Open Repair Data and Product Lifetime

Data analysis using the Open Repair Alliance database as of July 2025.

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The data

Community repair initiatives around the globe collects data on their repair activities and these data are joined by Open Repair Alliance in the Open Repair Database. Presently the July 2025 version contains data on more than 300.000 repairs of electrical devices and more than 100.000 of these registrations contain information on the age of the product being repaired. After removing all registrations of products produces earlier than 1926 (probably typing error or not relevant for present day comparison) the datasæt contain 102.066 registrations.

Data collected in this context have several risks of bias, that must be kept in mind when evaluating the data:

- Devices for repair are broken. Devices that "never" break are not seen in the repair community.
- Devices brought to a repair café is devices with a relatively good value – it might be a personal value of affection but mostly it is products that have had a cost above the bare minimum.
- You cannot find very old products if tit's a type of device, that has entered the marked just recently.
- A known history of lack of spare parts for some brands might reduce the number of devices for at particular brand.

Data on product lifetime

As there is only a few sources to data on product lifetime it is important to have more sources that can be used for comparison and the repair data is in no way the sole source of the truth. One of the major sources for product lifetime of household appliances is the Circularity Metrics Lab by the European Environment Agency: https://www.eea.europa.eu/en/circularity/sectoral-modules/product-lifespans/evolution-in-average-lifespans-of-household-appliances but their publishing does not contain detailed information.

You may also find various research works; one good place to look for these are in proceedings from the PLATE conferences, as an example:

https://irep.ntu.ac.uk/id/eprint/53870/1/2460600_Baguley.pdf

https://onlinelibrary.wiley.com/doi/epdf/10.1111/jiec.13608

What lifetime to expect from different types of appliances

The following overview shows how old devices of different types are before they are seen for repair. Hopefully this repair will make them live a lot longer so this is not the product lifetime – except if you are the type of person that never tries to save equipment by repairing.

