	ceramic
square — exposed									
AD 01600/T4; T8; T15	N	20/50	1250	2 to 22	96 □	85	28	textile	ceramic
square — exposed - with aluminium trim rings									
AD 01605/T4; T8; T15	N	20/50	1250	2 to 22	96 □	85	28	textile	ceramic
2" (cone)									
round									
AD 2096/T4; T8; T15	N	10	1300	3 to 17	50 ∅	43	27	paper	steel alloy
square									
AD 2296/T4; T8; T15	N	10	1300	3 to 17	50 □	43	27	paper	steel alloy
2 1/4" (cone)									
square									
AD 2273/T4; T8	N	10	1000	1,5 to 15	58 □	54	27	paper	ceramic
AD 2274/T4; T8	N	10	1000	1,5 to 15	58 □	54	38	paper	screened ceramic



type	status	system power	resonance frequency	rated frequency range	overall dia.	baffle hole dia.	total depth	surround /dome material	magnet system
		W	Hz	kHz	mm	mm	mm		
Squawkers 2" (dome)									
AD 0210/Sq4; Sq8	D	60	350	0,5 to 5	134	112	108	paper	ceramic
AD 0211/Sq4; Sq8	D	60	350	0,5 to 5	134	112	108	textile	ceramic
AD 02110/Sq4; Sq8	N	80	340	0,5 to 5	134	112	103	textile	ceramic
AD 02150/Sq4; Sq8	N	80	340	0,5 to 5	134	122	98	textile	ceramic
AD 02160/Sq4; Sq8	N	80	320	0,5 to 10	134	122	85	textile	ceramic
5" (cone)									
AD 5060/Sq4; Sq8	D	40	210	0,4 to 5	129	96	107	textile	ceramic
AD 50600/Sq4; Sq8	N*	60	—	0,4 to 5	115	100	106	textile	ceramic
AD 50601/Sq4; Sq8	N*	80	—	1,5 to 5	115	100	48	textile	ceramic
AD 5061/Sq4; Sq8	D	80	680	1,5 to 5	129	96	50	textile	ceramic
AD 5062/Sq4; Sq8	D	60	220	0,4 to 5	129	96	107	textile	ceramic
AD 50800/Sq4; Sq8	N*	40	—	0,4 to 5	115	100	106	textile	ceramic
AD 50801/Sq4; Sq8	N*	60	—	1,5 to 5	115	100	44	textile	ceramic
Woofers 4"									
AD 4060/W4; W8	N	15/30	60	0,06 to 10	102	95	52	rubber	ceramic
AD 40900/W4; W8	N	8	80	50 to 5000	102	95	54	foam	screened ceramic
AD 40910/W4; W8	N	18	72	50 to 5000	102	95	54	rubber	screened ceramic
5"									
AD 5060/W4; W8	D	10	60	0,05 to 5	129	108	56	rubber	ceramic
7"									
AD 70601/W4; W8	N	30	45	0,04 to 3	166	142	68	rubber	ceramic
AD 70610/W4; W8	N	30	45	0,05 to 4	166	142	68	textile	ceramic
AD 70611/W4; W8	N	30	45	0,05 to 4	166	142	68	textile	ceramic
AD 70650/W4; W8	N	40	45	0,07 to 5	166	142	72	rubber	ceramic
AD 70655/W8	N	50	32	20 to 1500	166	142	88	rubber	ceramic
8"									
AD 80601/W4; W8	N	50	42	0,05 to 4	204	180	86	rubber	ceramic
AD 80602/W4; W8	N	50	42	0,05 to 4	204	180	86	foam	ceramic
AD 80603/W4; W8	N	50	38	0,05 to 2	204	180	86	foam	ceramic
AD 80604/W4; W8	N	50	38	0,05 to 2	204	180	86	rubber	ceramic
AD 80605/W6	N	30	50	40 to 3000	204	180	82	foam	ceramic
AD 80651/W4; W8	N	60	39	0,05 to 4	204	180	88	rubber	ceramic
AD 80652/W4; W8	N	60	39	0,05 to 4	204	180	88	foam	ceramic
AD 80671/W4; W8	N	70	35	0,04 to 3	204	180	88	rubber	ceramic
AD 80672/W4; W8	N	70	35	0,04 to 3	204	180	88	foam	ceramic
10"									
AD 10650/W4; W8	N	30	20	0,04 to 3	261	227	113	foam	ceramic
AD 10100/W4; W8	D	40	25	0,03 to 1	261	227	131	rubber	ceramic
12"									
AD 12600/W4; W8	N	40	28	0,04 to 2	261	227	110	foam	ceramic
AD 12650/W4; W8	N	60	22	0,03 to 2	261	227	115	rubber	ceramic
AD 12200/W4; W8	N	80	23	0,03 to 1,5	311	280	119	rubber	ceramic
AD 12250/W4; W8	N	100	26	0,04 to 2	311	280	121	rubber	ceramic

passive radiators

recommended combinations

Passive radiators

type	status	catalogue no.	effective cone area m ²	total moving mass g	overall dia. mm	baffle hole dia. mm	surround material
AD 8001	N	2422 259 80001	$2,5 \times 10^{-2}$	33,9	204	180	rubber
AD 8002	N	2422 259 80002	$2,5 \times 10^{-2}$	33,9	204	180	foam
AD 1200	N	2422 259 12001	5×10^{-2}	51,6	311	279	rubber

Recommended loudspeaker combinations (4 and 8 Ω)

woofer	squawker	tweeter	cross-over frequency kHz	enclosure volume litres	power handling capacity W
AD 40910/W4(8)	—	AD 2296/T8(15)	4	5, bass reflex	15
AD 70601/W4(8)	—	AD 2296/T4(8)	2,4	9	20
AD 70601/W4(8)	—	AD 0141/T8(15)	1,6	9	25
AD 80652/W4(8)	AD 5060/Sq4(8)	AD 0140/T4(8)	0,7 and 3	25	40
AD 80652/W4(8) with AD 8002	AD 0211/Sq4(8)	AD 01630/T8(15) or AD 01631/T8(15)	0,7 and 2,4	35	50
9710/M8	—	—	—	40, bass reflex	25
AD 12650/W8	AD 5061/Sq8	AD 0141/T8	2,1 and 8	60	60
AD 12200/W8 with AD 1200	AD 0211/Sq4(8)	AD 01605/T4(8)	0,8 and 5	100	100

For more information our book "Building Hi-Fi speaker systems" and Technical notes TN102 to 108 and TN119 to 128 are currently available - more will follow.

