

BOARD OF TRADE

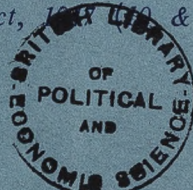
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*The Report on the
Census of Production
for 1954*

Volume 4: Industry M

RADIO AND TELECOMMUNICATIONS

*Presented by the Board of Trade to Parliament in pursuance of the
Statistics of Trade Act, 1947 (10 & 11 Geo. 6 Ch. 39, Sec. 7)*



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The Report on the Census of Production for 1954

VOLUME 4 INDUSTRY M

RADIO AND TELECOMMUNICATIONS

THIS REPORT on the Radio and Telecommunications Industry relates to establishments engaged wholly or mainly in the manufacture of telegraph and telephone equipment, radio and other electronic equipment, gramophones, electric lamps, including discharge lamps, etc.

Production by Government Departments in Northern Ireland for 1954 and 1951 has been included with private firms in the report on the Electrical Engineering (General) Industry (Volume 4, Industry K), but production by private firms is included in this report.

This industry corresponds to minimum list headings 72, 73 and 74 in the Standard Industrial Classification.

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IMPORTANT NOTES and definitions appear on the next page. In interpreting the data in the tables, it is essential to bear these in mind.

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The following notes describe terms in general use in the tables of the report. More detailed explanations of the terms used and a description of the scope and method of taking the census are given in the separate booklet entitled 'The Report on the Census of Production for 1954 - Introductory Notes' (price 1s. 6d. net).

Industrial Classification: Establishments are classified to industries according to the nature of their output and, as far as possible, in conformity with the Standard Industrial Classification. Certain products are identified as the principal products of individual industries, the principal products for a given industry being of a similar nature or commonly associated in production. The principle of classification normally followed is that an establishment is classified to an industry if its output of the principal products of that industry accounted for a greater proportion of the value of its output than did its output of the principal products of any other industry.

Specialist producers normally comprise those establishments 50 per cent. or more of whose total output by value is accounted for by the characteristic products of the specialist group.

Intermediate products: For some industries figures are given showing the total quantities made during the year of intermediate products, i.e., products which may be further processed in the establishments in which they are produced.

Larger establishments: The information given in the report relates mainly to 'larger establishments', i.e., establishments of firms employing on the average more than 10 persons. In most cases an establishment comprises the whole of the premises under the same ownership or management at a particular address (e.g., a mine or factory). Offices, warehouses, laboratories and other ancillary places of business situated apart from the producing works are not regarded as separate establishments and are included in the return for the works.

Small firms are those employing on the average 10 or fewer persons.

The estimates for the industry as a whole given in Table 1 are normally obtained by increasing the other items shown in the same proportion as total employment.

Gross output (production) is the total value of goods made and other work done during the year; it is obtained by adjusting the value of sales and work done during the year for changes in the value of stocks of products on hand for sale and work in progress.

Net output is the amount left after deducting from the value of gross output the aggregate of the cost of materials and fuel used, the amount paid for work given out, and, for 1951 and 1954, any transport payments made. This represents the value added to materials by the process of production, and constitutes the fund from which wages, salaries, rents, rates and taxes, advertising and other selling expenses and all other similar charges have to be met, as well as depreciation and profits.

Sales means sales during the year of goods made in the establishment covered by the return or made on commission for it, whether produced in the year or not. The value of sales is the net selling value, i.e., the amount charged to customers, whether on an ex-works or delivered basis, and net of any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc. For goods charged on a delivered basis to customers overseas, firms were required to give the f.o.b. value.

Materials and fuel: The total cost of materials and fuel purchased includes all purchases during the year of materials for use in production, and of fuel (includ-

ing oil, gas and electricity) for all purposes: packing materials, including the full cost of returnable cases when first purchased; workshop and office materials; water charges; materials for repairs to buildings, plant and vehicles when carried out by firms' own work-people included in their returns; consumable tools; and parts for machinery purchased as replacements. Purchases of goods for merchanting are excluded. The cost of materials and fuel used, given in Table 2, is obtained by adjusting purchases for changes during the year in the value of stocks.

Stocks: Firms were required to give stocks of materials and fuel, products on hand for sale, and work in progress, at income tax values.

Customs and Excise Duty paid on materials purchased is normally included in the cost of materials. Finished goods are similarly valued as they were sold, duty-paid or duty-free. The net amount of any duty paid is deducted in arriving at net output.

Employment: Total employment includes working proprietors, administrative, technical and clerical employees, and operatives, but excludes outworkers, canteen employees and persons engaged in merchanting or any other activity not covered by a firm's return, who are shown separately as excluded employees. Employees are persons on the pay-roll (i.e., persons whose National Insurance cards were held by employers), whether employed full-time or part-time.

Working proprietors are proprietors of businesses other than limited companies, together with members of their families who worked in the business without receiving fixed wages or salaries. Any persons working less than half the normal hours are excluded. For Northern Ireland directors of limited companies (other than those paid by fee only) are also included.

Administrative, technical and clerical employees include directors, other than those paid by fee only (except in Northern Ireland); managers, superintendents and works foremen; research, experimental, development, technical and design employees (other than operatives); draughtsmen and tracers; travellers; and office (including works office) employees.

Operatives include all other classes of employees, i.e., broadly speaking, all manual workers.

Outworkers are persons employed by the firm who work on materials supplied by the firm in their own homes.

