P. A. C. No. 553

PUBLIC ACCOUNTS COMMITTEE (1977-78)

(SIXTH LOK SABHA)

FOURTEENTH REPORT

TELEPHONE EXCHANGES

MINISTRY OF COMMUNICATIONS

[On paragraphs 13, 15, 16, 17, 18 and 20 relating to Telephone Exchanges included in the Report of the Comptroller and Auditor General of India for the year 1974-75, Union Government (Posts and Telegraphs)]

Presented in Lok Sabha on 28 NOV 1977
Laid in Rajya Sabha on 28 NOV 1977

LOK SABHA SECRETARIAT
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Page	Para	Line	For	Read
(iii)	S.No.19 Foot Note		ur in	urf on
6		30	The Paragraph may be numbered as "1.25"	
30	1.74	10	follows	followed
44	2.27	8	3751,1972	3751 in 1972
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121	6.101	27-28	arrange, ments	arrangements
123	6.108	6	develop	developed
	6.109	11	Generl	General
125		7	Delete 3.5 and 5 under Columns 1 and 2	
126			Insert 'Do' under column 3 for S.No. 4	
127		17 (Under column 4)	require- ments	requirement
128		12	Insert 'in' at the end after perceptibly.	
134		9	Delete the words 'in this behalf' and insert 'in pursuance of this Report' at that place.	
135		9	sapre	spare
137		1	atual	actual
		27	and	an

Page	Para	Line	For	Read
140		1 (Under column 1)	Communica-tion	Communi-cations
		19 (under column 4)	Delete the word 'to'	
		23	Delete the word 'in'	
146		2 (under column 2)	Insert 4.74,4.75,4.76 and 4.77 against S.Nos. 44,45,46 and 47 respectively.	
155		27 (Under column 4)	Insert (.) at the end	
156		3	concerned	concern
157		7	as well.	as well,
		23	conducts	conducted
158		17	there	three
160		21	defect	defects
161		6	firms	firm
161		11	setting	setting

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PART II*

Minutes of sitting of the Committee held on 15-7-1976 (FN & AN), 16-7-1976 (FN) and 14-9-1977

*Not printed (One cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

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Shri B. K. Mukherjee - Joint Secretary
Shri T. R. Ghai - Senior Financial Committee Officer

*Ceased to be a Member in his appointment as Minister of State w.e.f. 14-8-1977.

INTRODUCTION

I, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Fourteenth Report of the Public Accounts Committee on paragraphs 13,15,16,17, 18 and 20 relating to Telephone Exchanges included in the Report of the Comptroller & Auditor General India for the year 1974-75, Union Government (Posts and Telegraphs).

2. The Report of the Comptroller & Auditor General of India for the year 1974-75, Union Government (Posts & Telegraphs), was laid on the Table of the House on 30 April, 1976. The Committee (1976-77) examined these paragraphs at their sittings held on 15 July (FN & AN) and 16 July (FN) 1976 but could not finalise the report on account of the dissolution of Lok Sabha on 18-1-77. The Committee (1977-78) considered and finalised this Report at their sitting held on 14 September, 1977 based on the evidence taken and further information furnished by the Ministry of Communications. Minutes of the Sittings form Part II* of the Report.

3. For facility of reference the conclusions/recommendations of the Committee have been printed in thick type in the body of the Report. For the sake of convenience, the recommendations/ observations of the Committee have also been reproduced in a consolidated form in the Appendix to the Report.

4. The Committee place on record their appreciation of the commendable work done by the Chairman and Members of the Public Accounts Committee (1976-77) in taking evidence and obtaining information for the Report.

5. The Committee also place on record their appreciation of the assistance rendered to them in the examination of the Audit Report by the Comptroller & Auditor General of India.

6. The Committee would also like to express their thanks to the officers of the Ministry of Communications (P&T Board) for the cooperation extended by them in giving information to the Committee.

C. M. STEPHEN
CHAIRMAN
Public Accounts Committee.

NEW DELHI;
SEPTEMBER 26, 1977
ASVINA, 1899(S)

*Not printed. (One cyclostyled copy laid on the Table of the House and five copies placed in the Parliament Library).