cross-over networks

system	type	status	catalogue no.	cross-over frequency kHz	slope low dB/oct	slope middle dB/oct	slope high dB/oct	dimensions mm	overall height mm
2-way	ADF 1500/4 8	D	3104 207 10210 10220	1,5 1,8	6 6	— —	12 12	42,5 x 83	35
2-way	ADF 2000/4 8	D	3104 207 10130 10120	2	6 6	— —	12 12	42,5 x 83	35
2-way	ADF 2400/4 8	D	3104 207 10110 10100	2,4	6 6	— —	6 6	42,5 x 83	35
2-way	ADF 3000/4 8	D	3104 207 10230 10240	3 4	6 6	— —	12 12	42,5 x 83	35
3-way	ADF 600/5000/4 8	D	3104 207 10150 10140	0,6 to 5	6	6	12	60 x 140	36
3-way	ADF 700/2600/4 8	D	3104 207 10250 10260	0,65 to 2,8 0,7 to 2,6	6	12	12	60 x 140	36
3-way	ADF 700/3000/4 8	D	3104 207 10270 10280	0,7 to 3	6	12	12	60 x 140	36

high power - full-range

double cone



9710/M8

type	status	system power	resonance frequency	rated frequency range	overall dia.	baffle hole dia.	total depth	surround material	magnet system
		W	Hz	kHz	mm	mm	mm		
4"									
AD 4060/M4; M8	N	13	95	0,07 to 20	102	94	52	textile	ceramic
5"									
AD 5061/M4; M8	D	15	85	0,07 to 20	129	108	55	textile	ceramic
AD 5062/M4	N	20	85	0,07 to 20	102	94	52	textile	ceramic
7"									
AD 7062/M4; M8	D	30	45	0,04 to 18	166	141	68	rubber	ceramic
AD 7063/M4; M8	D	15	70	0,04 to 18	166	141	69	textile	ceramic
AD 7064/M4; M8	N	15	70	0,04 to 18	166	141	69	textile	ceramic
AD 70620/M4; M8	N	30	45	0,05 to 13	166	142	69	rubber	ceramic
AD 70630/M4; M8	N	15	60	0,06 to 15	166	142	69	textile	ceramic
AD 7065/M4; M8	N	20	70	0,08 to 20	155	142	72	textile	ceramic
8½"									
9710/M8	D	20	50	0,04 to 19	217	195	96	paper	ceramic
10"									
AD 1065/M4; M8; M15	D	10	55	0,06 to 18	261	227	113	paper	ceramic
12"									
AD 1265/M4; M8; M15	D	20	45	0,03 to 18	315	278	134	paper	ceramic
AD 12100/M4; M8; M15	D	25	45	0,03 to 13	315	278	152	paper	ceramic
AD 12100/HP4; HP8	D	50	60	0,04 to 12	315	278	152	textile	ceramic

The 8½ inch type 9710/M8 unit, with a ceramic magnet of 105 mm diameter (mass 400 g), is an extremely sensitive speaker which has, over a number of years, become the most popular type for hi-fi hobbyists. It features an exceptionally smooth response in the range 45 Hz to 19 kHz. Power handling capacity of the 9710/M8 is 20 W in a sealed enclosure up to 30 litres in volume, and up to 10 W in bass-reflex enclosures of over 30 litres.

medium power - full-range



type	status	max. power W	resonance frequency Hz	rated frequency range kHz	overall dia. mm	baffle hole dia. mm	total depth mm	surround material	magnet system
3"									
AD 3080/M4	N	6	155	0,1 to 12	87	77	37	textile	ceramic
AD 3080/X4	N	10	85	0,03 to 15	87	77	37	textile	ceramic
4"									
AD 4481/X4	D	6	140	0,09 to 14	105	96	39	textile	ceramic
AD 4085/X4; X8; X15	D	3	150	0,08 to 14	104	96	36	paper	ceramic
AD 4095/X4; X8; X15; X25	N	3	150	0,08 to 15	105	96	40	paper	steel alloy
AD 4485/X4; X8; X15	N	3	150	0,1 to 13	104	96	36	paper	ceramic
AD 4495/X4; X8; X15; X25	N	3	150	0,08 to 15	105	96	40	paper	steel alloy
5"									
AD 5081/M4; M8; M15; M25	D	6	135	0,07 to 20	120	108	49	paper	ceramic
AD 5081/X4; X8; X15; X25	D	6	140	0,06 to 14	120	108	49	paper	ceramic
7"									
AD 7080/M4; M8; M15	D	6	105	0,08 to 15	166	141	58	paper	ceramic
AD 7080/X4; X8	D	6	115	0,08 to 10	166	141	58	paper	ceramic
AD 7090/M4; M8	D	4	105	0,07 to 18	166	141	63	paper	steel alloy
AD 7090/X4; X8	D	4	115	0,07 to 13	166	141	63	paper	steel alloy
8"									
AD 8081/M4; M8	D	8	75	0,05 to 14	206	176	68	paper	ceramic
AD 8081/X4; X8	D	8	95	0,07 to 11	206	176	68	paper	ceramic
AD 8082/M4; M8	N	13	95	0,07 to 11	206	176	68	paper	ceramic

medium power - full-range

oval



type	status	max. power W	resonance frequency Hz	rated frequency range kHz	overall size mm	baffle hole size mm	total depth mm	surround material	magnet system
3'' x 5''									
AD 3595/X4; X8; X15; X25; X50	N	3	180	0,09 to 15	76x131	66x121	43	paper	steel alloy
3'' x 8''									
AD 3880/X4; X8; X15	D	4	120	0,09 to 15	82x205	72x195	51	paper	ceramic
AD 3890/X4; X8; X15; X25;	D	4	120	0,09 to 15	82x205	72x195	56	paper	steel alloy
3½'' x 6''									
AD 4682/X4; X8; X15; X25	D	6	140	0,08 to 13	95x155	82x140	51	paper	ceramic
AD 4685/X4; X8	N	4	140	0,07 to 15	95x155	82x142	49	paper	ceramic
AD 4692/X4; X8; X15; X25	D	4	140	0,08 to 13	95x155	82x140	55	paper	steel alloy
AD 4695/X4; X8; X15; X25	N	4	140	0,08 to 12	95x155	82x140	51	paper	steel alloy
4'' x 6''									
AD 4681/M4; M8; M25	D	6	135	0,1 to 20	102x154	89x141	48	paper	ceramic
AD 4681/X4; X8; X15; X25	D	6	140	0,1 to 20	102x154	89x141	48	paper	ceramic
AD 4686/X4; X8; X15; X25	N	6	140	0,1 to 20	102x154	89x141	45	paper	ceramic
AD 4691/M4; M8; M15; M25	D	6	135	0,1 to 20	102x154	89x141	52	paper	steel alloy
AD 4691/X4; X8; X15; X25	D	6	140	0,1 to 12	102x154	89x141	52	paper	steel alloy
AD 4696/X4; X8; X15; X25	N	6	140	0,1 to 12	102x154	89x141	45	paper	steel alloy
4'' x 8''									
AD 4891/X4; X8; X15; X25	N	10	110	0,07 to 10	96x210	82x192	54	paper	steel alloy
5'' x 7''									
AD 5780/M4; M8; M15; M25	D	6	100	0,07 to 20	133x183	110x160	57	paper	ceramic
AD 5780/X4; X8; X15; X25	D	6	115	0,08 to 10	133x183	110x160	57	paper	ceramic
AD 5790/X4	D	4	115	0,08 to 10	133x183	110x160	62	paper	steel alloy
AD 5791/M4; M8	N	10	100	0,07 to 19	133x183	110x160	62	paper	steel alloy