Wages and salaries include all overtime payments, bonuses and commissions without any deductions for income tax, insurances, contributory pensions etc. They exclude payments to working proprietors.

Capital expenditure includes expenditure on new building work, and on plant, machinery and vehicles, charged to capital account during the year, including any transport and installation costs involved. It includes expenditure in respect of establishments in Great Britain which had not begun production before the end of the year (which has not previously been included in the Census of Production reports for individual industries).

Symbols used:

.. for not available

- for nil or negligible (less than half the final digit shown).

Where figures are rounded, e.g., given to the nearest £ thousand, there may be apparent slight discrepancies between the sums of constituent items and the totals shown. In some cases, figures have been combined with others of a similar nature where publication of separate details might disclose information relating to an individual undertaking.

Industry summary

Estimates for the industry as a whole

TABLE 1

	United Kingdom			Scotland 1954	Wales 1954
	1948	1951	1954		
	£ million	£ million	£ million	£ million	£ million
Gross output (production)	153.9	241.1	340.5	9.96	13.94
Net output	93.2	129.0	185.3	6.02	7.13
Total stocks and work in progress					
At beginning of year	43.6	53.5	94.2	0.56	4.26
Change during year	+ 6.4	+ 19.3	+ 5.5	+ 0.01	- 0.41
Capital expenditure less disposals (a)	3.1	6.4	12.1	0.33	0.40
Wages and salaries	63.5	87.8	124.5	0.97	4.33
Total employment (including working proprietors)	Thousands	Thousands	Thousands	Thousands	Thousands
	202.5	241.1	277.1	8.41	10.29

(a) Capital expenditure on new building work, plant, machinery and vehicles (including (except in 1948) that incurred in Great Britain for establishments not yet in production), less amounts received for plant, machinery and vehicles disposed of. The 1948 figures for capital expenditure exclude any amounts incurred by Government Departments.

Summary of returns received

(A) Private firms

TABLE 2

	Unit	Great Britain 1948	United Kingdom	
			1951	1954
FIRMS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS				
Number of establishments	No.	406	440	526
Total value of sales and work done	£'000	104,300	175,856	264,192
Products on hand for sale	"	26,992	32,669	63,483
and work in progress	"	+ 5,375	+ 10,060	+ 3,909
Gross output (production) (a)	"	109,332	185,917	268,101
Purchases of materials and fuel	"	49,254	101,740	125,307
Stocks of materials and fuel	"	14,551	18,339	26,776
change during year	"	+ 709	+ 8,676	+ 2,072
Cost of materials and fuel used	"	48,545	93,065	123,235
Payment for work done on materials given out	"	955	1,688	3,511
Payment for transport (b)	"	343	1,414	2,384
Net output	"	59,832	89,749	138,972
Average number of employees	No.	100,654	124,814	145,718
operatives	"	33,189 (c)	42,031	54,273
others	"	67,465	82,783	91,445
Total employment (d)	"	133,861	166,867	200,008
Net output per person employed (d)	£	447	538	695
Wages and salaries	£'000	25,661	36,887	54,321
of operatives	"	13,125	18,798	29,732
of others	"	12,536	18,089	24,589
Capital expenditure	"			
New building work (e)	"	435	702	1,653
Plant and machinery	"	2,678	3,383	6,288
acquisitions (e)	"	149	126	255
disposals	"	183	464	624
Vehicles	"	48	79	142
acquisitions (e)	"			
disposals	"			
FIRMS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS				
Number of returns	No.	139	116 (f)	99
Total employment, including working proprietors	"	818	584 (f)	669

(continued on next page)

TABLE 2 (contd.)

	Unit	Great Britain		
		1948	1951	1954
ESTABLISHMENTS EMPLOYING ON AVERAGE MORE THAN 10 PERSONS				
Number of establishments	No.	15	23	22
Total value of sales and work done	£'000	43,178	54,118	71,689
Products on hand for sale and work in progress	{ at beginning of year + change during year	1,146 + 143	1,634 + 292	1,806 - 602
Gross output (production) (a)	"	43,320	54,411	71,087
Purchases of materials and fuel	"	10,734	15,690	25,484
Stocks of materials and fuel	{ at beginning of year + change during year	583 + 77	693 + 224	1,760 + 91
Cost of materials and fuel used	"	10,657	15,466	25,392
Payment for work done on materials given out	"	9	34	94
Payment for transport (b)	"	-	20	17
Net output	"	32,654	38,890	45,584
Average number of employees	{ operatives + others	55,873 11,318(c)	59,589 13,859	61,905 14,092
Total employment (g)	"	67,191	73,448	75,997
Net output per person employed (g)	£	486	529	600
Wages and salaries	{ of operatives + of others	18,776 5,452	24,202 7,600	30,442 9,514
Capital expenditure				
New building work (e)	"	..	1,300	1,764
Plant and machinery	{ acquisitions (e) + disposals	.. ..	464 1	690 4
Vehicles	{ acquisitions (e) + disposals	.. ..	309 79	556 84
ESTABLISHMENTS EMPLOYING ON AVERAGE 10 OR FEWER PERSONS				
Number of returns	No.	-	-	-
Total employment	"	-	-	-

- (a) For the year 1948 gross output excludes payments for transport services outwards on finished goods sold. For subsequent years gross output includes payments to other firms and undertakings and to firms' own separate transport organisations for transport services.
- (b) Payments to other firms and undertakings and to firms' own separate transport organisations. For the year 1948 payments cover only transport outwards of finished goods sold. For subsequent years they cover payments for transport of both finished goods sold and materials and fuel purchased.
- (c) Number in week ended September 25, 1948.
- (d) Excluding outworkers and including working proprietors.
- (e) Excluding expenditure for establishments not yet in production.
- (f) Excluding Northern Ireland. No information about small firms was collected in Northern Ireland for 1951.
- (g) Excluding outworkers.

