

*P. W. Dy
Pres. of the Madras
Read the fol*

No. 227 T.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

CIVIL WORKS.

Telegraph.

Simla, the 7th October 1896.

Review of the Administration Report of the Indian Telegraph Department for the year 1895-96.

READ—

Letter from the Director General of Telegraphs, No. 45 T., dated the 19th August 1896, and its enclosure, being the Administration Report of the Indian Telegraph Department for the year 1895-96.

OBSERVATIONS.—The Administration Report of the Indian Telegraph Department deals with the whole of the operations under the control of the Director General.

2. The expenditure of the year charged to Capital Account amounted to Rs. 13,84,286. The capital outlay to the close of the year under review amounted to Rs. 5,87,68,582, divided as follows :

	Rs.	Percentage of net total.
Lines	4,58,21,940	78.0
Buildings	55,95,120	9.5
Apparatus and plant	22,74,063	3.8
Stores and suspense	30,26,771	5.2
Exchange on expenditure in England previous to 1887-88	24,09,440	4.1
Total	5,91,27,334	

Deduct—

Receipts on Capital Account (including interest on Workshop Capital)	3,58,752	0.6
Total	5,87,68,582	

3. The net additions made during the year to the systems maintained by the Telegraph Department comprised 1,727 miles of line and 4,670 miles of wire. There has been a decrease of 8 miles in the mileage of cable in use.

4. The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication :

	Capital expenditure.	Miles of line.	Miles of wire.	Miles of cable.	OFFICES OPENED.		
					Departmental, ordinary and postal combined	Railway and canal.	TOTAL.
	Rs.						
Up to beginning of 1891-92	5,02,41,676	37,070	1,13,512	251	949	1,428	2,377
During 1891-92 ..	19,42,128	1,555	6,647	2	52	—33	19
" 1892-93...	21,62,811	2,405	6,092	21	99	58	157
" 1893-94...	22,54,374	1,677	8,004	...	124	58	182
" 1894-95...	7,83,307	1,941	4,001	—3	138	10	148
" 1895-96...	13,84,286	1,727	4,670	—8	99	12	111
To end of 1895-96...	5,87,68,582	46,375	1,42,926	263	1,461	1,533	2,994

5. The operations of the Department during the year under review continue satisfactory. The Revenue receipts amounted to Rs. 89,74,949, being an increase of Rs. 9,35,274 over the figures for the previous year. This, however, does not correctly represent the result of the year under report. As explained in paragraph 5 of the review for 1894-95, the gross revenue of that year was reduced by a credit of Rs. 3,48,762 on account of rebate due to the East Indian railway for which the Revenue Accounts of that year were not responsible. Excluding this sum, the net increase in receipts during 1895-96 amounted to Rs. 5,86,512.

The Revenue expenditure amounted to Rs. 57,83,726, being an increase of Rs. 90,508. The net receipts thus amounted to Rs. 31,91,223, showing an increase of Rs. 8,44,766. The Revenue receipts include Rs. 13,24,937 on account of State messages, and Rs. 1,14,226 on account of news-free and other *pro forma* revenue; including the receipts on account of State messages and excluding the *pro forma* revenue, the net receipts amounted to 5.24 per cent. on the Capital outlay.

6. The revenue receipts are made up as follows :

	Rs.
Message revenue, including State messages ...	70,75,599
Rent of lines, etc., on railways and canals ...	15,03,843
Rent of private lines, etc. ...	2,15,866
Sale of books, gazettes, etc. ...	20,128
Miscellaneous ...	45,287
Total ...	88,60,723
News-free and <i>pro forma</i> revenue ...	1,14,226
Grand Total ...	89,74,949

The increase occurred chiefly under "message revenue" and was mainly due to an improvement in private messages.

7. The following statement summarises the Revenue receipts and charges during the last five years :

Year.	Gross receipts excluding <i>pro forma</i> revenue.	Charges.	Net receipts.	Percentage of net to gross receipts.	Return on capital.
	Rs.	Rs.	Rs.		
1891-92 ...	73,80,285	48,34,295	25,45,990	34.5	4.88
1892-93 ...	75,31,726	51,56,998	23,74,728	31.5	4.37
1893-94 ...	79,18,526	53,04,761	26,13,765	33.0	4.61
1894-95 ...	79,25,103	56,93,218	22,31,885	28.2	3.89
1895-96 ...	88,60,723	57,83,726	30,76,997	34.7	5.24

8. The following figures show for the last two years the division of the traffic between State and Private and between Inland and Foreign messages respectively :

Class of telegrams.	1894-95.		1895-96.	
	No.	Value.	No.	Value.
		Rs.		Rs.
State, Inland ...	585,571	11,52,852	603,366	12,61,667
" , Foreign ...	6,804	56,993	6,985	63,270
Total State ...	592,375	12,09,845	610,351	13,24,937
Private, Inland ...	3,231,555	32,15,974	3,491,571	34,75,316
" , Foreign ...	567,296	20,16,053	634,812	22,75,346
Total Private ...	3,798,851	52,32,027	4,126,383	57,50,662
Grand Total ...	4,391,226	64,41,872	4,736,734	70,75,599

The private traffic still continues to exhibit rapid progress. In the year under review, there was a rise of 327,532 in the number of private messages and of Rs. 5,18,635 in their value.

The State inland telegrams also exhibited an increase of 17,795 or 3.04 per cent. in number and of Rs. 1,08,815 or 9.44 per cent. in value. The increase was due to the military operations in connection with the Chitral Relief Force.

The revenue from trans-Indian traffic rose to Rs. 9,97,056 in the year under review, thus exceeding by Rs. 2,65,503 the figure of Rs. 7,31,553, at which the revenue stood in 1890-91 prior to the reduction in the transit rates.

9. The following table gives the percentages of traffic in number and value due to each class of message :

Class of telegram.	INLAND.		Foreign.		TOTAL.	
	No.	Value.	No.	Value.	No.	Value.
		Rs.		Rs.		Rs.
State ...	12.74	17.83	0.15	0.90	12.89	18.73
Private ...	73.71	49.12	13.40	32.15	87.11	81.27
Total ...	86.45	66.95	13.55	33.05	100.00	100.00

10. The following figures show the division of the inland traffic into the three classes of Urgent, Ordinary, and Deferred during the last two years :

	PERCENTAGES.					
	Urgent.		Ordinary.		Deferred.	
	1894-95.	1895-96.	1894-95.	1895-96.	1894-95.	1895-96.
State ...	11.40	13.00	21.39	22.07	67.21	64.93
Private ...	5.83	6.01	40.09	40.20	54.08	53.79
Press ...	5.21	7.19	21.44	18.55	73.35	74.26

11. The growth of inland private traffic in a period of ten years is shown by the following figures :

			Number of messages.	Value. Rs.
1886-87	...	...	1,683,758	18,17,798
1895-96	...	...	3,491,571	34,75,316
Increase ...	...	...	1,807,813	16,57,518

During the ten-year period the number of messages has increased by over 107 per cent. and their value by over 91 per cent.