AUDIT PARAGRAPH

1·1 TELEPHONE SERVICE AT LUDHIANA - In April 1961, there were 1034 telephone connections working from the 1100 lines manual exchange at Ludhiana, and there were 1400 applicants waiting for new connections from that exchange. Anticipating a rise in demand for telephones to 5000 by 1966, the Postmaster General, Punjab Circle, proposed (April 1961) installation of a 6000 lines automatic telephone exchange. The 6000 lines automatic telephone exchange (crossbar type) was commissioned about 12 years thereafter in Feburary 1973; the time taken for different items of the work is indicated below:--

	Time taken	*Months*
Acquisition of land . . .	Between September 1961 and April 1963 . . .	19
Planning and sanctioning the construction of building.	Between May 1963 and July 1966	38
Preparation of detailed estimate for the building, calling for tenders etc. .	Between August 1966 and October 1967	14
Construction of building . .	Between November 1967 and September 1969. . . .	22
Planning, manufacture and supply of equipment by the Indian Telephone Industries	Between August 1967 and July 1972 .	59
Installation of equipment .	Between June 1971 and February 1973	20

1·2 In September 1961, the Director General, Posts and Telegraphs accorded approval for the purchase of land for the building for the proposed exchange. A plot of land was made available by the State Government in April 1963 at a cost of Rs. 1·68 lakhs.

1·3 The schedule of accommodation for the proposed exchange building was sent to the Architect in September 1963 for preparation of drawings and the Architect sent the preliminary sketches of the building to the Directorate in December 1964. The Department stated (January 1976) that " it was necessary for him to get the site particulars and also the surveyed site plan. Site particulars were called for by him from the Executive Engineer, C. P. W. D. Since this is a big building, the preparation of the preliminary drawings thereafter took some time and the Architect had to personally inspect the site." The drawings were finalised by the Directorate in April 1965.

1·4 When the plans were sent to the Municipal Corporation, Ludhiana, the latter raised certain objections, as a result of which some modifications to the drawings had to be made. A preliminary estimate for construction of the

building (floor area : 57,340 square feet) for the proposed 6000 lines exchange was thereafter sanctioned for Rs. 28·84 lakhs in July 1966. It took one year from August 1966 to July 1967 for the preparation of detailed structural drawings, detailed estimate of the cost of work and notice for the invitation of tenders. The detailed estimate for the building was sanctioned in August 1967.

1·5 Construction of the exchange building was commenced in November 1967 and completed in September 1969. Electrical installations were completed in March 1970. As there was delay in receipt of equipment for the proposed exchange, the building was utilised from August 1969 for accommodating the stores and the office of the Divisional Engineer, Telegraphs, Ludhiana.

1·6 In the meantime, the total demand for telephones was rising. With a view to meet the growing demand to some extent two more manual exchanges were opened in 1963 and 1968 respectively. By 1968 the combined capacity of the three manual exchanges was 3100 lines ; the cost of equipment for the additional 2000 lines was Rs. 6·06 lakhs.

1·7 A project estimate for installation of the 6000 lines automatic exchange was sanctioned for Rs. 165·68 lakhs in August 1967 ; the exchange was expected to be commissioned in 1971. Net annual profit expected from the exchange was Rs. 4·88 lakhs.

1·8 In August 1967, an indent for the supply of exchange equipment was sent to the Indian Telephone Industries. As the total demand for telephones had risen to 6500 by June 1967, another project estimate for Rs. 42·49 lakhs was sanctioned in January 1968 for provision of additional 2000 lines in the new automatic exchange.

1·9 In July 1968 the Director General, Posts and Telegraphs requested the Indian Telephone Industries to complete supplies of (i) iron frames by March 1969 for commencing installation work and (ii) other equipment by March 1970, according to the predetermined sequence of installation. The Indian Telephone Industries pointed out in the same month (July 1968) that the department had not approved the floor plan of the exchange sent by it in May 1968 and only after the approved floor plan was received it would design the specifications of the iron frames and would thereafter take up their manufacture. The approved floor plan was released in July 1968, but the Indian Telephone Industries apprehended (Sepetember 1968) delay in the supply of the iron frames for this exchange, as it was engaged in the manufacture of frames for other exchanges against previous orders. The Department stated January 1976 that the delay in the supply of the iron frames was mainly because the total quantity required for all exchanges exceeded the manufacturing capacity of the Indian Telephone Industries.