Analysis by size; 1954: Larger establishments

TABLE 3

Average number employed (a)	Estab-lish-ments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed (a)
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
(A) Private firms in the United Kingdom									
11 - 24(c)	92	2,500	1,321	1,433	411	507	241	209	712
25 - 49	104	5,002	2,531	2,991	758	965	472	132	675
50 - 99	81	8,471	4,233	4,491	1,361	1,500	772	363	723
100 - 199	82	15,904	8,045	9,014	2,820	3,165	1,600	488	680
200 - 299	33	10,785	5,535	6,083	2,067	2,027	1,138	268	679
300 - 399	27	13,725	6,114	6,442	2,409	2,517	1,357	409	691
400 - 499	15	8,409	4,522	4,757	1,950	1,902	1,166	216	674
500 - 749	32	28,864	14,500	14,835	4,885	5,111	2,645	1,105	735
750 - 999	17	21,296	11,316	11,449	3,260	3,897	1,757	350	769
1,000 - 1,499	14	26,783	10,930	12,842	4,134	4,527	2,206	647	644
1,500 - 1,999	9	22,327	10,424	12,192	3,682	4,619	2,005	650	657
2,000 - 2,499	6	17,301	9,039	10,070	3,247	3,857	1,690	619	679
2,500 - 2,999	3	14,413	7,202	6,373	1,884	2,182	1,148	640	872
3,000 - 4,999	4	20,433	11,612	10,452	5,894	4,202	3,339	458	713
5,000 and over	7	51,887	31,647	32,294	15,511	13,343	8,195	2,010	662
Total private firms	526	268,101	138,972	145,718	54,273	54,321	29,732	8,565	695

(continued on next page)

TABLE 3 (contd.)

Average number employed	Estab-lish-ments	Gross output	Net output	Employees		Wages and salaries		Capital expenditure (b)	Net output per person employed
				Operatives	Others	Operatives	Others		
	Number	£'000	£'000	Number	Number	£'000	£'000	£'000	£
(B) Government Departments in Great Britain									
11 - 24	9	146	108	113	38	67	26	2	717
25 - 49	2	67	56	44	15	27	11	3	944
100 - 199	2	275	172	283	48	130	28	2	519
300 - 399	1	331	206	306	52	134	35	1	574
500 - 749	5	2,675	1,566	2,599	444	1,139	269	22	515
3,000 - 3,999	1	3,324	2,154	2,932	547	1,394	351	171	619
5,000 - 7,499	1	6,320	4,124	5,302	1,081	2,500	654	268	646
10,000 and over	1	57,948	37,198	50,326	11,867	25,052	8,140	2,541	598
Total Government Departments	22	71,087	45,584	61,905	14,092	30,442	9,514	3,010	600

(a) Excluding outworkers and including working proprietors.

(b) Capital expenditure on new building work and on acquisition of plant, machinery and vehicles. Excluding expenditure for establishments not yet in production.

(c) Including a small number of establishments with fewer than 11 persons employed, particulars of which were included with those for larger establishments on a single return.

Analysis according to specialisation within the industry, 1954

Larger establishments in the United Kingdom

Private firms (a)

TABLE 4

	Unit	Specialist producers of				Remainder of the industry	Total
		Tele-graph and tele-phone apparatus	Radio and other electronic equipment (excluding valves) and gram-ophones	Valves (including cathode ray tubes)	Electric lamps		
Number of establishments	No.	82	270	33	59	82	526
Total value of sales and work done	£'000	58,806	125,665	20,633	13,978	45,111	264,192
Sales of characteristic products	"	39,243	109,522	17,935	12,040	18,650	63,483
Products on hand for sale and work in progress	{ at beginning of year + change during year	18,732 - 1,099	22,080 + 2,450	2,054 + 1,058	1,968 - 73	18,650 + 1,572	63,483 + 3,909
Gross output (production)	"	57,707	128,116	21,691	13,905	46,683	268,101
Purchases of materials and fuel	"	19,176	71,340	9,010	6,538	19,244	125,307
Stocks of materials and fuel	{ at beginning of year + change during year	5,050 - 224	12,224 + 2,164	1,743 + 263	1,265 + 157	6,496 - 288	26,776 + 2,072
Cost of materials and fuel used	"	19,399	69,176	8,747	6,381	19,532	123,235
Payment for work done on materials given out	"	427	2,452	874	33	926(b)	3,511
Payment for transport	"	322	1,347	207(b)	183	926(b)	2,384
Net output	"	37,559	55,141	12,738	7,309	26,225	138,972
Average number of employees	{ operatives + others	35,690 15,092	59,930 20,103	12,306 3,581	7,756 1,894	30,036 13,603	145,718 54,273
Total employment (c)	"	50,785	80,043	15,887	9,652	43,641	200,008
Net output per person employed (c)	£	740	689	802	757	601	695
Wages and salaries	{ of operatives + of others	14,310 7,959	21,097 11,587	4,465 1,989	2,560 977	11,889 7,221	54,321 29,732
Capital expenditure							
New building work (d)	"	254	737	304	20	338	1,653
Plant and machinery	{ acquisitions (d) + disposals	1,403 21	1,793 51	1,065 (b)	455 29	1,572 (b)	6,288 255
Vehicles	{ acquisitions (d) + disposals	82 12	402 84	5	31 9	103 36	624 142

(a) No specialisation was distinguished in the Government Departments section of this industry.