12. The following statement gives the distribution of the revenue charges during the last five years under the principal heads :

Year.	LINE MAINTENANCE.				SIGNALLING.			
	Establishment.	Repairs to lines and buildings.	Office stores and miscellaneous.	Total.	Establishment.	Repairs to buildings.	Office stores and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92	8,79,200	3,70,357	72,080	13,21,637	32,45,459	64,596	2,02,603	35,12,658
1892-93	9,07,049	4,82,482	83,617	14,73,148	34,02,114	59,414	2,22,322	36,83,850
1893-94	9,75,007	4,37,270	63,623	14,75,900	35,31,694	56,038	2,41,129	38,28,861
1894-95	10,44,014	5,21,736	63,373	16,29,123	37,81,817	53,545	2,28,733	40,64,095
1895-96	10,29,601	5,12,178	76,691	16,18,470	38,71,077	56,515	2,37,664	41,65,256

13. The strength of the signalling establishment at the close of the year was 3,546 of whom 1,660 were departmental officers, 328 British military signallers and 1,555 postal clerks.

14. The following table shows the average time intervals taken in the transmission of telegrams (excluding *deferred*) over some of the principal main routes during the last five years. The average of these averages indicates the steady annual improvement that has taken place.

Section.	Number of miles.	1891-92.		1892-93.		1893-94.		1894-95.		1895-96.	
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
Calcutta to Karachi	1,750	0	36	0	25	0	29	0	27	0	22
Karachi to Calcutta		0	17	0	14	0	14	0	15	0	11
Calcutta to Bombay	1,283	0	27	0	33	0	32	0	26	0	21
Bombay to Calcutta		0	27	0	29	0	27	0	27	0	21
Calcutta to Madras	1,181	0	45	0	42	0	33	0	23	0	22
Madras to Calcutta		0	39	0	35	0	28	0	19	0	19
Madras to Bombay	796	0	21	0	23	0	25	0	21	0	19
Bombay to Madras		0	25	0	24	0	23	0	25	0	21
Bombay to Karachi	840	0	26	0	24	0	22	0	23	0	19
Karachi to Bombay		0	11	0	10	0	10	0	11	0	9
Rangoon to Calcutta	1,003	0	58	1	2	0	50	0	35	0	55
Calcutta to Rangoon		0	37	0	40	0	32	0	26	0	28
Average of averages		0	31	0	30	0	27	0	23	0	22

There has been an improvement in the speed of transmission of messages over the principal main routes except between Calcutta and Rangoon. The improvement in speed is most marked between Bombay and Calcutta and Calcutta and Kurrachee, and in a less degree between Bombay and Madras and Bombay and Kurrachee.

The great improvement in speed between Bombay and Calcutta was mainly due to the excellent service rendered by two new copper wires *via* the Bengal-Nagpur railway, that between Calcutta and Kurrachee to rearrangement of the circuit between Calcutta and Agra and that between Bombay and Madras to the fast service afforded by the introduction of direct working with Melhuish transformers on three additional circuits during the year.

The falling off in speed between Calcutta and Rangoon was due to a severe cyclone which completely wrecked telegraph lines between Akyab and Maungdaw from the 25th April to the 5th May 1895.

15. The number of complaints received relating to the Indian Telegraph Department was 1,568 equivalent to 0.030 per cent. of the total number of paid messages, of which 817 were admitted. Of those admitted, 179 applied to non-delivery, 180 to delay, and 256 to mistakes. The number of messages that for various causes could not be delivered, amounted to 15,166 equivalent to 0.258 per cent. of the total number received for transmission.

16. The total number of interruptions to communications amounted to 2,177 which shows a slight decrease over the previous year, the total duration of the interruptions was also less.

17. The number of telegraphic money orders rose to 129,912 from 121,618 in the previous year.

On the 1st May 1893, the exchange of telegraphic money orders with Ceylon was commenced, and in addition to the figures given above the total number of orders sent and received during the year under review amounted to 8,183 as compared with 4,546 during 1894-95 and 1,949 during the eleven months of 1893-94.

18. The Inland Press telegrams sent numbered 24,892, of the value of Rs. 96,168, against 26,202 valued at Rs. 1,02,804 in the previous year.

The Foreign Press messages numbered 3,422 and the Indian share of the charges thereon amounted to Rs. 19,864.

19. As regards electrical improvements, experiments in simultaneous Morse and Vibrator working over a single wire were carried out with the result that a combination of induction coils and condensers was adopted for trial. These are still under experiment.

Cardew's vibrating sounders which, as noticed in the review of the report for 1894-95, proved so valuable in maintaining communications through the faulty Ceylon cables, maintained communication between Bunji and Chilas, when a portion of the line was buried under the snow and also between Moné and Kengtung over the temporary uninsulated line of 197 miles when, owing to heavy rain, the line would have been unworkable with ordinary instruments.

The carrying capacity and utility of some of the long circuits worked duplex were increased by an ingenious arrangement, made by Mr. Melhuish, by which intermediate offices were enabled to use the through circuit for short intervals when it was not being worked by the terminal offices. This arrangement has proved useful in reducing delays and affording additional facilities to intermediate stations without any expense for new wires.

20. The use of the telephone continues to show satisfactory progress.

At the end of the year 1895 there were 1,537 subscribers and 1,546 exchange connections to the Telephone Companies at Bombay, Calcutta, Kurrachee, Madras, Moulmein and Rangoon. There were also 31 exchanges and 265 exchange connections under the control of the Telegraph Department.

21. The construction of a telegraph line between Moné, the most easterly telegraph station in the Southern Shan States, and Kengtung, 197 miles to the east

having been decided on, a temporary line was started by the end of May 1895. Work was rapidly pushed on simultaneously in three different directions and a telegraph office was opened at Kengtung in the beginning of July 1895, intermediate offices having been opened at Saihkau and Mongping by the end of June 1895.

Telegraphic communication with Kengtung was maintained by Cardew's vibrating sounders up to the end of the year, by which time the work of reconstructing the line in a permanent manner was well advanced.

22. In Kashmir the line from Ramghat to Jalipur was reconstructed and an extension from Jalipur to Chilas, 24 miles, was completed during the year under review.

On the Murree-Srinagar and Srinagar-Gilgit sections, special attention was paid to the removal of line from localities in which it had suffered in previous years from avalanches with the result that no interruption was caused by avalanches on the former section and only seven on the latter.

23. The Administration Report was received from the Director General of Telegraphs on 20th August, about the same date as last year. It has been carefully prepared, and presents results which the Governor General in Council considers highly satisfactory and creditable to the administration of the Director General, as well as to the working of the staff of the Department.

24. For the efficient manner in which he carried out the field telegraph operations in Chitral, Mr. F. E. Dempster has received the honour of a Companionship of the Order of the Indian Empire and the Government of India are pleased to endorse the commendation accorded by the Director General to the telegraph officers employed with the Chitral expedition and to others specially mentioned in his report.

ORDER.—Ordered, that a copy of this Review and of the Report be forwarded to the Secretary of State and to the Local Governments and Administrations noted on the margin, and to the Government of Ceylon for information. Also that a copy of the Review be forwarded to the Director General of Telegraphs for information.

Ordered also that a copy of the Review and of the Report and Appendices A, B and F, be forwarded to the Home Department of the Government of India for information, and that the Review be published in Part I of the *Gazette of India*.

W. S. S. BISSET, Col., R. E.,
Secretary to the Government of India.

Order

Order the now No 3064 W & 28 October 1896.

Communicated to the
Departments of the Secretariat
for information.

(20) D.M.C.
W
21/10/96

The Public Deptt
" Revenue "

No. 227 T.

GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.

CIVIL WORKS.

Telegraph.

Simla, the 7th October 1896.

Review of the Administration Report of the Indian Telegraph Department for the year 1895-96.