1·10 Supply of iron frames was commenced by the Indian Telephone Industries in Feburary 1969, but by July 1970 only 60 percent of the frames were supplied. The supplies till then were not sufficient to commence installation work. With a view to giving some more connections to the waiting applicants, the combined capaicity of the three manual exchanges was further expanded to 4000 lines in 1970 and to 4400 lines in 1971.

1·11 Sufficient quantities of equipment (cost Rs. 67·43 lakhs) to commence

installation of the 6000 lines automatic exchange were received by June 1971. Installation of equipment was started in that month.

1·12 Sophisticated crossbar type exchange equipment was required to be installed in air-conditioned room to prevent ingressof dust and corrosion from humidity. In April 1970, an indent was sent to the Director General, Supplies and Disposals for an air-conditioning plant. The Director General, Supplies and Disposals placed an order (April 1971) on firm 'X' for supply and installation of the air-conditioning plant by September 1971 at a cost of Rs. 4·17 lakhs. Installation of the air-conditioning plant was completed after a delay of nearly sixteen months in January 1973. Rupees 3·51 lakhs were paid to firm 'X' for the plant by April 1973. The Department stated (January 1976) that "its performance was not satisfactory and its blower motor was getting excessively heated at the time of winter test". The supplier took one year to rectify the defects and the plant passed winter test in February 1974 and summer test in May 1974. The plant was offered for monsoon test in August 1974, but the test had to be abandoned due to burning of a cable. It was again offered for monsoon test in August 1975. The Department stated (January 1976) that the monsoon test "had to be abandoned again as the power supply was showing a low voltage". As the air-conditioning plant was not ready, eighteen window type air-conditioners were obtained (between June 1971 and March1973) at a cost of Rs. 0·98 lakh. The Department stated (January 1976) that the window type air-conditioner would be diverted to other exchanges when the air-conditioning plant would start functioning.

1·13 Installation of equipment was completed in February 1973. As against 11,250 estimated mazdoor days for the installation, 21,839 mazdoor days were actually spent in the work involving an extra expenditure of Rs. 0·64 lakh in wages: the Department stated (January 1976) that this was due to under estimation.

1·14 Immediately after installation of 6000 lines in February 1973, installation of additional 2000 lines sacnctioned in January 1968 was commenced; this work was completed in April 1974.

1·15 Since the total demand for telephones had risen to 9777 by September 1972 another project estimate was sanctioned for Rs. 61·10 lakhs in September 1972 for the expansion of the new automatic exchange from 8000 to 10000 lines. Installation of equipment for additional 1000 lines was completed in March 1975 and for the remaining 1000 lines in Augut 1975.

1·16 According to the instructions issued in September 1970, ninety per cent of the exchange capacity should be utilised soon after its expansion or, in any case, not later than six months of such expansion, and ninety-four percent about six mohths before the due date of commissioning of the next expansion. The actual utilisation of the installed capacity of the new exchange was as shown below:--

Month	Installed capacity in lines	Connectable capacity in lines	Working connections		Spare capacity	Number of applicants in waiting list
			number	as percentage of installed capacity		
March 1973 . . .	6000	5400	4338	72·3	1062	6683
September 1973 . . .	6000	5400	4883	81·4	517	6795
December 1973 . . .	6000	5640	5325	88·8	315	7184
March 1974 . . .	6000	5640	5624	93·7	16	7016
April 1974 . . .	8000	7440	6586	82·3	854	7825
November 1974 . . .	8000	7520	7071	88·4	449	8773
January 1975 . . .	8000	7520	7231	90·4	289	8642
March 1975 . . .	9000	8420	7239	80·4	1181	8549
June 1975 . . .	9000	8420	7293	81·0	1127	8563
September 1975 . . .	10000	9320	7860	78·6	1460	9533

1·17 Due to delay in the release of new telephone connections the Department lost a potential revenue of about Rs. 13·40 lakhs upto September 1975. The Department stated (January 1976) that attempts to implement September 1970 instructions resulted in unsatisfactory service in crossbar type exchanges and therefore revised instructions were issued in July 1974 and February 1975 about restricting the release of new connections from crossbar exchanges. Instructions issued in September 1970, however, continue to apply for release of new connections from strowger type exchanges.