(b) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(c) Excluding outworkers and including working proprietors.

(d) Excluding expenditure for establishments not yet in production.

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RADIO AND TELECOMMUNICATIONS

Sales of the principal products of the industry, including sales of these products by establishments classified to other industries

Larger establishments

(A) Private firms

TABLE 5

	United Kingdom				
	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.	£'000	Th.	£'000	Number
Radio transmitters for public broadcasting, complete	..	212	..	1,068	5
Television transmitters, complete	..	716	..	1,000	5
Radio communication and navigational aids (including radar equipment), complete	..	12,585	..	28,825	64
Television receiving apparatus, whether or not sound reception or radiogram is incorporated					
Television receiving sets, complete	711	24,328	1,337	44,897	44
Television chassis, substantially assembled			8	197	8
Television terminal units	..	(a)	5	155	7
Radio receiving sets, domestic, complete (b)					
Mains	1,136	11,077	850	7,350	39
Battery (including vibrator)	253	1,943	319	1,958	21
Mains/battery	143	1,362	166	1,441	20
Car radio			97	1,066	7
Other			73	342	6
Radiograms, complete (b)	210	5,739	306	7,655	37
Radio receiver and radiogram chassis, substantially assembled	..	(a)	16	259	23
Radio testing equipment, not elsewhere specified	..	1,240	..	2,469	26
Telegraph and telephone equipment, other than testing equipment					
Complete switchboard installations, whether or not supplied with instruments	..	17,864	..	20,116	15
Telephone instruments complete, sold separately	675	3,663	867	4,501	18
Parts	..	5,016	..	6,116	45
Telephone instruments and parts, not separately distinguished	..	136	..	491	23
Line apparatus for long distance communication (carrier, duplex and repeater) and speech input equipment	..	4,420	..	9,166	18
Telegraph and telephone testing equipment, not elsewhere specified	..	173	..	276	10
Signalling apparatus, including traffic signals, other than for railways	..	1,037	..	1,719	16
Electrical signalling apparatus for railways (c)	..	1,188	..	1,695	14
Industrial radio frequency equipment (valve type)					
Heating	..	1,245	..	753	13
Other, including electronic control equipment	..		..	2,162	35
Gramophones and phonographs					
Complete					
Acoustic	78	319	107	700	5
With electrical amplification	16	227	60	476	11
Record players and auto-change mechanisms	184	828(d)	1,082	4,791	23

RADIO AND TELECOMMUNICATIONS

TABLE 5 (contd.)

	United Kingdom				
	1951		1954		
	Quantity	Value	Quantity	Value	Entries
	Th.	£'000	Th.	£'000	Number
Gramophones and phonographs (contd.)					
Parts and accessories other than electric motors	..	3,375	..	2,182	22
Motors, complete, electric and other (c)	..		66	75	..
Other electrical sound reproducing apparatus					
Complete					
For public address	25	421	9	305	27
For sound films	..	89	..	533	
Loudspeakers and microphones, sold separately (e)	7	1,244	3	1,176	..
For industrial relay	3,852	2,630	4,034	2,405	31
Other descriptions	..	275	..	285	
Parts	2	79	14	133	15
Tape recorders (c)	..	87		74	
Other electrical sound recording apparatus, including magnetic recording tape, etc.	6	156	..	907	31
Resistors, sold separately	..	106	..	89	..
Fixed	..	1,205	..	1,124	21
Variable	258,260	2,497	278,269	2,773	26
Transformers (other than for lighting, heating, power and instruments) (c)(f)	..	438	..	674	
Components and parts of radio apparatus, telegraph and telephone apparatus, etc., not elsewhere specified	10,967	1,589	17,238	1,945	26
Valves, electronic (other than X-ray valves), electronic stabilising tubes and cathode ray tubes, sold separately	..	702	..	294	
Complete	1,751	452	2,073	412	18
Thyratrons and hot cathode mercury vapour and gas-filled rectifiers	..		..	111	
Photo-electric cells, stabilising tubes and cold cathode valves	..	16,163	..	22,463	225
Magnetrons and klystrons	..		..
Cathode ray tubes					
Electromagnetic deflection	634	3,659	1,325	7,435	13
Electrostatic deflection	18	184			
Other					
Not over 50 watts anode dissipation	11,994	2,917(h)	46,832	9,886	14
Over 50 watts anode dissipation	82	1,055(h)	83	1,093	7
Parts	..	552	..	2,208	19
Electric lamps, filament type, complete, ready for use					
Not over 24 volts					
Motor vehicle types	39,988	1,527	61,300	2,140	24
Torch bulbs, radio panel and cycle dynamo bulbs	61,607	708	67,497	1,272	21
Other lamps not over 24 volts	16,672	597			
Over 24 volts	160,248	7,260	171,805	8,640	25

TABLE 5 (contd.)