READ—

Letter from the Director General of Telegraphs, No. 45 T., dated the 19th August 1896, and its enclosure, being the Administration Report of the Indian Telegraph Department for the year 1895-96.

OBSERVATIONS.—The Administration Report of the Indian Telegraph Department deals with the whole of the operations under the control of the Director General.

2. The expenditure of the year charged to Capital Account amounted to Rs. 13,84,286. The capital outlay to the close of the year under review amounted to Rs. 5,87,68,582, divided as follows :

				Rs.	Percentage of net total.
Lines	...	...	...	4,58,21,940	78.0
Buildings	...	...	...	55,95,120	9.5
Apparatus and plant	...	...	...	22,74,063	3.8
Stores and suspense	...	...	...	30,26,771	5.2
Exchange on expenditure in England previous to 1887-88	...	...	...	24,09,440	4.1
Total	...	...	...	5,91,27,334	
Deduct—					
Receipts on Capital Account (including interest on Workshop Capital)	...	...	...	3,58,752	0.6
Total	...	...	...	5,87,68,582	

3. The net additions made during the year to the systems maintained by the Telegraph Department comprised 1,727 miles of line and 4,670 miles of wire. There has been a decrease of 8 miles in the mileage of cable in use.

4. The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication:

	Capital expenditure.	Miles of line.	Miles of wire.	Miles of cable.	OFFICES OPENED.		
					Departmental, ordinary and postal combined	Railway and canal.	TOTAL.
	Rs.						
Up to beginning of 1891-92	5,02,41,676	37,070	1,13,512	251	949	1,428	2,377
During 1891-92 ..	19,42,128	1,555	6,647	2	52	—33	19
" 1892-93...	21,62,811	2,405	6,092	21	99	58	157
" 1893-94...	22,54,374	1,677	8,004	...	124	58	182
" 1894-95...	7,83,307	1,941	4,001	—3	138	10	148
" 1895-96...	13,84,286	1,727	4,670	—8	99	12	111
To end of 1895-96...	5,87,68,582	46,375	1,42,926	263	1,461	1,533	2,994

5. The operations of the Department during the year under review continue satisfactory. The Revenue receipts amounted to Rs. 89,74,949, being an increase of Rs. 9,35,274 over the figures for the previous year. This, however, does not correctly represent the result of the year under report. As explained in paragraph 5 of the review for 1894-95, the gross revenue of that year was reduced by a credit of Rs. 3,48,762 on account of rebate due to the East Indian railway for which the Revenue Accounts of that year were not responsible. Excluding this sum, the net increase in receipts during 1895-96 amounted to Rs. 5,86,512.

The Revenue expenditure amounted to Rs. 57,83,726, being an increase of Rs. 90,508. The net receipts thus amounted to Rs. 31,91,223, showing an increase of Rs. 8,44,766. The Revenue receipts include Rs. 13,24,937 on account of State messages, and Rs. 1,14,226 on account of news-free and other *pro forma* revenue; including the receipts on account of State messages and excluding the *pro forma* revenue, the net receipts amounted to 5.24 per cent. on the Capital outlay.

6. The revenue receipts are made up as follows:

	Rs.
Message revenue, including State messages ...	70,75,599
Rent of lines, etc., on railways and canals ...	15,03,843
Rent of private lines, etc. ...	2,15,866
Sale of books, gazettes, etc. ...	20,128
Miscellaneous ...	45,287
Total ...	88,60,723
News-free and <i>pro forma</i> revenue ...	1,14,226
Grand Total ...	89,74,949

The increase occurred chiefly under "message revenue" and was mainly due to an improvement in private messages.

7. The following statement summarises the Revenue receipts and charges during the last five years:

Year.	Gross receipts excluding <i>pro forma</i> revenue.	Charges.	Net receipts.	Percentage of net to gross receipts.	Return on capital.
	Rs.	Rs.	Rs.		
1891-92 ...	73,80,285	48,34,295	25,45,990	34.5	4.88
1892-93 ...	75,31,726	51,56,998	23,74,728	31.5	4.37
1893-94 ...	79,18,526	53,04,761	26,13,765	33.0	4.61
1894-95 ...	79,25,103	56,93,218	22,31,885	28.2	3.89
1895-96 ...	88,60,723	57,83,726	30,76,997	34.7	5.24

8. The following figures show for the last two years the division of the traffic between State and Private and between Inland and Foreign messages respectively:

Class of telegrams.	1894-95.		1895-96.	
	No.	Value.	No.	Value.
		Rs.		Rs.
State, Inland ...	585,571	11,52,852	603,366	12,61,667
" , Foreign ...	6,804	56,993	6,985	63,270
Total State ...	592,375	12,09,845	610,351	13,24,937
Private, Inland ...	3,231,555	32,15,974	3,491,571	34,75,316
" , Foreign ...	567,296	20,16,053	634,812	22,75,346
Total Private ...	3,798,851	52,32,027	4,126,383	57,50,662
Grand Total ...	4,391,226	64,41,872	4,736,734	70,75,599

The private traffic still continues to exhibit rapid progress. In the year under review, there was a rise of 327,532 in the number of private messages and of Rs. 5,18,635 in their value.

The State inland telegrams also exhibited an increase of 17,795 or 3.04 per cent. in number and of Rs. 1,08,815 or 9.44 per cent. in value. The increase was due to the military operations in connection with the Chitral Relief Force.

The revenue from trans-Indian traffic rose to Rs. 9,97,056 in the year under review, thus exceeding by Rs. 2,65,503 the figure of Rs. 7,31,553, at which the revenue stood in 1890-91 prior to the reduction in the transit rates.

9. The following table gives the percentages of traffic in number and value due to each class of message :

Class of telegram.	INLAND.		Foreign.		TOTAL.	
	No.	Value.	No.	Value.	No.	Value.
		Rs.		Rs.		Rs.
State ...	12.74	17.83	0.15	0.90	12.89	18.73
Private ...	73.71	49.12	13.40	32.15	87.11	81.27
Total ...	86.45	66.95	13.55	33.05	100.00	100.00

10. The following figures show the division of the inland traffic into the three classes of Urgent, Ordinary, and Deferred during the last two years :

	PERCENTAGES.					
	Urgent.		Ordinary.		Deferred.	
	1894-95.	1895-96.	1894-95.	1895-96.	1894-95.	1895-96.
State ...	11.40	13.00	21.39	22.07	67.21	64.93
Private ...	5.83	6.01	40.09	40.20	54.08	53.79
Press ...	5.21	7.19	21.44	18.55	73.35	74.26

11. The growth of inland private traffic in a period of ten years is shown by the following figures :

			Number of messages.	Value. Rs.
1886-87 ...	...	...	1,683,758	18,17,798
1895-96 ...	...	...	3,491,571	34,75,316
Increase ...	...	...	1,807,813	16,57,518

During the ten-year period the number of messages has increased by over 107 per cent. and their value by over 91 per cent.