low power

round



type	status	max power W	resonance frequency Hz	rated frequency range kHz	overall dia. mm	baffle hole dia. mm	total depth mm	magnet system
1¼" AD 0198/Z8; Z15; Z25	D	0,3	500	0,3 to 7	31	26,5	14,3	steel alloy
2" AD 2099/Z8; Z15; Z25	D	0,5	420	0,3 to 4	50	46	18	steel alloy
2½" AD 2071/Z4; Z8; Z15; Z25; Z50; Z150	D	1	360	0,2 to 4	64	59	20	ceramic
3" AD 3071/Y4; Y8; Y15; Y25; Y50; Y150	D	2	250	0,1 to 6	81	72	23	ceramic
AD 3371/Y4; Y8; Y15; Y25; Y50; Y150	D	2	250	0,1 to 6	81	72	28	ceramic
4" AD 4072/X4; X8; X15; X25	D	3	170	0,08 to 15	105	96	30,5	ceramic
AD 4074/X4; X8; X15; X25	N	3	170	0,08 to 15	105	96	44	scr. ceramic
AD 4472/X4; X8; X15; X25	D	3	170	0,08 to 15	105	96	30,5	ceramic
AD 4474/X4; X8; X15; X25	N	3	170	0,08 to 15	105	96	44	scr. ceramic

coding system

AD ● ● ● ● / ● ● ● ●

nominal cone size (inches) and shape of flange

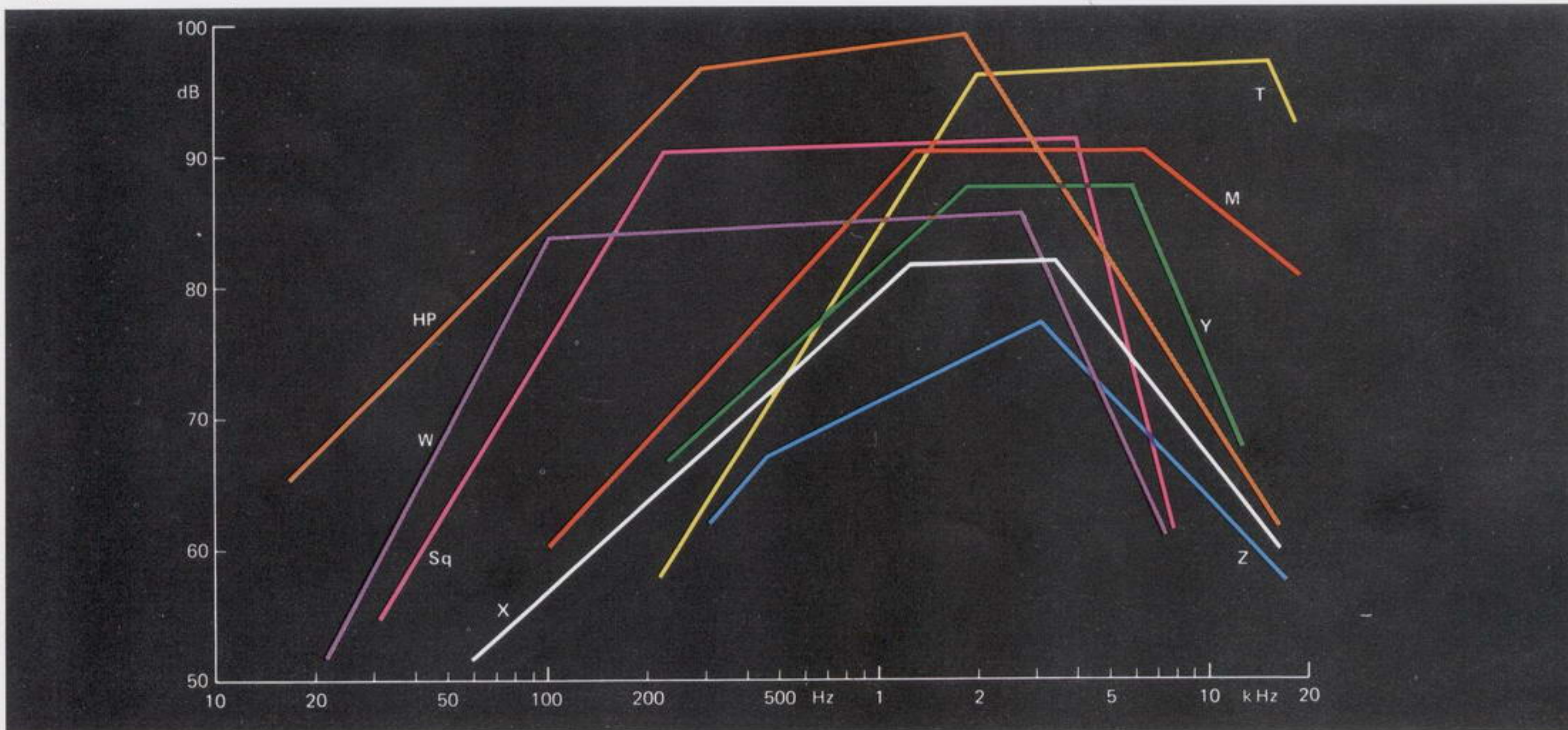
magnet system

rated impedance (Ω)