1·18 Extension of the subscribers' trunk dialling (STD) facility became feasible with the commissioning of co-axial cable (between Delhi and Jullundur *via* Ludhiana) in September 1966 . Jullundur and Amritsar got the STD facility with Delhi in April 1970 and September 1970 respectively and between themselves in January 1971. One way STD facility from Ludhiana to Jullundur became available in February 1973. STD facility from Ludhiana to Amritsar was introduced in November 1973. The facility is yet not available between Ludhiana and Chandigarh and between Ludhiana and Delhi(December 1975). The Department stated (January 1976) that"the project for installation of the exchange at Ludhiana did not include provision of STD and therefore, the equipment even at Ludhiana was not included in the exchange order. Channels are also not available even today to provide STD between Ludhiana and Chandigarh and Delhi....."

1·19 The total demand for telephones had risen to 17393 by September 1975. In June 1974 yet another project estimate was sanctioned for Rs. 207·57 lakhs for the vertical expansion of the exchange building (estimated cost Rs. 12 10 lakhs) and installation of a second unit of 6000 lines exchange therein. The building work is in progress (January 1976).

1·20. After commissioning of the automatic exchange in February 1973 the three manual exchanges (4400 lines) were dismantled but some of the recovered stores were still awaiting disposal (December 1975). The Department stated (January 1976) that all stores in serviceable and good condition were utilised and the stores lying unused were only those to be scrapped.

[Paragraph 13 of the Report of the C & AG of India for the year 1974-75 Union Government (Posts and Telegraphs)]

1.21. According to the Audit Paragraph, the 6000 lines Automatic Telephone Exchange (cross bar) at Ludhiana proposed by the Postmaster General Punjab Circle in April, 1961 was commissioned about 12 years thereafter in February, 1973. The time taken for different items of the work is indicated below :

	Time taken
Acquisition of Land . . .	19 months (September, 1961 to April 1963).
Planning and sanctioning the construction of building.	38 months (May, 1963 to July, 1966).
Preparation of detailed estimate for the building, calling for tenders etc.	14 months (August, 1966 to October, 1967).
Construction of building . . .	22 months (Noveember, 1967 to September, 1969.
Planning, manufacture and supply of equipment by the Indian Telephone Industries	59 months (August, 1967 to July, 1972).
Installation of equipment .	20 months (June, 1971 to February, 1973).

PLANNING AND EXECUTION OF THE PROJECT

1.22. The Committee desired to know the reasons for the abnormal delay in the execution of the project, which took 12 years from 1961 to 1973. The Secretary, Ministry of Communications has stated during evidence :

> "I must submit that this is a very, very long period for execution of such a project, and there is no basic defence for such a long period having been taken. But I would like to submit here that, in any exercise of this type where we acquire land and commission an Exchange, there are distinct phases of activity, some of which can be overlapped and some of which cannot be overlapped.
>
> Taking the first phase of acquisition of land, this is an exercise where the P & T Department as such has only a very peripheral control because, except for the fact that we go on pressing the various agencies and Departments who actually have to take action on it, in regard to basic action, the P & T cannot do much."