Rækkemærkater	1	2	3	4	5	6	(tom)	Hovedtotal	pct <2 year	pct <5	pct <10	pct <20	pct <30	pct >30
Aircon/dehumidifier	103	183	148	53	8	16		511	20,2	35,8	29,0	10,4	1,6	3,1
Battery/charger/adapter	259	494	442	243	71	107		1616	16,0	30,6	27,4	15,0	4,4	6,6
Coffee maker	890	2989	2176	863	207	170		7295	12,2	41,0	29,8	11,8	2,8	2,3
Decorative or safety lights	447	625	471	276	166	206		2191	20,4	28,5	21,5	12,6	7,6	9,4
Desktop computer	48	107	249	154	21	23		602	8,0	17,8	41,4	25,6	3,5	3,8
Digital compact camera	35	101	128	105	20	30		419	8,4	24,1	30,5	25,1	4,8	7,2
DSLR/video camera	19	39	47	100	57	28		290	6,6	13,4	16,2	34,5	19,7	9,7
Fan	155	284	240	132	49	66		926	16,7	30,7	25,9	14,3	5,3	7,1
Flat screen	74	378	605	305	24	37		1423	5,2	26,6	42,5	21,4	1,7	2,6
Food processor	612	1261	1247	826	360	691		4997	12,2	25,2	25,0	16,5	7,2	13,8
Games console	52	107	101	65	35	36		396	13,1	27,0	25,5	16,4	8,8	9,1
Hair & beauty item	340	608	492	273	76	106		1895	17,9	32,1	26,0	14,4	4,0	5,6
Hair dryer	94	274	341	172	62	64		1007	9,3	27,2	33,9	17,1	6,2	6,4
Handheld entertainment device	83	177	165	205	139	175		944	8,8	18,8	17,5	21,7	14,7	18,5
Headphones	370	445	198	87	22	59		1181	31,3	37,7	16,8	7,4	1,9	5,0
Hi-Fi integrated	43	136	348	402	272	225		1426	3,0	9,5	24,4	28,2	19,1	15,8
Hi-Fi separates	303	858	1380	1592	982	1389		6504	4,7	13,2	21,2	24,5	15,1	21,4
Iron	295	862	805	356	99	108		2525	11,7	34,1	31,9	14,1	3,9	4,3
Kettle	408	808	572	236	59	71		2154	18,9	37,5	26,6	11,0	2,7	3,3
Lamp	548	1111	1367	1230	669	1101		6026	9,1	18,4	22,7	20,4	11,1	18,3
Laptop	346	1290	1588	648	21	102		3995	8,7	32,3	39,7	16,2	0,5	2,6
Large home electrical	295	734	927	550	193	95		2794	10,6	26,3	33,2	19,7	6,9	3,4
Misc	39	59	60	34	21	39		252	15,5	23,4	23,8	13,5	8,3	15,5
Mobile	398	634	292	75	20	82		1501	26,5	42,2	19,5	5,0	1,3	5,5
Musical instrument	34	62	70	85	68	71		390	8,7	15,9	17,9	21,8	17,4	18,2
Paper shredder	112	193	150	87	24	30		596	18,8	32,4	25,2	14,6	4,0	5,0
PC accessory	120	170	163	76	18	34		581	20,7	29,3	28,1	13,1	3,1	5,9
Portable radio	302	753	1155	1094	508	881		4693	6,4	16,0	24,6	23,3	10,8	18,8
Power tool	874	2129	1999	1314	497	426		7239	12,1	29,4	27,6	18,2	6,9	5,9
Printer/scanner	202	692	668	310	37	40		1949	10,4	35,5	34,3	15,9	1,9	2,1
Projector	17	38	75	53	39	195		417	4,1	9,1	18,0	12,7	9,4	46,8
Sewing machine	112	346	557	756	614	1259		3644	3,1	9,5	15,3	20,7	16,8	34,5
Small home electrical	894	1330	1131	701	302	397		4755	18,8	28,0	23,8	14,7	6,4	8,3
Small kitchen item	915	1556	1347	770	298	397		5283	17,3	29,5	25,5	14,6	5,6	7,5
Tablet	169	441	393	120	19	46		1188	14,2	37,1	33,1	10,1	1,6	3,9
Toaster	385	816	695	388	136	159		2579	14,9	31,6	26,9	15,0	5,3	6,2
Toy	526	533	302	249	174	349		2133	24,7	25,0	14,2	11,7	8,2	16,4
TV and gaming-related accessories	117	290	492	509	204	103		1715	6,8	16,9	28,7	29,7	11,9	6,0
Vacuum	1165	3082	2702	1389	422	316		9076	12,8	34,0	29,8	15,3	4,6	3,5
Watch/clock	231	455	509	498	346	919		2958	7,8	15,4	17,2	16,8	11,7	31,1

“1”: Less than 2 years old, “2”: less than 5 years old, “#”: less than 10 years old, “4”: less than 20 years old, “5”: less than 30 years old, “6”: more than 29 years old.

If you care about the ressources of the Earth and about the cost of being a consumer, this will make you put the question: If projectors, sewing machines and clocks can last more than 30 years before the first repair, why can’t other electrical devices. Some numbers spring to mind: Coffeamakers: 41% are less than 5 years old when they need the first repair.

Continue to look for surprises and for unfairness shown by the data.

Headphones: good and less good.

The following data table focus on headphones. Above we saw an overall age of less than 5 years before repair of 69%. Should that be compliant with “high tech”. Let’s see if there are significant differences between brands.

The table only contains brands that have been brought to repair in more tham 10 instances.