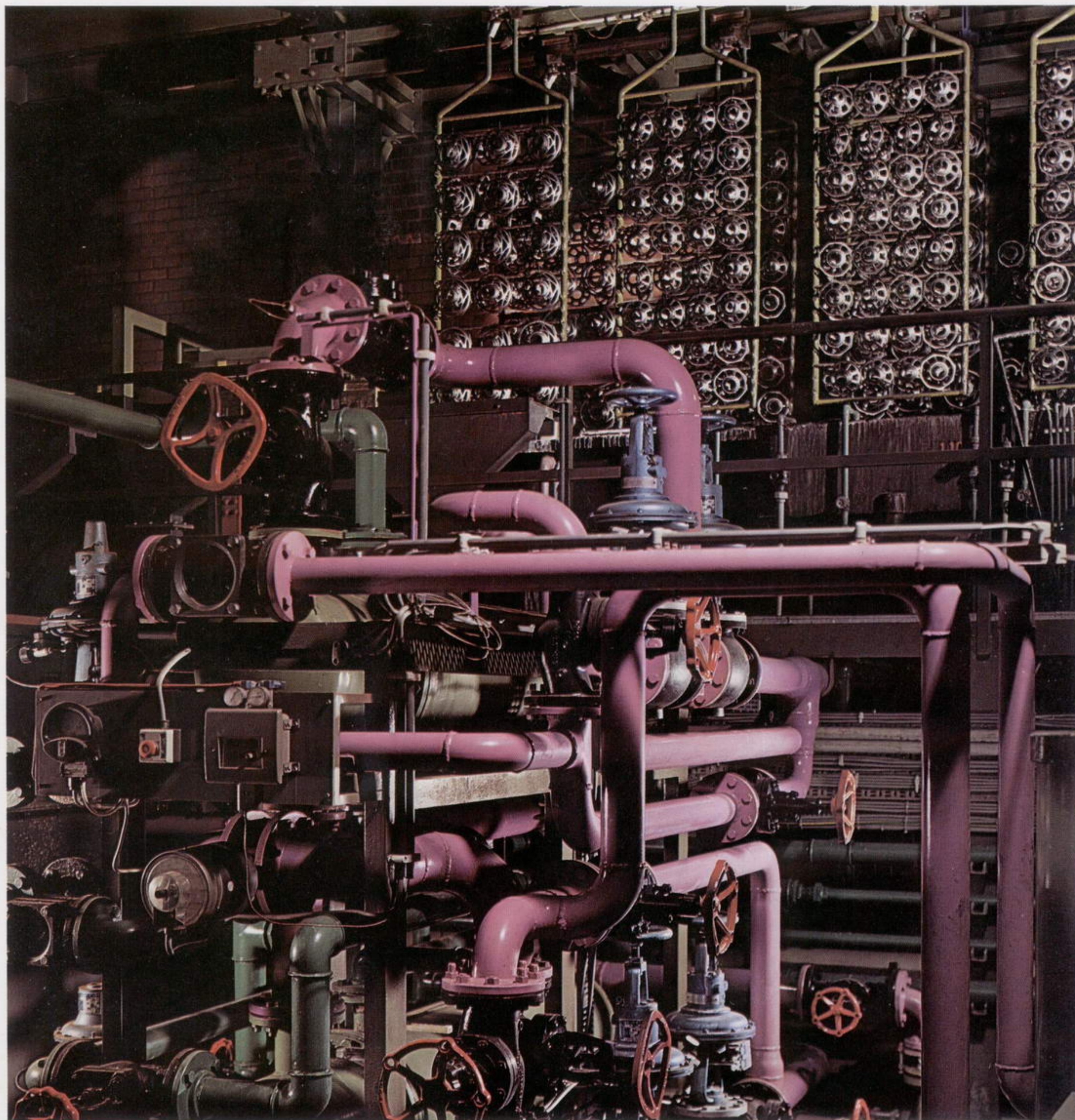
audio response

00 = 3/4	dome	10 = ceramic,	102 mm Ø	high power	HP	4
01 = 1 to 1 1/4	dome	40 to 49 = ceramic,	60 mm Ø	double cone, smooth response over wide frequency range	M	8
02 = 2	dome	400 to 449 = ceramic,	60 mm Ø			15
10 = 10	round	60 to 64 = ceramic,	72 mm Ø			25
12 = 12	round	600 to 649 = ceramic,	72 mm Ø	squawkers; for mid-range frequencies	Sq	50
20 = 2 to 2 1/2	round	65 to 67 = ceramic,	90 mm Ø	tweeter; for high frequencies	T	150
22 = 2 to 2 1/2	square	650 to 679 = ceramic,	90 mm Ø			
30 = 3	round	70 to 74 = ceramic,	30 mm Ø	woofer; for very low frequencies	W	
33 = 3	square	80 to 84 = ceramic,	53 mm Ø	notably higher response level at about 3 kHz	Z	
35 = 3 x 5	oval	800 to 849 = ceramic,	53 mm Ø	notably higher response level in the region 2 to 6 kHz	Y	
38 = 3 x 8	oval	85 to 89 = ceramic,	46 mm Ø	as Y, but wider frequency range	X	
40 = 4	round	90 to 94 = steel alloy,	18 mm Ø			
44 = 4	square	900 to 949 = steel alloy,				
46 = 4 x 6	oval	with compensation				
48 = 4 x 8	oval	magnet,	53 mm Ø			
50 = 5	octagonal	95 to 97 = steel alloy,	14 mm Ø			
57 = 5 x 7	oval	98, 99 = steel alloy,	10 mm Ø			
70 = 7	octagonal	100 = ceramic,	130 mm Ø			
80 = 8	octagonal	200 = ceramic,	125 mm Ø			
		250 = ceramic,	138 mm Ø			

Approximated response curves and their relationship.