12. The following statement gives the distribution of the revenue charges during the last five years under the principal heads :

Year.	LINE MAINTENANCE.				SIGNALLING.			
	Establishment.	Repairs to lines and buildings.	Office stores and miscellaneous.	Total.	Establishment.	Repairs to buildings.	Office stores and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92 ...	8,79,200	3,70,357	72,080	13,21,637	32,45,459	64,596	2,02,603	35,12,658
1892-93 ...	9,07,049	4,82,482	83,617	14,73,148	34,02,114	59,414	2,22,322	36,83,850
1893-94 ...	9,75,007	4,37,270	63,623	14,75,900	35,31,694	56,038	2,41,129	38,28,861
1894-95 ...	10,44,014	5,21,736	63,373	16,29,123	37,81,817	53,545	2,28,733	40,64,095
1895-96 ...	10,29,601	5,12,178	76,691	16,18,470	38,71,077	56,515	2,37,664	41,65,256

13. The strength of the signalling establishment at the close of the year was 3,546 of whom 1,660 were departmental officers, 328 British military signallers and 1,555 postal clerks.

14. The following table shows the average time intervals taken in the transmission of telegrams (excluding deferred) over some of the principal main routes during the last five years. The average of these averages indicates the steady annual improvement that has taken place.

Section.	Number of miles.	1891-92.		1892-93.		1893-94.		1894-95.		1895-96.	
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
Calcutta to Karachi ...	1,750	0	36	0	25	0	29	0	27	0	22
Karachi to Calcutta ...		0	17	0	14	0	14	0	15	0	11
Calcutta to Bombay ...	1,283	0	27	0	33	0	32	0	26	0	21
Bombay to Calcutta ...		0	27	0	29	0	27	0	27	0	21
Calcutta to Madras ...	1,181	0	45	0	42	0	33	0	23	0	22
Madras to Calcutta ...		0	39	0	35	0	28	0	19	0	19
Madras to Bombay ...	796	0	21	0	23	0	25	0	21	0	19
Bombay to Madras ...		0	25	0	24	0	23	0	25	0	21
Bombay to Karachi ...	840	0	26	0	24	0	22	0	23	0	19
Karachi to Bombay ...		0	11	0	10	0	10	0	11	0	9
Rangoon to Calcutta ...	1,003	0	58	1	2	0	50	0	35	0	55
Calcutta to Rangoon ...		0	37	0	40	0	32	0	26	0	28
Average of averages ...		0	31	0	30	0	27	0	23	0	22

There has been an improvement in the speed of transmission of messages over the principal main routes except between Calcutta and Rangoon. The improvement in speed is most marked between Bombay and Calcutta and Calcutta and Kurrachee, and in a less degree between Bombay and Madras and Bombay and Kurrachee.

The great improvement in speed between Bombay and Calcutta was mainly due to the excellent service rendered by two new copper wires *via* the Bengal-Nagpur railway, that between Calcutta and Kurrachee to rearrangement of the circuit between Calcutta and Agra and that between Bombay and Madras to the fast service afforded by the introduction of direct working with Melhuish transformers on three additional circuits during the year.

The falling off in speed between Calcutta and Rangoon was due to a severe cyclone which completely wrecked telegraph lines between Akyab and Maungdaw from the 25th April to the 5th May 1895.

15. The number of complaints received relating to the Indian Telegraph Department was 1,568 equivalent to 0.030 per cent. of the total number of paid messages, of which 817 were admitted. Of those admitted, 179 applied to non-delivery, 180 to delay, and 256 to mistakes. The number of messages that for various causes could not be delivered, amounted to 15,166 equivalent to 0.258 per cent. of the total number received for transmission.

16. The total number of interruptions to communications amounted to 2,177 which shows a slight decrease over the previous year, the total duration of the interruptions was also less.

17. The number of telegraphic money orders rose to 129,912 from 121,618 in the previous year.

On the 1st May 1893, the exchange of telegraphic money orders with Ceylon was commenced, and in addition to the figures given above the total number of orders sent and received during the year under review amounted to 8,183 as compared with 4,546 during 1894-95 and 1,949 during the eleven months of 1893-94.

18. The Inland Press telegrams sent numbered 24,892, of the value of Rs. 96,168, against 26,202 valued at Rs. 1,02,804 in the previous year.

The Foreign Press messages numbered 3,422 and the Indian share of the charges thereon amounted to Rs. 19,864.

19. As regards electrical improvements, experiments in simultaneous Morse and Vibrator working over a single wire were carried out with the result that a combination of induction coils and condensers was adopted for trial. These are still under experiment.

Cardew's vibrating sounders which, as noticed in the review of the report for 1894-95, proved so valuable in maintaining communications through the faulty Ceylon cables, maintained communication between Bunji and Chilas, when a portion of the line was buried under the snow and also between Moné and Kengtung over the temporary uninsulated line of 197 miles when, owing to heavy rain, the line would have been unworkable with ordinary instruments.

The carrying capacity and utility of some of the long circuits worked duplex were increased by an ingenious arrangement, made by Mr. Melhuish, by which intermediate offices were enabled to use the through circuit for short intervals when it was not being worked by the terminal offices. This arrangement has proved useful in reducing delays and affording additional facilities to intermediate stations without any expense for new wires.

20. The use of the telephone continues to show satisfactory progress.

At the end of the year 1895 there were 1,537 subscribers and 1,546 exchange connections to the Telephone Companies at Bombay, Calcutta, Kurrachee, Madras, Moulmein and Rangoon. There were also 31 exchanges and 265 exchange connections under the control of the Telegraph Department.

21. The construction of a telegraph line between Moné, the most easterly telegraph station in the Southern Shan States, and Kengtung, 197 miles to the east

7
having been decided on, a temporary line was started by the end of May 1895. Work was rapidly pushed on simultaneously in three different directions and a telegraph office was opened at Kengtung in the beginning of July 1895, intermediate offices having been opened at Sainkau and Mongping by the end of June 1895.

Telegraphic communication with Kengtung was maintained by Cardew's vibrating sounders up to the end of the year, by which time the work of reconstructing the line in a permanent manner was well advanced.

22. In Kashmir the line from Ramghat to Jalipur was reconstructed and an extension from Jalipur to Chilas, 24 miles, was completed during the year under review.

On the Murree-Srinagar and Srinagar-Gilgit sections, special attention was paid to the removal of line from localities in which it had suffered in previous years from avalanches with the result that no interruption was caused by avalanches on the former section and only seven on the latter.

23. The Administration Report was received from the Director General of Telegraphs on 20th August, about the same date as last year. It has been carefully prepared, and presents results which the Governor General in Council considers highly satisfactory and creditable to the administration of the Director General, as well as to the working of the staff of the Department.

24. For the efficient manner in which he carried out the field telegraph operations in Chitral, Mr. F. E. Dempster has received the honour of a Companionship of the Order of the Indian Empire and the Government of India are pleased to endorse the commendation accorded by the Director General to the telegraph officers employed with the Chitral expedition and to others specially mentioned in his report.

ORDER.—Ordered, that a copy of this Review and of the Report be forwarded to the Secretary of State and to the Local Governments and Administrations noted on the margin, and to the Government of Ceylon for information. Also that a copy of the Review be forwarded to the Director General of Telegraphs for information.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam and Coorg.
The Residents at Hyderabad and in Mysore.
The Agents to the Governor General in Central India, Rajputana, and Baluchistan.

Ordered also that a copy of the Review and of the Report and Appendices A, B and F, be forwarded to the Home Department of the Government of India for information, and that the Review be published in Part I of the *Gazette of India*.

W. S. S. BISSET, Col., R. E.,
Secretary to the Government of India.

Order

Order thereon R 3084 W & 28th October 1896.

Communicated to the
Departments of the Secretariat
for information.

(24) Sme

W
21/10/96

N^o 227 J
7-10-96

The Public Dept
" Revenue "

Secy. of the Madras Govt.
Read the following

No. 227 T.

GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.

CIVIL WORKS.

Telegraph.

Simla, the 7th October 1896.

Review of the Administration Report of the Indian Telegraph Department for the year 1895-96.

READ—

Letter from the Director General of Telegraphs, No. 45 T., dated the 19th August 1896, and its enclosure, being the Administration Report of the Indian Telegraph Department for the year 1895-96.

OBSERVATIONS.—The Administration Report of the Indian Telegraph Department deals with the whole of the operations under the control of the Director General.

2. The expenditure of the year charged to Capital Account amounted to Rs. 13,84,286. The capital outlay to the close of the year under review amounted to Rs. 5,87,68,582, divided as follows :

	Rs.	Percentage of net total.
Lines	4,58,21,940	78.0
Buildings	55,95,120	9.5
Apparatus and plant	22,74,063	3.8
Stores and suspense	30,26,771	5.2
Exchange on expenditure in England previous to 1887-88	24,09,440	4.1
Total ...	5,91,27,334	
Deduct—		
Receipts on Capital Account (including interest on Workshop Capital)	3,58,752	0.6
Total ...	5,87,68,582	

3. The net additions made during the year to the systems maintained by the Telegraph Department comprised 1,727 miles of line and 4,670 miles of wire. There has been a decrease of 8 miles in the mileage of cable in use.

4. The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication :

	Capital expenditure.	Miles of line.	Miles of wire.	Miles of cable.	OFFICES OPENED.		
					Departmental, ordinary and postal combined	Railway and canal.	TOTAL.
	Rs.						
Up to beginning of 1891-92	5,02,41,676	37,070	1,13,512	251	949	1,428	2,377
During 1891-92...	19,42,128	1,555	6,647	2	52	—33	19
" 1892-93...	21,62,811	2,405	6,092	21	99	58	157
" 1893-94...	22,54,374	1,677	8,004	...	124	58	182
" 1894-95...	7,83,307	1,941	4,001	—3	138	10	148
" 1895-96...	13,84,286	1,727	4,670	—8	99	12	111
To end of 1895-96...	5,87,68,582	46,375	1,42,926	263	1,461	1,533	2,954

5. The operations of the Department during the year under review continue satisfactory. The Revenue receipts amounted to Rs. 89,74,949, being an increase of Rs. 9,35,274 over the figures for the previous year. This, however, does not correctly represent the result of the year under report. As explained in paragraph 5 of the review for 1894-95, the gross revenue of that year was reduced by a credit of Rs. 3,48,762 on account of rebate due to the East Indian railway for which the Revenue Accounts of that year were not responsible. Excluding this sum, the net increase in receipts during 1895-96 amounted to Rs. 5,86,512.

The Revenue expenditure amounted to Rs. 57,83,726, being an increase of Rs. 90,508. The net receipts thus amounted to Rs. 31,91,223, showing an increase of Rs. 8,44,766. The Revenue receipts include Rs. 13,24,937 on account of State messages, and Rs. 1,14,226 on account of news-free and other *pro forma* revenue; including the receipts on account of State messages and excluding the *pro forma* revenue, the net receipts amounted to 5.24 per cent. on the Capital outlay.

6. The revenue receipts are made up as follows :

	Rs.
Message revenue, including State messages ...	70,75,599
Rent of lines, etc., on railways and canals ...	15,03,843
Rent of private lines, etc. ...	2,15,866
Sale of books, gazettes, etc. ...	20,128
Miscellaneous ...	45,287
Total ...	88,60,723
News-free and <i>pro forma</i> revenue ...	1,14,226
Grand Total ...	89,74,949

The increase occurred chiefly under "message revenue" and was mainly due to an improvement in private messages.

7. The following statement summarises the Revenue receipts and charges during the last five years :

Year.	Gross receipts excluding <i>pro forma</i> revenue.	Charges.	Net receipts.	Percentage of net to gross receipts.	Return on capital.
	Rs.	Rs.	Rs.		
1891-92 ...	73,80,285	48,34,295	25,45,990	34.5	4.88
1892-93 ...	75,31,726	51,56,998	23,74,728	31.5	4.37
1893-94 ...	79,18,526	53,04,761	26,13,765	33.0	4.61
1894-95 ...	79,25,103	56,93,218	22,31,885	28.2	3.89
1895-96 ...	88,60,723	57,83,726	30,76,997	34.7	5.24

8. The following figures show for the last two years the division of the traffic between State and Private and between Inland and Foreign messages respectively :

Class of telegrams.	1894-95.		1895-96.	
	No.	Value.	No.	Value.
		Rs.		Rs.
State, Inland ...	585,571	11,52,852	603,366	12,61,667
" , Foreign ...	6,804	56,993	6,985	63,270
Total State ...	592,375	12,09,845	610,351	13,24,937
Private, Inland ...	3,231,555	32,15,974	3,491,571	34,75,316
" , Foreign ...	567,296	20,16,053	634,812	22,75,346
Total Private ...	3,798,851	52,32,027	4,126,383	57,50,662
Grand Total ...	4,391,226	64,41,872	4,736,734	70,75,599

The private traffic still continues to exhibit rapid progress. In the year under review, there was a rise of 327,532 in the number of private messages and of Rs. 5,18,635 in their value.

The State inland telegrams also exhibited an increase of 17,795 or 3.04 per cent. in number and of Rs. 1,08,815 or 9.44 per cent. in value. The increase was due to the military operations in connection with the Chitral Relief Force.

The revenue from trans-Indian traffic rose to Rs. 9,97,056 in the year under review, thus exceeding by Rs. 2,65,503 the figure of Rs. 7,31,553, at which the revenue stood in 1890-91 prior to the reduction in the transit rates.

9. The following table gives the percentages of traffic in number and value due to each class of message:

Class of telegram.	INLAND.		Foreign.		TOTAL.	
	No.	Value.	No.	Value.	No.	Value.
		Rs.		Rs.		Rs.
State ...	12'74	17'83	0'15	0'90	12'89	18'73
Private ...	73'71	49'12	13'40	32'15	87'11	81'27
Total ...	86'45	66'95	13'55	33'05	100'00	100'00

10. The following figures show the division of the inland traffic into the three classes of Urgent, Ordinary, and Deferred during the last two years:

	PERCENTAGES.					
	Urgent.		Ordinary.		Deferred.	
	1894-95.	1895-96.	1894-95.	1895-96.	1894-95.	1895-96.
State ...	11'40	13'00	21'39	22'07	67'21	64'93
Private ...	5'83	6'01	40'09	40'20	54'08	53'79
Press ...	5'21	7'19	21'44	18'55	73'35	74'26

11. The growth of inland private traffic in a period of ten years is shown by the following figures:

			Number of messages.	Value. Rs.
1886-87	...	...	1,683,758	18,17,798
1895-96	...	...	3,491,571	34,75,316
Increase ...	...	...	1,807,813	16,57,518

During the ten-year period the number of messages has increased by over 107 per cent. and their value by over 91 per cent.