	United Kingdom				
	1951		1954		Entries
	Quantity	Value	Quantity	Value	
	Th.	£'000	Th.	£'000	Number
Photoflash lamps for photographic and other purposes	3,620	153	4,316	184	..
Vacuum tubes, complete					
Discharge lamps, luminous tubes, fluorescent tubes and tube signs					
Advertising types, i.e. high tension cold cathode tubes over 300 volts	9	72	18	68	} 22
Other types	..	463	..	476	
Other fluorescent tubular lamps	6,939	1,808	8,770	2,021	14
Other discharge lamps, etc., not over 300 volts					
Not over 5 watts	..	16	542	146	6
Over 5 watts	420	601	623	933	8
Other, including X-ray tubes and X-ray valves	10	332	7	509	8
Parts of electric lamps and vacuum tubes (c)	..	1,413	..	1,571	18
Unclassified radio, telegraph, telephone, etc. apparatus for Government Departments	..	1,845	..	6,256 (i)	20
Waste products (other than scrap metals)	..	194	..	192	50
Total goods sold		157,190		237,291	..
Electrical contract and other work carried out in the United Kingdom					
Electrical contract work done as main contractors on telecommunication lines and works (j)		4,330		8,370	8
Other work					
Installation and erection of radio (including television), telegraph and telephone apparatus and appliances		9,189 (j)		3,981 (k)	19
Repair and maintenance work on customers' machinery and plant		2,989 (j)		3,766 (k)	73
Research and development work		3,311 (j)		6,352 (k)	55
Other work done for the industry or on commission (c)		190 (j)		334 (k)	12
Total work done		20,008		22,804	..
Less estimated value of goods made by firms and separately recorded as sold, which were used in the work on telecommunication lines and works		9,987 (l)		5,400	..
Total work done exclusive of the value of goods made and used in the work		10,021		17,404	..
Total goods sold and work done		167,211		254,694	..
Sales in other industries (see Table 6)		16,782		25,751	..
Principal products of this industry sold by establishments in the industry		150,429		228,943	345

(B) Government Departments

TABLE 5 (contd.)

	Great Britain		
	1951	1954	
	Value	Value	Entries
	£'000	£'000	Number
Telegraph and telephone equipment, other than testing equipment			
Complete switchboard installations, whether or not supplied with instruments	6	22	..
Telephone instruments complete, sold separately	2	95	..
Parts	537	1,004	..
Line apparatus for long distance communication (carrier, duplex and repeater) and speech input equipment	27	4	..
Telegraph and telephone testing equipment, not elsewhere specified	97	93	..
Signalling apparatus, including traffic signals, other than for railways	5	2	..
Components and parts of radio apparatus, telegraph and telephone apparatus, etc., not elsewhere specified	63	82	..
Waste products (other than scrap metals)	1,171	26	..
Total goods sold	1,906	1,327	..
Electrical contract and other work carried out in Great Britain			
Electrical contract work done as main contractors on telecommunication lines and works	11,784	17,736	..
Other work			
Installation and erection of radio (including television), telegraph and telephone apparatus and appliances	12,316	16,061	..
Repair and maintenance work	25,295	33,181	9
Research and development work	1,323	1,717	..
Total work done	50,717	68,694	..
Total goods sold and work done	52,623	70,021	9

(a) Not recorded separately.

(b) The 1951 figures include chassis substantially assembled.

(c) So far as recorded separately.

(d) Excluding auto-change mechanisms.

(e) The 1951 figures exclude microphones.

(f) For lighting, heating, power and instrument transformers see the Electrical Engineering (General) Industry (Volume 4, Industry K).

(g) Described as electronic valves other than X-ray, transmitting and industrial, including rectifying valves and stabilising tubes.

(h) Described as transmitting and industrial valves.

(i) Including some research and development work for Government Departments.

(j) Value of work done inclusive of the value of goods used by firms and recorded as their output.

(k) Excluding the value of goods used by firms and recorded as their output.

(l) Estimated value of goods made and used in all electrical contract and other work.

Sales of principal products of the industry by establishments
classified to other industries

Larger establishments in the United Kingdom
Private firms (a)

TABLE 6

	1954			Principal industries in which produced (b)
	Quantity	Value	Entries	
	Th.	£'000	Number	
Radio communication and navigational aids (including radar equipment), complete	..	5,704	18	3K, 4I, 4K, 5H
Television receiving apparatus, whether or not sound reception or radiogram is incorporated; radio receiving sets, domestic (excluding car radio); and radiograms	221	3,889	8	4K, 4N, 5E
Complete and chassis substantially assembled	..	63		
Telegraph and telephone equipment, other than testing equipment				
Complete installations; line apparatus for long distance communication (carrier, duplex and repeater) and speech input equipment; telephone instruments, complete, sold separately; and parts	..	1,857	48	4K, 4L, 11I, 12C
Radio transmitters for public broadcasting, complete; and radio, telegraph and telephone testing equipment not elsewhere specified	..	65	6	4K
Signalling apparatus, including traffic signals, other than for railways	..	150	7	4I, 4K, 4O
Electrical signalling apparatus for railways	..	1,438	11	3L, 4K, 12C
Industrial radio frequency equipment (valve type) including heating and electronic control equipment	..	1,470	19	4I, 4K, 5E
Electrical sound reproducing apparatus				
Complete				
For public address and sound films	1	269	5	4K
Other descriptions, including loudspeakers and microphones sold separately, record players and auto-change mechanism	18	77	8	4J, 4K
Parts, including motors and other parts and accessories of gramophones and phonographs	..	190	17	4H, 4K
Electrical sound recording apparatus including tape recorders, magnetic recording tape, etc.	..	105	6	5E, 5L, 11G
Resistors, sold separately	37,886	421	12	4I, 4K, 5E
Fixed	..	470		
Variable	156	19	11	4I, 4K, 4O
Components and parts of radio apparatus, telegraph and telephone apparatus, etc. not elsewhere specified	..	1,678	78	
Valves, electronic (other than X-ray valves) electronic stabilising tubes and cathode ray tubes, complete, sold separately	..	843	..	4K
Electric lamps, filament type, complete, ready for use, and photoflash lamps for photographic and other purposes	75,310	2,497	6	4K, 4N
	..	105		
Vacuum tubes, complete, including discharge lamps, luminous tubes, fluorescent tubes and tube signs, X-ray tubes and X-ray valves	1,766	923	13	4K, 4O, 5E
	..	178		
Parts of electronic valves, cathode ray tubes and vacuum tubes	..	441	11	1I, 4I, 4K, 4O
Total goods sold		23,135	..	