Automatic plating of metal parts



conversion list

type to catalogue number

type	catalogue no.	type	catalogue no.	type	catalogue no.
AD 0140/T4	2422 257 33201	AD 01630/T4	2422 257 33801	AD3371/ Y50	2403 257 23505
T8	33202	T8	33802	Y150	23506
T15	33203	T15	33803		
AD 0141/T4	33211	AD 01631/T4	33811	AD 3595/X4	2422 256 30311
T8	33212	T8	33812	X8	30312
T15	33213	T15	33813	X15	30313
AD 0146/T4	43001	AD 01632/T4	33805	X25	30314
T8	43002	T8	33806	X50	30315
AD 0162/T4	33311	T15	33807		
T8	33312	AD 01633/T4	33815	AD 3880/X4	2422 257 30301
T15	33313	T8	33816	X8	30302
AD 0163/T4	33401	T15	33817	X15	30303
T8	33402				
T15	33403	AD 2071/Z4	2403 257 23801	AD 3890/X4	2422 256 30501
		Z8	23802	X8	30503
AD 0198/Z8	2403 256 12103	Z15	23803	X15	30504
Z15	12102	Z25	23804	X25	30505
Z25	12101	Z50	23806		
		Z150	23805	AD 4060/M4	2422 257 34619
AD 0210/Sq4	2422 257 32001			M8	34617
Sq8	32002	AD 2096/T4	2422 256 33301	W4	34661
AD 0211/Sq4	32011	T8	33302	W8	34602
Sq8	32012	T15	32303		
AD 00400/T4	33701	AD 2099/Z8	22203	AD 4072/X4	2403 257 24205
T8	33702	Z15	22202	X8	24206
AD 00800/T4	33711	Z25	22201	X15	24207
T8	33712			X25	24208
AD 00900/T4	43101	AD 02110/Sq4	2422 257 32201	AD 4074/X4	24305
T8	43102	Sq8	32202	X8	24306
AD 1065/M4	41001	AD 02150/Sq4	32301	X15	24307
M8	41002	Sq8	32302	X25	24308
M15	41003	AD 02160/Sq4	32311		
AD 1200	2422 259 12001	Sq8	32312	AD 4085/X4	2422 257 24301
				X8	24302
AD 1265/M4	2422 257 41101	AD 2273/T4	2403 257 22101	X15	24303
M8	41102	T8	22102		
AD 01411/T4	43207	AD 2274/T4	22201	AD 4095/X4	2422 256 24301
T8	43208	T8	22202	X8	24302
AD 01420/T4	33111			X15	24303
T8	33112	AD 2296/T4	2422 256 32311	X25	24304
T15	33113	T8	32312		
AD 01421/T4	43201	T15	32313	AD 4472/X4	2403 257 24805
T8	43202			X8	24806
AD01430/T4	33115	AD 3071/Y4	2403 257 23601	X15	24807
T8	33116	Y8	23602	X25	24808
T15	33117	Y15	23603	AD 4474/X4	24705
AD 01431/T4	43204	Y25	23604	X8	24706
T8	43205	Y50	23605	X15	24707
AD 01600/T4	33501	Y150	23606	X25	24708
T8	33502				
T15	33503	AD 3080/M4	2422 257 34517	AD 4481/X4	2422 257 34419
AD 01605/T4	33511	X4	34519	AD 4485/X4	24311
T8	33512			X8	24312
T15	33513	AD 3371/Y4	2403 257 23501	X15	24313
AD 01610/T4	33601	Y8	23502		
T8	33602	Y15	23503		
T15	33603	Y25	23504		

type	catalogue no.
AD 4495/X4	2422 256 24311
X8	24312
X15	24313
X25	24314
AD 4681/M4	2422 257 30409
M8	30411
M25	30413
X4	30401
X8	30402
X15	30403
X25	30404
AD 4082/X4	30601
X8	30602
X15	30603
X25	30604
AD 4685/X4	30701
X8	30702
AD 4686/X4	30801
X8	30802
X15	30803
X25	30804
AD 4691/M4	2422 256 30612
M8	30615
M15	30614
M25	30616
X4	30601
X8	30602
X15	30603
X25	30604
AD 4692/X4	30801
X8	30802
X15	30803
X25	30804
AD 4695/X4	30901
X8	30902
X15	30903
X25	30904
AD 4696/X4	40101
X8	40102
X15	40103
X25	40104
AD 4891/X4	30711
X8	30712
X15	30713
X25	30714
AD 5060/Sq4	2422 257 35401
Sq8	35402
W4	35301
W8	35302
AD 5061/M4	35511
M8	35512
Sq4	35405
Sq8	35406
AD 5062/M4	2404 257 35518
Sq4	35411
Sq8	35412

type	catalogue no.
AD 5081/M4	2422 257 35705
M8	35706
M15	35707
M25	35708
X4	35701
X8	35702
X15	35703
X25	35704
AD 5780/M4	36105
M8	36106
M15	36107
M25	36108
X4	36101
X8	36102
X15	36103
X25	36104
AD 5790/X4	2422 256 36002
AD 5791/M4	36011
M8	36012
AD 7062/M4	2404 257 46001
M8	46002
AD 7063/M4	2422 257 37906
M8	37907
AD 7064/M4	37913
M8	37914
AD 7065/M4	47019
M8	47012
AD 7080/M4	37803
M8	37804
M15	37805
X4	37801
X8	37802
AD 7090/M4	2422 256 37105
M8	37106
X4	37101
X8	37102
AD 8000	2404 258 48201
AD 8001	2404 259 80001
AD 8002	80002
AD 8081/M4	2422 257 38211
M8	38212
X4	38213
X8	38214
AD 8082/M4	38215
AD 10100/W4	41201
W8	41202
AD 10650/W4	2404 257 31701
W8	31702

type	catalogue no.
AD 12100/HP4	2422 257 51101
HP8	51102
M4	51001
M8	51002
M15	51003
AD 12200/W4	31511
W8	31512
AD 12250/W4	61011
W8	61012
AD 12600/W4	21011
W8	21012
AD 12650/W4	31411
W8	31412
AD 40900/W4	34801
W8	34802
AD 40910/W4	34805
W8	34806
AD 50600/Sq4	45001
Sq8	45002
AD 50601/Sq4	45011
Sq8	45012
AD 50800/Sq4	45101
Sq8	45102
AD 50801/Sq4	45111
Sq8	45112
AD 70601/W4	47101
W8	47102
AD 70610/W4	37915
W8	37916
AD 70611/W4	37917
W8	37918
AD 70620/M4	2404 257 46101
M8	46102
AD 70630/M4	2422 257 47103
M8	47104
AD 70650/W4	47201
W8	47202
AD 70655/W8	2404 257 07002
AD 80601/W4	2422 257 48201
W8	48202
AD 80602/W4	48311
W8	48312
AD 80603/W4	48205
W8	48206
AD 80604/W4	48207
W8	48208
AD 80605/W6	48305
AD 80651/W4	48401
W8	48402
AD 80652/W4	48511
W8	48512
AD 80671/W4	48601
W8	48602
AD 80672/W4	48711
W8	48712
9710/M8	48101