12. The following statement gives the distribution of the revenue charges during the last five years under the principal heads:

Year.	LINE MAINTENANCE.				SIGNALLING.			
	Establishment.	Repairs to lines and buildings.	Office stores and miscellaneous.	Total.	Establishment.	Repairs to buildings.	Office stores and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92	8,79,200	3,70,357	72,080	13,21,637	32,45,450	64,596	2,02,603	35,12,658
1892-93	9,07,049	4,82,482	83,617	14,73,148	34,02,114	59,414	2,22,322	36,83,850
1893-94	9,75,007	4,37,270	63,623	14,75,900	35,31,694	56,038	2,41,129	38,28,861
1894-95	10,44,014	5,21,736	63,373	16,29,123	37,81,817	53,545	2,28,733	40,64,095
1895-96	10,29,601	5,12,178	76,691	16,18,470	38,71,077	56,515	2,37,664	41,65,256

13. The strength of the signalling establishment at the close of the year was 3,546 of whom 1,660 were departmental officers, 328 British military signallers and 1,555 postal clerks.

14. The following table shows the average time intervals taken in the transmission of telegrams (excluding *deferred*) over some of the principal main routes during the last five years. The average of these averages indicates the steady annual improvement that has taken place.

Section.	Number of miles.	1891-92.		1892-93.		1893-94.		1894-95.		1895-96.	
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
Calcutta to Karachi	1,750	0	36	0	25	0	29	0	27	0	22
Karachi to Calcutta		0	17	0	14	0	14	0	15	0	11
Calcutta to Bombay	1,283	0	27	0	33	0	32	0	26	0	21
Bombay to Calcutta		0	27	0	29	0	27	0	27	0	21
Calcutta to Madras	1,181	0	45	0	42	0	33	0	23	0	22
Madras to Calcutta		0	39	0	35	0	28	0	19	0	19
Madras to Bombay	796	0	21	0	23	0	25	0	21	0	19
Bombay to Madras		0	25	0	24	0	23	0	25	0	21
Bombay to Karachi	840	0	26	0	24	0	22	0	23	0	19
Karachi to Bombay		0	11	0	10	0	10	0	11	0	9
Rangoon to Calcutta	1,003	0	58	1	2	0	50	0	35	0	55
Calcutta to Rangoon		0	37	0	40	0	32	0	26	0	28
Average of averages		0	31	0	30	0	27	0	23	0	22

There has been an improvement in the speed of transmission of messages over the principal main routes except between Calcutta and Rangoon. The improvement in speed is most marked between Bombay and Calcutta and Calcutta and Kurrachee, and in a less degree between Bombay and Madras and Bombay and Kurrachee.

The great improvement in speed between Bombay and Calcutta was mainly due to the excellent service rendered by two new copper wires *via* the Bengal-Nagpur railway, that between Calcutta and Kurrachee to rearrangement of the circuit between Calcutta and Agra and that between Bombay and Madras to the fast service afforded by the introduction of direct working with Melhuish transformers on three additional circuits during the year.

The falling off in speed between Calcutta and Rangoon was due to a severe cyclone which completely wrecked telegraph lines between Akyab and Maungdaw from the 25th April to the 5th May 1895.

15. The number of complaints received relating to the Indian Telegraph Department was 1,568 equivalent to 0.030 per cent. of the total number of paid messages, of which 817 were admitted. Of those admitted, 179 applied to non-delivery, 180 to delay, and 256 to mistakes. The number of messages that for various causes could not be delivered, amounted to 15,166 equivalent to 0.258 per cent. of the total number received for transmission.

16. The total number of interruptions to communications amounted to 2,177 which shows a slight decrease over the previous year, the total duration of the interruptions was also less.

17. The number of telegraphic money orders rose to 129,912 from 121,618 in the previous year.

On the 1st May 1893, the exchange of telegraphic money orders with Ceylon was commenced, and in addition to the figures given above the total number of orders sent and received during the year under review amounted to 8,183 as compared with 4,546 during 1894-95 and 1,949 during the eleven months of 1893-94.

18. The Inland Press telegrams sent numbered 24,892, of the value of Rs. 96,168, against 26,202 valued at Rs. 1,02,804 in the previous year.

The Foreign Press messages numbered 3,422 and the Indian share of the charges thereon amounted to Rs. 19,864.

19. As regards electrical improvements, experiments in simultaneous Morse and Vibrator working over a single wire were carried out with the result that a combination of induction coils and condensers was adopted for trial. These are still under experiment.

Cardew's vibrating sounders which, as noticed in the review of the report for 1894-95, proved so valuable in maintaining communications through the faulty Ceylon cables, maintained communication between Bunji and Chilas, when a portion of the line was buried under the snow and also between Moné and Kengtung over the temporary uninsulated line of 197 miles when, owing to heavy rain, the line would have been unworkable with ordinary instruments.

The carrying capacity and utility of some of the long circuits worked duplex were increased by an ingenious arrangement, made by Mr. Melhuish, by which intermediate offices were enabled to use the through circuit for short intervals when it was not being worked by the terminal offices. This arrangement has proved useful in reducing delays and affording additional facilities to intermediate stations without any expense for new wires.

20. The use of the telephone continues to show satisfactory progress.

At the end of the year 1895 there were 1,537 subscribers and 1,546 exchange connections to the Telephone Companies at Bombay, Calcutta, Kurrachee, Madras, Moulmein and Rangoon. There were also 31 exchanges and 265 exchange connections under the control of the Telegraph Department.

21. The construction of a telegraph line between Moné, the most easterly telegraph station in the Southern Shan States, and Kengtung, 197 miles to the east

having been decided on, a temporary line was started by the end of May 1895. Work was rapidly pushed on simultaneously in three different directions and a telegraph office was opened at Kengtung in the beginning of July 1895, intermediate offices having been opened at Saihkau and Mongping by the end of June 1895.

Telegraphic communication with Kengtung was maintained by Cardew's vibrating sounders up to the end of the year, by which time the work of reconstructing the line in a permanent manner was well advanced.

22. In Kashmir the line from Ramghat to Jalipur was reconstructed and an extension from Jalipur to Chilas, 24 miles, was completed during the year under review.

On the Murree-Srinagar and Srinagar-Gilgit sections, special attention was paid to the removal of line from localities in which it had suffered in previous years from avalanches with the result that no interruption was caused by avalanches on the former section and only seven on the latter.

23. The Administration Report was received from the Director General of Telegraphs on 20th August, about the same date as last year. It has been carefully prepared, and presents results which the Governor General in Council considers highly satisfactory and creditable to the administration of the Director General, as well as to the working of the staff of the Department.

24. For the efficient manner in which he carried out the field telegraph operations in Chitral, Mr. F. E. Dempster has received the honour of a Companionship of the Order of the Indian Empire and the Government of India are pleased to endorse the commendation accorded by the Director General to the telegraph officers employed with the Chitral expedition and to others specially mentioned in his report.

ORDER.—Ordered, that a copy of this Review and of the Report be forwarded to the Secretary of State and to the Local Governments and Administrations noted on the margin, and to the Government of Ceylon for information. Also that a copy of the Review be forwarded to the Director General of Telegraphs for information.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam and Coorg.
The Residents at Hyderabad and in Mysore.
The Agents to the Governor General in Central India, Rajputana, and Baluchistan.

Ordered also that a copy of the Review and of the Report and Appendices A, B and F, be forwarded to the Home Department of the Government of India for information, and that the Review be published in Part I of the *Gazette of India*.

W. S. S. BISSET, Col., R. E.,
Secretary to the Government of India.

Order

Order thereon R 3064 N 28 October 1896.

Communicated to the
Departments of the Secretariat
for information.

(D) Dmc
W
21/10/96

The Public Department
" Revenue "

P. W. Department
Pres. of the Madras Govt.
Read the following

No. 227 T.

GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.

CIVIL WORKS.

Telegraph.

Simla, the 7th October 1896.

Review of the Administration Report of the Indian Telegraph Department for the year 1895-96.

READ—

Letter from the Director General of Telegraphs, No. 45 T., dated the 19th August 1896, and its enclosure, being the Administration Report of the Indian Telegraph Department for the year 1895-96.

OBSERVATIONS.—The Administration Report of the Indian Telegraph Department deals with the whole of the operations under the control of the Director General.

2. The expenditure of the year charged to Capital Account amounted to Rs. 13,84,286. The capital outlay to the close of the year under review amounted to Rs. 5,87,68,582, divided as follows :

				Rs.	Percentage of net total.
Lines	...	...	...	4,58,21,940	78.0
Buildings	...	...	...	55,95,120	9.5
Apparatus and plant	...	...	...	22,74,063	3.8
Stores and suspense	...	...	...	30,26,771	5.2
Exchange on expenditure in England previous to 1887-88	...	...	...	24,09,440	4.1
Total				5,91,27,334	

Deduct—

Receipts on Capital Account (including interest on Workshop Capital)	...	...	3,58,752	0.6
Total			5,87,68,582	

3. The net additions made during the year to the systems maintained by the Telegraph Department comprised 1,727 miles of line and 4,670 miles of wire. There has been a decrease of 8 miles in the mileage of cable in use.

4. The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication :

	Capital expenditure.	Miles of line.	Miles of wire.	Miles of cable.	OFFICES OPENED.		
					Departmental, ordinary and postal combined	Railway and canal.	TOTAL.
	Rs.						
Up to beginning of 1891-92	5,02,41,676	37,070	1,13,512	251	949	1,428	2,377
During 1891-92 ..	19,42,128	1,555	6,647	2	52	—33	19
" 1892-93...	21,62,811	2,405	6,092	21	99	58	157
" 1893-94...	22,54,374	1,677	8,004	...	124	58	182
" 1894-95...	7,83,307	1,941	4,001	—3	138	10	148
" 1895-96...	13,84,286	1,727	4,670	—8	99	12	111
To end of 1895-96...	5,87,68,582	46,375	1,42,926	263	1,461	1,533	2,994

5. The operations of the Department during the year under review continue satisfactory. The Revenue receipts amounted to Rs. 89,74,949, being an increase of Rs. 9,35,274 over the figures for the previous year. This, however, does not correctly represent the result of the year under report. As explained in paragraph 5 of the review for 1894-95, the gross revenue of that year was reduced by a credit of Rs. 3,48,762 on account of rebate due to the East Indian railway for which the Revenue Accounts of that year were not responsible. Excluding this sum, the net increase in receipts during 1895-96 amounted to Rs. 5,86,512.

The Revenue expenditure amounted to Rs. 57,83,726, being an increase of Rs. 90,508. The net receipts thus amounted to Rs. 31,91,223, showing an increase of Rs. 8,44,766. The Revenue receipts include Rs. 13,24,937 on account of State messages, and Rs. 1,14,226 on account of news-free and other *pro forma* revenue; including the receipts on account of State messages and excluding the *pro forma* revenue, the net receipts amounted to 5.24 per cent. on the Capital outlay.

6. The revenue receipts are made up as follows :

	Rs.
Message revenue, including State messages ...	70,75,599
Rent of lines, etc., on railways and canals ...	15,03,843
Rent of private lines, etc. ...	2,15,866
Sale of books, gazettes, etc. ...	20,128
Miscellaneous ...	45,287
Total ...	88,60,723
News-free and <i>pro forma</i> revenue ...	1,14,226
Grand Total ...	89,74,949

The increase occurred chiefly under "message revenue" and was mainly due to an improvement in private messages.

7. The following statement summarises the Revenue receipts and charges during the last five years :

Year.	Gross receipts excluding <i>pro forma</i> revenue.	Charges.	Net receipts.	Percentage of net to gross receipts.	Return on capital.
	Rs.	Rs.	Rs.		
1891-92 ...	73,80,285	48,34,295	25,45,990	34.5	4.88
1892-93 ...	75,31,726	51,56,998	23,74,728	31.5	4.37
1893-94 ...	79,18,526	53,04,761	26,13,765	33.0	4.61
1894-95 ...	79,25,103	56,93,218	22,31,885	28.2	3.89
1895-96 ...	88,60,723	57,83,726	30,76,997	34.7	5.24

8. The following figures show for the last two years the division of the traffic between State and Private and between Inland and Foreign messages respectively :

Class of telegrams.	1894-95.		1895-96.	
	No.	Value.	No.	Value.
		Rs.		Rs.
State, Inland ...	585,571	11,52,852	603,366	12,61,667
" , Foreign ...	6,804	56,993	6,985	63,270
Total State ...	592,375	12,09,845	610,351	13,24,937
Private, Inland ...	3,231,555	32,15,974	3,491,571	34,75,316
" , Foreign ...	567,296	20,16,053	634,812	22,75,346
Total Private ...	3,798,851	52,32,027	4,126,383	57,50,662
Grand Total ...	4,391,226	64,41,872	4,736,734	70,75,599

The private traffic still continues to exhibit rapid progress. In the year under review, there was a rise of 327,532 in the number of private messages and of Rs. 5,18,635 in their value.

The State inland telegrams also exhibited an increase of 17,795 or 3.04 per cent. in number and of Rs. 1,08,815 or 9.44 per cent. in value. The increase was due to the military operations in connection with the Chitral Relief Force.

The revenue from trans-Indian traffic rose to Rs. 9,97,056 in the year under review, thus exceeding by Rs. 2,65,503 the figure of Rs. 7,31,553, at which the revenue stood in 1890-91 prior to the reduction in the transit rates.

9. The following table gives the percentages of traffic in number and value due to each class of message:

Class of telegram.	INLAND.		Foreign.		TOTAL.	
	No.	Value.	No.	Value.	No.	Value.
		Rs.		Rs.		Rs.
State ...	12.74	17.83	0.15	0.90	12.89	18.73
Private ...	73.71	49.12	13.40	32.15	87.11	81.27
Total ...	86.45	66.95	13.55	33.05	100.00	100.00

10. The following figures show the division of the inland traffic into the three classes of Urgent, Ordinary, and Deferred during the last two years:

	PERCENTAGES.					
	Urgent.		Ordinary.		Deferred.	
	1894-95.	1895-96.	1894-95.	1895-96.	1894-95.	1895-96.
State ...	11.40	13.00	21.39	22.07	67.21	64.93
Private ...	5.83	6.01	40.09	40.20	54.08	53.79
Press ...	5.21	7.19	21.44	18.55	73.35	74.26

11. The growth of inland private traffic in a period of ten years is shown by the following figures:

			Number of messages.	Value. Rs.
1886-87	...	...	1,683,758	18,17,798
1895-96	...	...	3,491,571	34,75,316
Increase ...	...	...	1,807,813	16,57,518

During the ten-year period the number of messages has increased by over 107 per cent. and their value by over 91 per cent.