1.23. Explaining the various stages from land acquisition to awarding of contract the witness has added :

> "After land acquisition there are three actions from that stage upto the stage of selecting a contractor and awarding the contract. This took 52 months in this particular case of Ludhiana. It is a very long period. We have made a detailed analysis and we feel at normally this should not take more than 24 months.After the land is acquired we prepare the accommodation schedule ; it is approved by Finance and then passed on to the Architect who prepares a preliminary sketch drawing. Then we prepare an estimate and also simultaneously take it up with the local bodies for approval. After that has been done and it has been accepted, we prepare a detailed estimate and the structural drawings and get it sanctioned. There after, we call for tenders and the contractor is selected. The whole exercise should not take more than two years. In this particular case however, it has taken a little more than four years. There are three basic reasons. One is, when the schedule of accommodation was given to the Architect, at that time (September, 1963) the Architect said that this particular plot of land was not suitable for construction of such a large an predstigious building. There was a lot of correspondence between us and the Architect".

1.24. The Committee enquired whether the Government had adequately examined the suitability of the plot for the allotted purpose before its purchase. The Secretary, Ministry of Communications has stated as follows :

> "When this took place in 1963, we did not have the P & T Civil Wing which we have now. Every item of work was separately passed on to the CPWD, for example, whether a piece of land was all right for a particular building was looked after by one particular branch and then the design was passed on to another branch or Architect.

When asked whether the land for the project was acquired at a usual commercial rate or concessional rate, the Ministry in a note furnished to the Committee have stated as under:

> "The land was purchased from the Punjab Government, who agreed to charge the cost as assessed by the Revenue authorities. This can, therefore, be taken as the market price."

1.26. When the Committee asked as to the basis on which the P & T gave its decision for the acquisition of this land, the Secretary, Ministry of Communications has informed the Committee that no records were available.

1.27. The Member (TD) , Posts & Telegraphs Board has elucidated the position as follows :

> "In those days, the CPWD was the works agency for all the Central Government Departments. The normal drill as mentioned is that the land is first chosen on technical considerations. The area for location of an exchange building is decided on merits taking into account its Central place, cable plan and other considerations. In that area, thereafter, a search is made for a suitable land. The

information about the land in regard to its capacity to take the building and its land is to be given to the Architect. In this case, at the time there was the P & T wing of the CPWD As mentioned earlier, we are unable to place our hands on the point whether the engineering view about **the** suitability of the site was taken or not. However, the alternatives available were practically nil. There was only one land available and this was chosen and the Architect was requested to make plans. He made plans. He first opined that this was a triangular plot and did not appear to be suitable for construction. On our telling him that this was the only place he went to the site, came back and gave us a plan and at the same time opined that it seemed to be a low-lying area and may require some filling etc. He wanted to have a surveyed site plan, so that he could have level and actual dimensions of the plot. The Works Wing of the CPWD, P & T Wings was asked to furnish the surveyed site plan. At this stage, when the field unit came into the picture and took measurements, they reported that there was an encroachment by the municipality for widening the road. This was brought to the notice of PMG. He took up with the State Government to have this sorted out. It was sorted out with the State Government and they agreed that they would give us additional land to compensate for this encroachment. The Architect then made the plan."

1.28. Elaborating the reasons for the delay, in submission of the plan by the Architect, Secretary, Ministry of Communications stated as follows :

"Normally it should take about four months. The whole process took 14 months, when we had this plan. There was a delay of 10-12 months in this work. Thereafter another difficulty occurred. In the plan that was made, the building was shown into two blocks, one the main equipment block called the exchange and the other quarters. When this plan was submitted to the municipality, they did not agree. They said that it should have only one block, because the area which could be covered could not be as much as indicated by the Architect. The sorting out of this matter took a long time. The matter was taken up with the Chief Architect, Chandigarh and finally sorted out. This delayed the preparation of the detailed estimates. Certain modificaions had to be made in the original layout. The residential block had to be modified, so also the main building and after that the structural things had to be drawn up. Both these elements introduced a delay of about 2 years. In the normal course it should have taken two years but it took 4 years. This was as far as the programme of the building was concerned."