conversion list

catalogue to type number

catalogue number	type	catalogue number	type	catalogue number	type
2403 256 12101	AD 0198/Z25	2422 256 22201	AD 2099/Z25	2422 256 36011	AD 5791/M4
12102	Z15	22202	Z15	36012	M8
12103	Z8	22203	Z8	37101	AD 7090/X4
2403 257 22101	AD 2273/T4	24301	AD 4095/X4	37102	X8
22102	T8	24302	X8	37105	M4
22201	AD 2274/T4	24303	X15	37106	M8
22202	T8	24304	X25		
23501	AD 3371/Y4	24311	AD 4495/X4	2422 257 21011	AD 12600/W4
23502	Y8	24312	X8	21012	W8
23503	Y15	24313	X15	24301	AD 4085/X4
23504	Y25	24314	X25	24302	X8
23505	Y50	30311	AD 3595/X4	24303	X15
23506	Y150	30312	X8	24311	AD 4485/X4
23601	AD 3071/Y4	30313	X15	24312	X8
23602	Y8	30314	X25	24313	X15
23603	Y15	30315	X50	30301	AD 3880/X4
23604	Y25	30501	AD 3890/X4	30302	X8
23605	Y50	30503	X8	30303	X15
23606	Y150	30504	X15	30401	AD 4681/X4
23801	AD 2071/Z4	30505	X25	30402	AD 4681/X8
23802	Z8	30601	AD 4691/X4	30403	X15
23803	Z15	30602	X8	30404	X25
23804	Z25	30603	X15	30409	M4
23805	Z150	30604	X25	30411	M8
23806	Z50	30612	M4	30413	M25
24205	AD 4072/X4	30614	M15	30601	AD 4682/X4
24206	X8	30615	M8	30602	X8
24207	X15	30616	M25	30603	X15
24208	X25	30711	AD 4891/X4	30604	X25
24305	AD 4074/X4	30712	X8	30701	AD 4685/X4
24306	X8	30713	X15	30702	X8
24307	X15	30714	X25	30801	AD 4646/X4
24308	X25	30801	AD 4692/X4	30802	X8
24705	AD 4474/X4	30802	X8	30803	X15
24706	X8	30803	X15	30804	X25
24707	X15	30804	X25	31411	AD 12650/W4
24708	X25	30901	AD 4695/X4	31412	W8
24805	AD 4472/X4	30902	X8	31511	AD 12200/W4
24806	X8	30903	X15	31512	W8
24807	X15	30904	X25	32001	AD 0210/Sq4
24808	X25	31001	AD 3591/X4	32002	Sq8
2404 257 07002	AD 70655/W8	31002	X8	32011	AD 0211/Sq4
31701	AD 10650/W4	31003	X15	32012	Sq8
31702	W8	31004	X25	32201	AD 02110/Sq4
35411	AD 5062/Sq4	31005	X50	32202	Sq8
35412	Sq8	32101	AD 2095/T4	32301	AD 02150/Sq4
46001	AD 7062/M4	32102	T8	32302	Sq8
46002	M8	32103	T15	32311	AD 02160/Sq4
46101	AD 70620/M4	32301	AD 2096/T4	32312	Sq8
46102	M8	32302	T8	33311	AD 01420/T4
2404 258 48201	AD 8000	32303	T15	33112	T8
2404 259 80001	AD 8001	32311	AD 2296/T4	33113	T15
80002	AD 8002	32312	T8	33115	AD 01430/T4
		32313	T15	33116	T8
		36002	AD 5790/X4	33117	T15
		36005	X8		

catalogue number	type
2422 257 33201	AD 0140/T4
33202	T8
33203	T15
33211	AD 0141/T4
33212	T8
33213	T15
33311	AD 0162/T4
33312	T8
33313	T15
33401	AD 0163/T4
33402	T8
33403	T15
33501	AD 01600/T4
33502	T8
33503	T15
33511	AD 01605/T4
33512	T8
33513	T15
33601	AD 01610/T4
33602	T8
33603	T15
33701	AD 00400/T4
33702	T8
33711	AD 00800/T4
33712	T8
33801	AD 01630/T4
33802	T8
33803	T15
33805	AD 01632/T4
33806	T8
33807	T15
33811	AD 01631/T4
33812	T8
33813	T15
33815	AD 01633/T4
33816	T8
33817	T15
34419	AD 4481/X4
34517	AD 3080/M4
34519	X4
34601	AD 4060/W4
34602	W8
34617	M8
34619	M4
34801	AD 40900/W4
34802	W8
34805	AD 40910/W4
34806	W8
35301	AD 5060/W4
35302	W8
35401	AD 5060/Sq4
35402	Sq8

catalogue number	type
2422 257 35405	AD 5061/Sq4
35406	Sq8
35511	M4
35512	M8
35518	AD 5062/M4
35701	AD 5081/X4
35702	X8
35703	X15
35704	X25
35705	AD 5081/M4
35706	M8
35707	M15
35708	M25
36101	AD 5780/X4
36102	X8
36103	X15
36104	X25
36105	M4
36106	M8
36107	M15
36108	M25
37801	AD 7080/X4
37802	X8
37803	M4
37804	M8
37805	M15
37906	AD 7063/M4
37907	M8
37913	AD 7064/M4
37914	M8
37915	AD 70610/W4
37916	W8
37917	AD 70611/W4
37918	W8
38211	AD 8081/M4
38212	M8
38213	X4
38214	X8
38215	AD 8082/M4
41001	AD 1065/M4
41002	M8
41003	M15
41101	AD 1265/M4
41102	M8
41201	AD 10100/W4
41202	W8
43001	AD 0146/T4
43002	T8
43101	AD 00900/T4
43102	T8
43201	AD 01421/T4
43202	T8

catalogue number	type
2422 257 43204	AD 01431/T4
43205	T8
43207	AD 01411/T4
43208	T8
45001	AD 50600/Sq4
45002	Sq8
45011	AD 50601/Sq4
45012	Sq8
45101	AD 50800/Sq4
45102	Sq8
45111	AD 50801/Sq4
45112	Sq8
47012	AD 7065/M8
47019	M4
47101	AD 70601/W4
47102	W8
47103	AD 70630/M4
47104	M8
47201	AD 70650/W4
47202	W8
48101	9710/M8
48201	AD 80601/W4
48202	W8
48205	AD 80603/W4
48206	W8
48207	AD 80604/W4
48208	W8
48305	AD 80605/W6
48311	AD 80602/W4
48312	W8
48401	AD 80651/W4
48402	W8
48511	AD 80652/W4
48512	W8
48601	AD 80671/W4
48602	W8
48711	AD 80672/W
48712	W8
51001	AD 12100/M4
51002	M8
51003	M15
51101	AD 12100/HP4
51102	HP8
61011	AD 12250/W4
61012	W8
2422 259 12001	AD 1200

how to order

Loudspeakers are available in packs of the following quantities: (Subject to change; new packing under development)