TABLE 6 (contd.)

	1954			Principal industries in which produced (b)
	Quantity	Value	Entries	
		£'000	Number	
Electrical contract and other work carried out in the United Kingdom				
Electrical contract work done as main contractors on telecommunication lines and works (c)				
Installation and erection of radio (including television), telegraph and telephone apparatus and appliances (d)		3,268	7	
Less estimated value of goods made by firms and separately recorded as sold which were used in the work on telecommunication lines and works		652	..	
Total work done exclusive of the value of goods made by firms and used in the work		2,616	..	
Total goods sold and work done		25,751	..	

(a) No sales of the principal products of this industry were recorded by Government establishments classified to other industries.

(b) The volume number and industry references given are to the industries shown in the list at the back of this report.

(c) Value of work done inclusive of the value of goods used by firms and recorded as their output.

(d) Excluding the value of goods used by firms and recorded as their output.

Sales in the industry of other than principal products

Larger establishments

TABLE 7

	1954	
	Private firms in the United Kingdom	Government Departments in Great Britain
	£'000	
Electrical machinery and plant	1,184	-
Electric lighting fittings and accessories	1,176	-
Capacitors	2,025	-
X-ray and other electro-medical apparatus	245	-
Cooking and heating apparatus and appliances, electric	373	-
Portable (mechanical) appliances, electrically operated	1,814	-
Transformers, instrument	80	-
Measuring instruments, commercial, electrical	43	-
Insulating materials	85	-
Scientific instruments, electrical	834	-
Electrical equipment for aircraft, and other aircraft accessories and parts	4,247	-
Other electrical goods	11,381	-
Scientific, surgical and photographic instruments, not elsewhere specified	1,270	-
Machinery and plant (other than electrical)	993	-
Machine tools	223	-
Other engineering products	1,024	-
Brass manufactures	137	-
Hardware, hollow-ware, metal furniture and sheet metal	177	-
Clocks, electric and other, including parts	174	-

TABLE 7 (contd.)

	1954	
	Private firms in the United Kingdom	Government Departments in Great Britain
	£'000	£'000
Scrap metals sold		
Iron and steel	69	13
Copper	225	20
Brass	712	-
Other metals	423	87
Other goods	4,548	-
Total goods sold	33,462	120
Electrical contract and other work carried out in the United Kingdom by private firms, and in Great Britain by Government Departments		
Electrical contract work done as main contractors, including work on power stations (thermal and hydro-electric) and electric power and lighting lines and works, but excluding that on telecommunication lines and works	755	1,089
Other work done, excluding the installation of radio (including television), telegraph and telephone apparatus and appliances	1,277	460
Total work done	2,031	1,549
Less estimated value of goods made by firms and separately recorded as sold, which were used in the contract work	245	
Total work done exclusive of the value of goods made and used in the work	1,787	1,549
Total goods sold and work done	35,249	1,668

Total make of certain products
Larger establishments in the United Kingdom
Private firms (a)

TABLE 8

	Returned in this industry			Returned in all industries		
	1951		1954	1951		1954
	Quantity	Quantity	Entries	Quantity	Quantity	Entries
				Th.	Th.	Number
Valves, electronic (other than X-ray valves), electronic stabilising tubes and cathode ray tubes						
Complete						
Thyratrons and hot cathode mercury vapour and gas-filled rectifiers					125	7
Photo-electric cells, stabilising tubes and cold cathode valves				26,847	2,755	11
Magnetrons and klystrons					43	7
Cathode ray tubes						
Electromagnetic deflection	(b)	(b)		761	1,495	10
Electrostatic deflection				19		
Other						
Not over 50 watts anode dissipation				12,029	48,120	12
Over 50 watts anode dissipation				140	89	7

(a) None of the products listed above was returned as made in Government establishments.

(b) Owing to the risk of disclosure of information relating to individual firms, separate particulars cannot be given.