12. The following statement gives the distribution of the revenue charges during the last five years under the principal heads:

Year.	LINE MAINTENANCE.				SIGNALLING.			
	Establishment.	Repairs to lines and buildings.	Office stores and miscellaneous.	Total.	Establishment.	Repairs to buildings.	Office stores and miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92	8,79,200	3,70,357	72,080	13,21,637	32,45,459	64,596	2,02,603	35,12,658
1892-93	9,07,049	4,82,482	83,617	14,73,148	34,02,114	59,414	2,22,322	36,83,850
1893-94	9,75,007	4,37,270	63,623	14,75,900	35,31,694	56,038	2,41,129	38,28,861
1894-95	10,44,014	5,21,736	63,373	16,29,123	37,81,817	53,545	2,28,733	40,64,095
1895-96	10,29,601	5,12,178	76,691	16,18,470	38,71,077	56,515	2,37,664	41,65,256

13. The strength of the signalling establishment at the close of the year was 3,546 of whom 1,660 were departmental officers, 328 British military signallers and 1,555 postal clerks.

14. The following table shows the average time intervals taken in the transmission of telegrams (excluding *deferred*) over some of the principal main routes during the last five years. The average of these averages indicates the steady annual improvement that has taken place.

Section.	Number of miles.	1891-92.		1892-93.		1893-94.		1894-95.		1895-96.	
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
Calcutta to Karachi	1,750	0	36	0	25	0	29	0	27	0	22
Karachi to Calcutta		0	17	0	14	0	14	0	15	0	11
Calcutta to Bombay	1,283	0	27	0	33	0	32	0	26	0	21
Bombay to Calcutta		0	27	0	29	0	27	0	27	0	21
Calcutta to Madras	1,181	0	45	0	42	0	33	0	23	0	22
Madras to Calcutta		0	39	0	35	0	28	0	19	0	19
Madras to Bombay	796	0	21	0	23	0	25	0	21	0	19
Bombay to Madras		0	25	0	24	0	23	0	25	0	21
Bombay to Karachi	840	0	26	0	24	0	22	0	23	0	19
Karachi to Bombay		0	11	0	10	0	10	0	11	0	9
Rangoon to Calcutta	1,003	0	58	1	2	0	50	0	35	0	55
Calcutta to Rangoon		0	37	0	40	0	32	0	26	0	28
Average of averages		0	31	0	30	0	27	0	23	0	22

There has been an improvement in the speed of transmission of messages over the principal main routes except between Calcutta and Rangoon. The improvement in speed is most marked between Bombay and Calcutta and Calcutta and Kurrachee, and in a less degree between Bombay and Madras and Bombay and Kurrachee.

The great improvement in speed between Bombay and Calcutta was mainly due to the excellent service rendered by two new copper wires *via* the Bengal-Nagpur railway, that between Calcutta and Kurrachee to rearrangement of the circuit between Calcutta and Agra and that between Bombay and Madras to the fast service afforded by the introduction of direct working with Melhuish transformers on three additional circuits during the year.

The falling off in speed between Calcutta and Rangoon was due to a severe cyclone which completely wrecked telegraph lines between Akyab and Maungdaw from the 25th April to the 5th May 1895.

15. The number of complaints received relating to the Indian Telegraph Department was 1,568 equivalent to 0.030 per cent. of the total number of paid messages, of which 817 were admitted. Of those admitted, 179 applied to non-delivery, 180 to delay, and 256 to mistakes. The number of messages that for various causes could not be delivered, amounted to 15,166 equivalent to 0.258 per cent. of the total number received for transmission.

16. The total number of interruptions to communications amounted to 2,177 which shows a slight decrease over the previous year, the total duration of the interruptions was also less.

17. The number of telegraphic money orders rose to 129,912 from 121,618 in the previous year.

On the 1st May 1893, the exchange of telegraphic money orders with Ceylon was commenced, and in addition to the figures given above the total number of orders sent and received during the year under review amounted to 8,183 as compared with 4,546 during 1894-95 and 1,949 during the eleven months of 1893-94.

18. The Inland Press telegrams sent numbered 24,892, of the value of Rs. 96,168, against 26,202 valued at Rs. 1,02,804 in the previous year.

The Foreign Press messages numbered 3,422 and the Indian share of the charges thereon amounted to Rs. 19,864.

19. As regards electrical improvements, experiments in simultaneous Morse and Vibrator working over a single wire were carried out with the result that a combination of induction coils and condensers was adopted for trial. These are still under experiment.

Cardew's vibrating sounders which, as noticed in the review of the report for 1894-95, proved so valuable in maintaining communications through the faulty Ceylon cables, maintained communication between Bunji and Chilas, when a portion of the line was buried under the snow and also between Moné and Kengtung over the temporary uninsulated line of 197 miles when, owing to heavy rain, the line would have been unworkable with ordinary instruments.

The carrying capacity and utility of some of the long circuits worked duplex were increased by an ingenious arrangement, made by Mr. Melhuish, by which intermediate offices were enabled to use the through circuit for short intervals when it was not being worked by the terminal offices. This arrangement has proved useful in reducing delays and affording additional facilities to intermediate stations without any expense for new wires.

20. The use of the telephone continues to show satisfactory progress.

At the end of the year 1895 there were 1,537 subscribers and 1,546 exchange connections to the Telephone Companies at Bombay, Calcutta, Kurrachee, Madras, Moultmein and Rangoon. There were also 31 exchanges and 265 exchange connections under the control of the Telegraph Department.

21. The construction of a telegraph line between Moné, the most easterly telegraph station in the Southern Shan States, and Kengtung, 197 miles to the east

having been decided on, a temporary line was started by the end of May 1895. Work was rapidly pushed on simultaneously in three different directions and a telegraph office was opened at Kengtung in the beginning of July 1895, intermediate offices having been opened at Saihkau and Mongping by the end of June 1895.

Telegraphic communication with Kengtung was maintained by Cardew's vibrating sounders up to the end of the year, by which time the work of reconstructing the line in a permanent manner was well advanced.

22. In Kashmir the line from Ramghat to Jalipur was reconstructed and an extension from Jalipur to Chilas, 24 miles, was completed during the year under review.

On the Murree-Srinagar and Srinagar-Gilgit sections, special attention was paid to the removal of line from localities in which it had suffered in previous years from avalanches with the result that no interruption was caused by avalanches on the former section and only seven on the latter.

23. The Administration Report was received from the Director General of Telegraphs on 20th August, about the same date as last year. It has been carefully prepared, and presents results which the Governor General in Council considers highly satisfactory and creditable to the administration of the Director General, as well as to the working of the staff of the Department.

24. For the efficient manner in which he carried out the field telegraph operations in Chitral, Mr. F. E. Dempster has received the honour of a Companionship of the Order of the Indian Empire and the Government of India are pleased to endorse the commendation accorded by the Director General to the telegraph officers employed with the Chitral expedition and to others specially mentioned in his report.

ORDER.—Ordered, that a copy of this Review and of the Report be forwarded to the Secretary of State and to the Local Governments and Administrations noted on the margin, and to the Government of Ceylon for information. Also that a copy of the Review be forwarded to the Director General of Telegraphs for information.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam and Coorg.
The Residents at Hyderabad and in Mysore.
The Agents to the Governor General in Central India, Rajputana, and Baluchistan.

Ordered also that a copy of the Review and of the Report and Appendices A, B, and F, be forwarded to the Home Department of the Government of India for information, and that the Review be published in Part I of the *Gazette of India*.

W. S. S. BISSET, Col., R. E.,
Secretary to the Government of India.

Order

Order thereon No 3064 W & 28th October 1896.

Communicated to the
Departments of the Secretariat
for information.

(20) Done

W.
21/10/96

The Public Department
" Revenue "