Quantity	Types
1	AD 1265, AD 10100, AD 10650, AD 12100, AD 12200, AD 12250, AD 12600, AD 12650
2	9710/M8
3	AD 8082, AD 80601, AD 80602, AD 80603, AD 80604, AD 80605, AD 80651, AD 80652, AD 80671, AD 80672
4	AD 5780, AD 5790, AD 5791, AD 7062, AD 7063, AD 7064, AD 7065, AD 7080, AD 7090, AD 8081, AD 70601, AD 70610, AD 70611, AD 70620, AD 70630, AD 70650, AD 70655
5	AD 3071, AD 3371, AD 4072, AD 4074, AD 4472, AD 4474, AD 4891
6	AD 0210, AD 0211, AD 02150, AD 02160, AD 3880, AD 3890, AD 5060Sq, AD 5061, AD 5062, AD 5081, AD 50600, AD 50601, AD 50800, AD 50801
7	AD 4681, AD 4682, AD 4685, AD 4686, AD 4691, AD 4692, AD 4695, AD 4696
8	AD 5060W
9	AD 0140, AD 0141, AD 0146, AD 0162, AD 0163, AD 00400, AD 00800, AD 00900, AD 01411, AD 01420, AD 01421, AD 01430, AD 01431, AD 01600, AD 01605, AD 01610, AD 01630, AD 01631, AD 01632, AD 01633, AD 4060, AD 4085, AD 4095, AD 4481, AD 4485, AD 4495, AD 40900, AD 40910
12	AD 3080, AD 3595
25	AD 0198, AD 2071, AD 2096, AD 2099, AD 2273, AD 2274, AD 2296

After deciding on the loudspeaker type and quantity required, simply use the conversion list to find its catalogue number. The catalogue number has 12 digits, and the 11th is either a 0 or a 1.

Change a 0 to a 2, or a 1 to a 3.

Example

Loudspeaker type selected AD5780/X8. Catalogue number of this type is 2422 257 36102.

Order catalogue number 2422 257 36122.

The list of pack quantities shows this type packed in multiples of 4, so the number you order should also be a multiple of 4.