29. In regard to construction of the building and installation of the equipment the Secretary of the Ministry has stated :

"The construction took 22 months which for a building costing Rs. 25 lakhs is the normal time taken. Even now it takes between 24-26 months. The Building was constructed in September 1969 and the commissioning was done in February 1973. 3½ years have been taken. Normally it should not have taken more than 2 years. But this requires that the whole process of selection of equipment which would be followed by the supply of equipment by the Indian Telephone Industries should be such that the installation

can commence on the very day when the building was completed. That requires an advance co-ordination of 2 years. The IIT took about 8-12 months to prepare the detailed engineering plans and then they place orders and the equipment gets manufactured and the supply starts. In this process there has been a delay the reasons for which I will explain. Why I am giving this general picture is that normally we would be happy if the total time taken is 6 years - 2 years for the initial work, that is before the construction started and 2 years for the construction of the building and 2 years in the installaion of the equipment. Because these items cannot be dovetailed into each other, this is the time we have taken into consideration that ultimately we will bring it to five years if we cut short the period of installation from 24 months to 18 months. That would be the idea but in this case there has been a delay of 4 years as I mentioned."

1.30. When the Committee enquired whether any time schedule was drawn up for the completion of the project, the Ministry, in a note, furnished to the Committee have stated as under :

"When the acquisition of the land was proposed to be made in May 1961, it was anticipated that the construction of the building and the installation of the exchange equipment would take about 4 to 5 years after the purchase of the land. The detailed time schedule of various activities was not drawn up at that time."

SUPPLY AND INSTALLATION OF EQUIPMENT

1.31 According to the Audit Paragraph, Planning manufacture and supply of equipment by the Indian Telephone Industries took 59 months (August 1967 to July, 1972) . Explaining the position about the delay in the supply of equipment by Indian Telephone Industries, the Secretary, Ministry of Communications has stated during evidence :

"That was the period for the development of a special type of machines in the Indian Telephone Industries. We were developing a new manufacturing system of cross bars wherein certain programmes, on discussion with the collaborators, had been finalised. Over six periods—six months each—starting from 1965 -68, they had to supply 1,67,000 lines of equipment. From the ITI the actual supply was only 54,800 lines, there was a slippage of 1 lakh lines over that period in the actual manufacture of what we had programmed, and thereafter also, the supply of equipment from the ITI was coming in such a way that if for any exchange the first pack came on a certain date, the last pack came after three and half years to four years. The supply for a particular station was spread over a period of four years. Now, with our special efforts, we have coordinated the whole thing and we have laid down the time schedule for the supplies from the beginning to the end. We have spread this over a period of 18 months. For a period of two years the supply was not being made because of which, there was a lot of backlog. The Chairman of the ITI is now trying to see that this period of supply is reduced to eighteen

months. With the organisation changes and coordination efforts this period will go down. I do admit that in the past it was beyond our control. If there had been proper coordination with the ITI and there was no delay in the preconstruction works, better results would have been achieved."

1.32. The position was further elucidated by the Chairman, Indian Telephone Industries as follows:

"The manufacture of cross-bar equipment was taken up in collaboration with the International Telephone and Telegraph Company of America and their subsidiary—the B.T.M. of Belgium. According to the agreement, we were to reach the capacity of the manufacture of 100 thousand lines by February 1968 and within these six periods of six months each, we were supposed to be able to supply to the P&T a total of 167 thousand lines. A number of events took place in which a number of commitments that had been given to us by our collaborators could not be kept up. I would mention only a few of these items supplied in each six months of this period. In each phase there had been slippages on the part of our collaborators. For example, in the earlier phase, instructions in respect of the engineering and the test, know-how were delayed for more than a year.

Then they had to supply us in the initial phases, parts and equipments, sub-assemblies. These were also considerably delayed. First test equipment had to be supplied and after assembly had been made, we had to test to see whether the equipment had come to the proper expectation. These were delayed by about 1-1/2 years. Certain machines had been shipped by them. But, unfortunately, as you are aware, at that time, our relationship with Pakistan was bad and we went into war with themand the machines that were coming through Karachi were impounded by them. These machines were for special purposes which could not be stopped but because of this trouble, our production programme had to be revised and we suffered considerable delays in the obtaining of those machines. Later, in the second phase, there was a delay in the supply of the parts, and the machines. Besides, the total number of machines which they supplied to us were inadequate to meet our production requirements that were expected from the ITI. On this we had a detailed dialogue with our collaborator and ultimately the collaborator had to concede that the number of machines supplied was inadequate.