(92237)

Purchases of materials and fuel, 1954

Larger establishments in the United Kingdom

Private firms (a)

TABLE 9

	Quantity	Cost
	Th.cwt.	£'000
Materials		
Iron and steel		
Drop forgings	1.7	17
Wrought tubes and fittings for wrought tubes	..	23
Wire and wire manufactures, including wire cables and ropes	3.6	19
Transmission and conveyor chains	..	3
Other iron	63.5	186
Castings in the rough or machined, except machined castings elsewhere specified	0.1	2
Other iron, except finished parts, including pig-iron (other than refined)	15.2	112
Ferro-alloys	..	19
Other steel (alloy and non-alloy)	10.7	30
Ingots, blooms, billets and slabs, and sheet and tinplate bars	..	105
Angles, shapes, sections, bars, rods (including wire rods) and girders, beams and joists (not fabricated)	1.4	48
Castings in the rough or machined, except machined castings elsewhere specified	..	11
Forgings, except drop-forgings, in the rough or machined, except machined forgings elsewhere specified	85.5	247
Tin-, terne- and black-plates, and tinned and terne sheets	226.2	610
Electrical quality sheets	..	73
Other plates and sheets 1/8 in. thick and over, and hoop and strip (including tape) of all thicknesses	4.2	24
Other plates and sheets under 1/8 in. thick	..	8
Springs, laminated and other types	1.4	16
Aluminium and aluminium alloys	..	14
Plates, sheets, strip, circles, blanks and foil	33.3	112
Castings and forgings, rough dressed	122.7	522
Other descriptions (except finished parts, wire and scrap)	..	54
Brass and other alloys of copper, including nickel silver and cupro-nickel, but excluding other nickel alloys	191.5	528
Copper	..	56
Lead and alloys of lead, including solder, in all forms (except finished parts and scrap)	349.8	959
Tin in all forms (except finished parts and scrap)	..	102
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	0.7	36
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	..	76
Copper	54.3	950
Wire rods	..	115
Wire, cables and flexibles, uninsulated	53.9	513
Other descriptions (except finished parts and scrap)	..	364
Lead and alloys of lead, including solder, in all forms (except finished parts and scrap)	19.1	443
Tin in all forms (except finished parts and scrap)	..	207
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	166.1	2,498
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	64.5	925
Copper	11.5	234
Wire rods	..	33
Wire, cables and flexibles, uninsulated	5.4	93
Other descriptions (except finished parts and scrap)	..	15
Lead and alloys of lead, including solder, in all forms (except finished parts and scrap)	203.5	3,444
Tin in all forms (except finished parts and scrap)	5.9	125
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	318.3	1,844
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	1.0	40
Zinc and alloys of zinc, except brass, in all forms (except finished parts and scrap)	24.5	133

(92237)

TABLE 9 (contd.)

	Quantity	Cost
	Th.cwt.	£'000
Materials (contd.)		
Uninsulated wire, cables and flexibles of non-ferrous metals except copper	6.7	52
	..	472
Bitumen and bitumastic compound	19.5	16
	..	3
Glass		
Blown	89.2	1,409
	..	1,698
Other descriptions	307.6	3,581
	..	429
Mica		
Block and splittings	1.2	44
	..	57
Built-up ('Micanite')	..	36
	Th.gal.	
Insulating oils	14.7	3
Paint, enamel and varnish, including emulsion paints, cellulose-based paints and lacquers	348.2	430
	..	52
	Th.cwt.	
Paper and paperboard, including press-board and paper yarn, tubes, etc. (excluding packaging material)	104.2	636
Plastics materials		
Synthetic resins	12.0	138
	..	28
Moulding powders	93.1	1,035
Sheet, foil, rods, tubes, film, etc. including laminated sheets	19.8	537
	..	177
Plating compounds	25.0	125
	..	154
Porcelain and other ceramics in all forms	1.5	114
	..	487
Rubber, including hard rubber, balata, gutta percha and synthetic rubber in all forms including finished parts	17.4	284
	..	474
Timber (excluding timber for packing, i.e. for making into cases, drums, etc. or for repairing returnable cases, and veneers)		
Hardwood and softwood	Th.cu.ft. 377.7	301
	Th.sq.ft. 5,291.5	309
Yarn, thread, tape and cloth, not oiled or otherwise coated or impregnated with insulating materials		
Of cotton	Th.lb.	
Yarn and thread	720.3	347
	200.0	97
Tape and cloth	..	115
	235.7	99
Of man-made fibres (rayon, nylon, etc.)	..	44
	33.1	21
Of silk	..	3
	1,897.0	88
Of jute	..	10
Electrical insulating materials not elsewhere specified	..	145
Insulated wires, cables, flexibles, strips and strands	..	3,361
Purchased components		
Ball and roller bearings and parts	Th.	188
	..	166
Batteries and accumulators	..	116
Fractional horse-power electric motors, i.e. less than one horse-power	25	14
	..	

TABLE 9 (contd.)