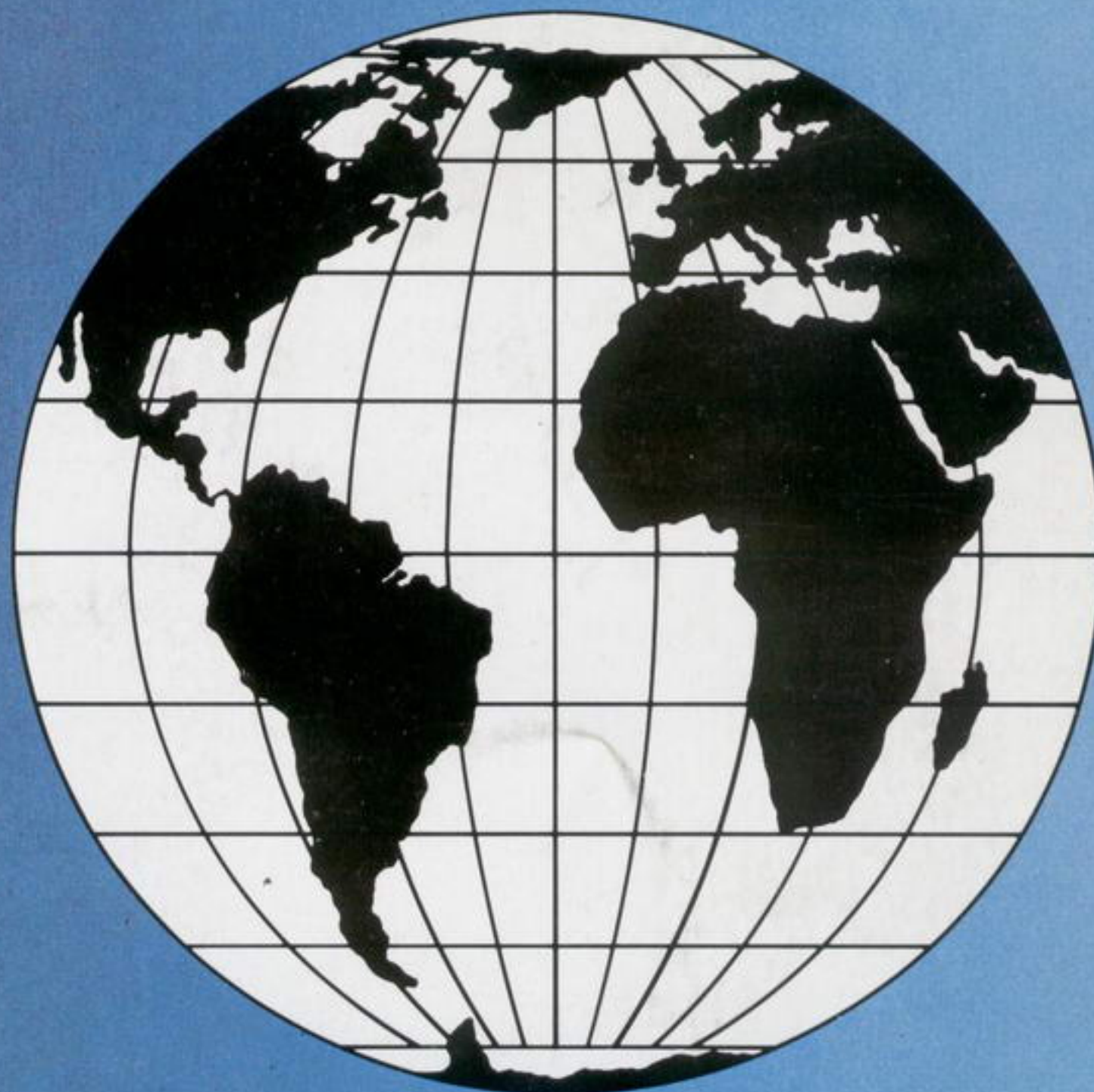
Computer-aided loudspeaker design



Electronic components and materials

for professional, industrial
and consumer uses

from the world-wide
Philips Group of Companies



- Argentina:** FAPESA I.y.C., Av. Crovara 2550, Tablada, Prov. de BUENOS AIRES, Tel. 652-7438/7478.
- Australia:** PHILIPS INDUSTRIES HOLDINGS LTD., Elcoma Division, 67 Mars Road, LANE COVE, 2066, N.S.W., Tel. 427 08 88.
- Austria:** ÖSTERREICHISCHE PHILIPS BAUELEMENTE Industrie G.m.b.H., Triester Str. 64, A-1101 WIEN, Tel. 62 91 11.
- Belgium:** M.B.L.E., 80, rue des Deux Gares, B-1070 BRUXELLES, Tel. 523 00 00.
- Brazil:** IBRAPE, Caixa Postal 7383, Av. Brigadeiro Faria Lima, 1735 SAO PAULO, SP, Tel. (011) 211-2600.
- Canada:** PHILIPS ELECTRONICS LTD., Electron Devices Div., 601 Milner Ave., SCARBOROUGH, Ontario, M1B 1M8, Tel. 292-5161.
- Chile:** PHILIPS CHILENA S.A., Av. Santa Maria 0760, SANTIAGO, Tel. 39-40 01.
- Colombia:** SADAPE S.A., P.O. Bcx 9805, Calle 13, No. 51 + 39, BOGOTA D.E. 1., Tel. 600 600.
- Denmark:** MINIWATT A/S, Emdrupvej 115A, DK-2400 KØBENHAVN NV., Tel. (01) 69 16 22.
- Finland:** OY PHILIPS AB, Elcoma Division, Kaivokatu 8, SF-00100 HELSINKI 10, Tel. 1 72 71.
- France:** R.T.C. LA RADIOTECHNIQUE-COMPELEC, 130 Avenue Ledru Rollin, F-75540 PARIS 11, Tel. 355-44-99.
- Germany:** VALVO, UB Bauelemente der Philips G.m.b.H., Valvo Haus, Burchardstrasse 19, D-2 HAMBURG 1, Tel. (040) 3296-1.
- Greece:** PHILIPS S.A. HELLENIQUE, Elcoma Division, 52, Av. Syngrou, ATHENS, Tel. 915 311.
- Hong Kong:** PHILIPS HONG KONG LTD., Elcoma Div., 15/F Philips Ind. Bldg., 24-28 Kung Yip St., KWAI CHUNG, Tel. NT 24 51 21.
- India:** PEICO ELECTRONICS & ELECTRICALS LTD., Ramon House, 169 Backbay Reclamation, BOMBAY 400020, Tel. 295144.
- Indonesia:** P.T. PHILIPS-RALIN ELECTRONICS, Elcoma Division, 'Timah' Building, Jl. Jen. Gatot Subroto, P.O. Box 220, JAKARTA, Tel. 44 163.
- Ireland:** PHILIPS ELECTRICAL (IRELAND) LTD., Newstead, Clonskeagh, DUBLIN 14, Tel. 69 33 55.
- Italy:** PHILIPS S.p.A., Sezione Elcoma, Piazza IV Novembre 3, I-20124 MILANO, Tel. 2-6994.
- Japan:** NIHON PHILIPS CORP., Shuwa Shinagawa Bldg., 26-33 Takanawa 3-chome, Minato-ku, TOKYO (108), Tel. 448-5611.
(IC Products) SIGNETICS JAPAN, LTD, TOKYO, Tel. (03)230-1521.
- Korea:** PHILIPS ELECTRONICS (KOREA) LTD., Elcoma Div., Philips House, 260-199 Itaewon-dong, Yongsan-ku, C.P.O. Box 3680, SEOUL, Tel. 794-4202.
- Malaysia:** PHILIPS MALAYSIA SDN. BERHAD, Lot 2, Jalan 222, Section 14, Petaling Jaya, P.O.B. 2163, KUALA LUMPUR, Selangor, Tel. 77 44 11.
- Mexico:** ELECTRONICA S.A. de C.V., Varsovia No. 36, MEXICO 6, D.F., Tel. 533-11-80.
- Netherlands:** PHILIPS NEDERLAND B.V., Afd. Elonco, Boschdijk 525, 5600 PB EINDHOVEN, Tel. (040) 79 33 33.
- New Zealand:** PHILIPS ELECTRICAL IND. LTD., Elcoma Division, 2 Wagener Place, St. Lukes, AUCKLAND, Tel. 867 119.
- Norway:** NORSK A/S PHILIPS, Electronica, Sørkedalsveien 6, OSLO 3, Tel. 46 38 90.
- Peru:** CADESA, Rocca de Vergallo 247, LIMA 17, Tel. 62 85 99.
- Philippines:** PHILIPS INDUSTRIAL DEV. INC., 2246 Pasong Tamo, P.O. Box 911, Makati Comm. Centre, MAKATI-RIZAL 3116, Tel. 86-89-51 to 59.
- Portugal:** PHILIPS PORTUGESA S.A.R.L., Av. Eng. Duharte Pacheco 6, LISBOA 1, Tel. 68 31 21.
- Singapore:** PHILIPS PROJECT DEV. (Singapore) PTE LTD., Elcoma Div., P.O.B. 340, Toa Payoh CPO, Lorong 1, Toa Payoh, SINGAPORE 12, Tel. 53 88 11.
- South Africa:** EDAC (Pty.) Ltd., 3rd Floor Rainer House, Upper Railway Rd. & Ove St., New Doornfontein, JOHANNESBURG 2001, Tel. 614-2362/9.
- Spain:** COPRESA S.A., Balmes 22, BARCELONA 7, Tel. 301 63 12.
- Sweden:** A.B. ELCOMA, Lidingövägen 50, S-115 84 STOCKHOLM 27, Tel. 08/67 97 80.
- Switzerland:** PHILIPS A.G., Elcoma Dept., Allmendstrasse 140-142, CH-8027 ZÜRICH, Tel. 01/43 22 11.
- Taiwan:** PHILIPS TAIWAN LTD., 3rd Fl., San Min Building, 57-1, Chung Shan N. Rd, Section 2, P.O. Box 22978, TAIPEI, Tel. 5513101-5.
- Thailand:** PHILIPS ELECTRICAL CO. OF THAILAND LTD., 283 Silom Road, P.O. Box 961, BANGKOK, Tel. 233-6330-9.
- Turkey:** TÜRK PHILIPS TICARET A.S., EMET Department, Inonu Cad. No. 78-80, ISTANBUL, Tel. 43 59 10.
- United Kingdom:** MULLARD LTD., Mullard House, Torrington Place, LONDON WC1E 7HD, Tel. 01-580 6633.
- United States:** (Active devices & Materials) AMPEREX SALES CORP., Providence Pike, SLATERSVILLE, R.I. 02876, Tel. (401) 762-9000.
(Passive devices) MEPCO/ELECTRA INC., Columbia Rd., MORRISTOWN, N.J. 07960, Tel. (201) 539-2000.
(IC Products) SIGNETICS CORPORATION, 811 East Arques Avenue, SUNNYVALE, California 94086, Tel. (408) 739-7700.
- Uruguay:** LUZIELECTRON S.A., Rondeau 1567, piso 5, MONTEVIDEO, Tel. 9 43 21.
- Venezuela:** IND. VENEZOLANAS PHILIPS S.A., Elcoma Dept., A. Ppal de los Ruices, Edif. Centro Colgate, CARACAS, Tel. 36 05 11.