Then there were certain special machines which they were manufacturing. We ordered the machines in the year 1964 but they came only in 1966-67. This was the nature of the problems with which we were faced. The new and sophisticated production of crossbar equipments and their supply was deficient and they were not according to schedule....You will appreciate that we have been largely able to supply them within the schedule time. In the earlier period certain types of equipments were only bought. We have carried out a very detailed survey with regard to P&T Departments requirements to decide about

the package programme. The package is that in about three months' time certain type of equipment is given. Firstly, cable is given and after that selector is given. In this manner we have decided about the package programme of the different items of equipment that should be supplied in sequence so that the unbalanced equipment does not keep on lying infructuously. We have achieved a great measure of success in this considering what our past performance used to be."

1.33. While the Committee appreciated the aforesaid difficulties of ITI, they desired to know as to how far these difficulties contributed to the taking of 59 months for planning, manufacture and supply of the equipment and taking another 20 months in the installation of the equipment, and how far as the delay was justifiable and excusable. In reply, the Chairman, Indian Telephone Industries stated:

"The points that I have mentioned have a direct bearing on the Ludhiana case, because it fell within the six periods. Originally, the equipment was to be installed by the end of the six periods. Although our total production in the six periods was very short, during our discussions with the P&T they decided to shift the delivery because the building was not ready."

The witness has further added:

"The building was ready in September, 1969 and we had started supplying the equipment from January, 1969 and it was completed in March, 1971."

1.34. The Committee sought an explanation of the fact that though the supply of machinery had started by January, 1969, it remained lying unutilised because the building was not ready by then. To this, the Secretary, Ministry of Communications has clarified the position as follows:

"In this particular case, they started supplying the equipment from January, 1969 and the building got completed in September, 1969. To be able to start the installation in September, 1969, the equipment consignment should have been started much earlier otherwise the delay would occur. This delay is because of the fact that the whole cross bar programme has slipped over and so also the supply of the equipment. I admit that there had been delay and it should not have been allowed in the circumstances because the building was ready and it was not utilised."

1.35. Explaining the conditions which were required to be fulfilled for achieving the completion of installation work within the stipulated period of 2 years, the Secretary, Ministry of Communications has stated:

"There are two points. One is that two years time required after construction of the building, for installation is a time when there is overlapping as far as ITI equipment is concerned. When we start the installation, a sizeable proportion of the equipment should have been there. Under the new programme, 18 months

time is required for total supply. But in abnormal circumstances, two years time is given. In these two years, one year is the time when installation starts. At that time, 50 per cent of the equipment is there, i.e., equipment starts coming 12 months earlier and then the installation starts. ITI should take two years in supplying the equipment and one year should overlap with the installation of the equiupment. Prior to it, ITI takes one year to make detailed engineering. So, ITI should take a total period of three years, of which two years will be overlapping while the building is under construction and one year is mixed with the time when the equipment is installed. In this case, it took five years instead of three years. The special reason is that there was slippage in the cross bar programme and the whole thing got spread out in this manner."

1.36. The Committee desired to know the reasons for delay in the installation of the exchange equipment, the Member (TD), Posts & Telegraphs Board has explained:

"The building was ready sometime in August-September 1969. Now originally it was anticipated that the ITI exchange equipment would be supplied in 1967-68 itself. ITI had its problems in regard to this equipment and this was the cause slipping .....We can take up the installation only when we receive the major iron frames. After all the equipment is ultimately to be mounted on iron frames. These iron frames took sometime in coming to us and the installation can be commenced only in June 1971. That caused the delay."