	Quantity	Cost
	Th.	£'000
Materials (contd.)		
Purchased components (contd.)		
Loudspeakers and microphones	1,820	1,080
	..	167
Magnets, permanent	12,051	1,198
Measuring and control instruments, including ammeters, voltmeters, thermostats, etc.	..	594
Radio and television cabinets		
Of wood	1,828	6,503
	633	534
	..	64
Valves, electronic (other than X-ray valves), electronic stabilising tubes and cathode ray tubes, excluding mercury pool rectifiers		
	1,145	6,506
Cathode ray tubes		
	246	104
Transmitting and industrial	..	611
	26,356	5,092
Other		
Electrical machinery not included above, i.e. generators, motors (other than fractional horse-power motors), converting machinery, static rectifiers, transformers for lighting, heating and power, starting, control and switchgear, etc. and parts thereof	..	619
Other purchased electrical components, including parts and accessories (pick-ups, automatic record changers, etc.) for gramophones and radiograms, not elsewhere specified	..	18,307
Other finished parts not elsewhere specified		
Wholly or mainly of plastics materials	..	1,990
Other, except those of rubber and glass	..	11,742
	Th.gal.	
Lubricating oils and greases, including cutting oils and emulsions	242.1	58
	..	24
Replacement parts for plant, machinery and vehicles, and accessories bought as replacement	..	1,077
Consumable tools, including engineers' small tools, jigs, fixtures and measuring instruments, bought as replacement	..	1,187
Packing materials		
Timber and wooden crates, packing cases, etc.	Th.cu.ft. 1,137.9	657
	..	350
Paper, including transparent cellulose wrapping, and paperboard and containers made from these materials, including fibreboard packing cases	..	2,472
Jute piece goods, including hessian and jute sacks	..	126
Other packing materials	..	401
All other purchased materials	..	16,255
Unclassified purchased materials	..	8,936
Fuel and electricity		
Coal	Th.tons 145.6	600
Coke	22.6	133
Liquid fuels (including creosote/pitch mixtures)		
For use in internal combustion engines		
Motor spirit (petrol) for use in road vehicles and derv. fuel	Th.gal. 1,496	303
	89	12
Other	..	3
For burning in furnaces, boilers, kilns, etc.	6,858	291

TABLE 9 (contd.)

	Quantity	Cost
		£'000
Fuel and electricity (contd.)		
Gas purchased		
From Gas Boards	Th.therms 11,497	717
From other sources, including other departments of the same firms	{ 335 ..	20 43
Electricity purchased (b)		
From Electricity Boards	Th.kWh. 311,930	1,755
From other sources, including other departments of the same firms	{ 12,407 ..	79 10
All other purchased fuel	..	26
Unclassified purchased materials and fuel	..	776
Total cost		125,307

(a) The total cost of materials purchased by Government Departments in Great Britain amounted to £25,484,000.

(b) Owing to the risk of disclosure of information relating to individual firms, the total quantity of electricity generated at firms' own establishments cannot be given.

Average number of employees and wages, salaries and superannuation payments (a)

Larger establishments

(A) Private firms

TABLE 10

	United Kingdom	
	1951	1954
Average number of employees		
Operatives	124,814	145,718
Administrative, technical and clerical employees	42,031	54,273
Total	166,845	199,991
Wages and salaries paid to		
Operatives	£'000 36,887	£'000 54,321
Administrative, technical and clerical employees	18,798	29,732
Total	55,685	84,053
Wages and salaries per head		
Operatives	£ 296	£ 373
Administrative, technical and clerical employees	447	548
Superannuation and other pension funds for employees and dependents (b)		
Employers' contributions	..	£'000 1,871
Employees covered	..	Number 86,418
Pension, etc. payments to former employees and dependents (b)	..	£'000 76

(B) Government Departments

TABLE 10 (contd.)

	Great Britain	
	1951	1954
Average number of employees		
Operatives	Number 59,589	Number 61,905
Administrative, technical and clerical employees	13,859	14,092
Total	73,448	75,997
Wages and salaries paid to		
Operatives	£'000 24,202	£'000 30,442
Administrative, technical and clerical employees	7,600	9,514
Total	31,802	39,956
Wages and salaries per head		
Operatives	£ 406	£ 492
Administrative, technical and clerical employees	548	675
Superannuation and other pension funds for employees and dependents		
Employers' contributions	..	..
Employees covered	..	..
Pension, etc. payments to former employees and dependents		

(a) The following persons, not included above, were also employed by larger establishments in this industry ('Other workers' includes, for example, employees engaged in merchanting). Payments to outworkers are also shown.

	Private firms		Government Departments	
	1951	1954	1951	1954
Canteen workers				
Males	137	134	-	-
Females	1,445	1,669	7	7
Total	1,582	1,803	7	7
Other workers				
Males	427	288	89	100
Females	198	185	27	20
Total	625	473	116	120
Total excluded employees	2,207	2,276	123	127
Outworkers				
Males	5	18	1	-
Females	288	202	9	-
Total	293	220	10	-
Payments to outworkers	£'000 30	£'000 24	£'000 -	£'000 -

(b) The figures given relate to larger establishments in Great Britain only.

RADIO AND TELECOMMUNICATIONS

Employment in a specified week (a)

Larger establishments

TABLE 11

	1951			1954		
	Males	Females	Total	Males	Females	Total
	(A) Private firms in the United Kingdom					
Working proprietors	21	1	22	17	-	17
Operatives	62,610	64,995	127,605	76,929	78,249	155,178
Administrative, technical and clerical employees	28,601	14,502	43,103	38,655	17,854	56,509
Total employees in private firms	91,211	79,497	170,708	115,584	96,103	211,687
	(B) Government Departments in Great Britain					
Operatives	58,315	1,210	59,525	60,573	1,313	61,886
Administrative, technical and clerical employees	9,466	4,464	13,930	9,033	5,006	14,039
Total employees in Government Departments	67,781	5,674	73,455	69,606	6,319	75,925

(a) Week ended September 22, 1951, or October 30, 1954.

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