Rækkemærkater	1	2	3	4	5	6	Hovedtot	pct 1	pct 2	pct 3	pct 4	pct 5	pct 6
Hovedtotal	**370**	**445**	**198**	**87**	**22**	**59**	**1181**	31,3	37,7	16,8	7,4	1,9	5,0
Unknown	87	97	34	24	5	11	258	33,7	37,6	13,2	9,3	1,9	4,3
Sony	43	44	21	7	3	6	124	34,7	35,5	16,9	5,6	2,4	4,8
Sennheiser	18	37	37	19	8	3	122	14,8	30,3	30,3	15,6	6,6	2,5
JBL	23	34	6	2		3	68	33,8	50,0	8,8	2,9	0,0	4,4
Bose	9	32	17	3	1	2	64	14,1	50,0	26,6	4,7	1,6	3,1
Beats	12	10	6	3	1	1	43	27,9	23,3	14,0	7,0	2,3	2,3
Marshall	12	22	3	1		2	40	30,0	55,0	7,5	2,5	0,0	5,0
Beyer Dynamic	6	6	9	8			29	20,7	20,7	31,0	27,6	0,0	0,0
Philips	3	11	6	2		7	29	10,3	37,9	20,7	6,9	0,0	24,1
AKG	4	7	11	3	1	1	27	14,8	25,9	40,7	11,1	3,7	3,7
Logitech	12	2				2	16	75,0	12,5	0,0	0,0	0,0	12,5
Apple	7	4	1			1	13	53,8	30,8	7,7	0,0	0,0	7,7
Samsung	5	6				2	13	38,5	46,2	0,0	0,0	0,0	15,4
Jabra	5	5	2				12	41,7	41,7	16,7	0,0	0,0	0,0
razer	7	5					12	58,3	41,7	0,0	0,0	0,0	0,0
Jvc	3	3	2	1		2	11	27,3	27,3	18,2	9,1	0,0	18,2

Going to buy new headphones, consider the ones with high percentage in the columns to the right and be somewhat carefull if you are looking at Logitech, Apple or Razer.

This analysis can be done for every product category with our data.

Headphones: Broken but is it repairable?

The Open Repair Data can also help us, if we dig a bit deeper: OK, it's broken – but can it be repaired:

Rækkemærkater	End of life	Fixed	Repairable	Unknown	Hovedtotal	EOL pct	Fixed pct	Repairable pct
Hovedtotal	**272**	**644**	**256**	**9**	**1181**	**23,0**	54,5	21,7
Unknown	75	130	50	3	258	**29,1**	50,4	19,4
Sony	21	79	24		124	**16,9**	63,7	19,4
Sennheiser	15	82	25		122	**12,3**	67,2	20,5
JBL	21	31	16		68	**30,9**	45,6	23,5
Bose	17	25	21	1	64	**26,6**	39,1	32,8
Beats	15	15	13		43	**34,9**	34,9	30,2
Marshall	8	18	14		40	**20,0**	45,0	35,0
Beyer Dynamic	5	19	5		29	**17,2**	65,5	17,2
Philips	5	19	4	1	29	**17,2**	65,5	13,8
AKG	3	20	4		27	**11,1**	74,1	14,8
Logitech	6	7	3		16	**37,5**	43,8	18,8
Apple	7	4	2		13	**53,8**	30,8	15,4
Samsung	6	6	1		13	**46,2**	46,2	7,7
Jabra	6	4	2		12	**50,0**	33,3	16,7
razer	3	8	1		12	**25,0**	66,7	8,3
Jvc		10	1		11	**0,0**	90,9	9,1

Logitech and Apple, that needed repair earlier than many other brands are also in this context marked with red: They break to early and they cannot even be repaired.

Razer that was on the "too early" list gathers a bit positive points here: They can very often be repaired.

Headphones: Why not repairable

Finaly, the data can help us to understand why something wasn't repairable: Do I lack the skills or equipment or is spare parts to expensive or simply not available:

Rækkemærkater	Item too worn out	Lack of equipment	No way to open product	information not available	Spare parts not available	Spare parts too expensive	(tom)	Hovedtotal
Hovedtotal	**4**	**8**	**29**	**10**	**37**	**10**	**174**	**272**
Unknown		1	6	2	10	5	51	75
JBL	1	2	2		5		11	21
Sony		1	4	2	4	1	9	21
Bose		1	1		2		13	17
Beats			1		5		9	15
Sennheiser				2			13	15
Apple					1		6	7
Marshall		1			3		3	7
Jabra			1	1			4	6
Logitech			1		1		4	6
Samsung			2				4	6
Philips						1	4	5
Beyerdynamic			1		2		1	4
AKG			1				2	3
razer		1					2	3

Follow up: 39 more categories

Detailed analysis like this one for headphones can be done for the remaining 39 product categories in the Open Repair Database.

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