DELAY IN THE SUPPLY OF IRON FRAMES

1.36. According to the Audit Paragraph the Director General, Posts & Telegraphs requested the Indian Telephone Industries in July, 1968 to complete supply of (i) iron frames by March 1969 for commencing installation work and (ii) other equipment by March 1970. The Indian Telephone Industries pointed out in the same month (July 1968) that the Posts & Telegraphs Department had not approved the floor plan of the exchange sent by it in May 1968 and only after the approved floor plan was received it would design the specifications of the iron frames and would thereafter take up their manufacture. The approved floor plan was released in July, 1968 but the Indian Telephone Industries apprehended (September 1968) delay in the supply of the iron frames for this exchange, as it was engaged in the manufacture of frames for other exchanges against previous orders. Supply of iron frames was commenced by the Indian Telephone Industries in February 1969, but by July 1970 only 60 per cent of the frames were supplied. The supplies till then were not sufficient to commence installation work. Sufficient quantities of equipment to commence installation were received by June, 1971, when the installation of the equipment was started.

1.37. The Committee desired to know the reasons for submission of the floor plan by the Indian Telephone Industries eight months after the indent was placed with them in August, 1967. The Chairman, Indian Telephone Industries stated as follows:

"As has been indicated the programme for the supply of this exchange was shifted to a later date as our total production was not coming up to the mark. Further, this being entirely new equipment our skills for this work were being developed. Since the supplies were to come later this engineering and development of the floor plan was given a lower priority."

1.38. The witness has further added:

"In this particular case certain machines had to be supplied by BTM and though the orders for the supply of those machines were placed in 1964 yet we received the machines only in the year 1966-67. As this machine was delayed we had a lot of backlog. Lot of equipment had already gone to some of the exchanges and, as such, we had to rush the iron work to those exchanges first. There had been situations where due to shortages of machinery there used to be imbalance. We have done a considerable amount of work and now it is only two years gap and we are trying to improve it and complete the total supplies in a packagewise programme and the total time taken now will soon be taken one and a half years."

PREPARATION OF TIME SCHEDULE

1.39. The Committee desired to know whether any time schedule was prepared for the completion of the Project. The Member (TD), Posts & Telegraphs Board has stated as follows:

"Normally we should have had a time-schedule. It appears here that the time schedule was the probable availability of the automatic exchange equipment. This was, as you know, scheduled to arrive sometime from August of 1967 onwards till January, 1968. So, the building programme should have been planned so that the building was available to receive the equipment for installation between August, 1967 and January, 1968. They would have worked out on such a date. At present, I am unable to lay my hands on any such paper as such. But this is the information available with us that the automatic exchange equipment was required to come sometime from August, 1967 to January, 1968. Therefore, the appertenances and other things should have been ready by that time. But in the meantime these other things which were mentioned happened which delayed the construction."

1.40. The Secretary, Ministry of Communications has elucidated the position as follows:

"We are controlling the progress of each one of these programmes and projects. This is called the sytem of PERT, Progress Evaluation Programme and Review Technique. The time required for every facet of the work is analysed and the plan is mapped out and continuous monitoring done. We have introduced this only recently, since the last 1 1/2 years."

1.41. The Committee enquired since when the system had been working well. The witness has explained:

> "....this PERT programme was introduced only about one and a half years ago. After July 1974 we are getting a number of officers trained. This PERT programme is working now. As a matter of fact this has enabled us to keep a watch on all phases of the work—not only on the supply of equipment by ITI but on all phases right from the time of land acquisition. All these are now being monitored for all the projects."

1.42. The Committee desired to know the extent of co-ordination maintained between the Indian Telephone Industries and the Posts & Telegraphs Department, with a view to ensure timely supply and optimum utilization of the equipment. The Secretary, Ministry of Communications has stated as follows:

> "Taking all things into account a realistic programme is drawn up and this programme is continuously monitored officially. Formal meetings are held between the ITI and the P&T Board once in six months to review the programme. Obviously, as it is such a large programme covering the whole country, reviews are made on a continuing basis and revision of the programme, in parts, takes place. If we find that certain buildings due to come up are not going to come up in time, then that programme is re-scheduled. If we find that an Exchange which had been put in next year's programme, due to certain reasons, will not be ready for taking the equipment, we change that schedule and put in a new Exchange which was not put in the programme earlier to so that supplies can be made according to the new programme. This is a continuing process. It is now working very well and the sort of thing which occurred the past may not recur."

REMEDIAL MEASURES

1.43. Pointing out that there were inordinate delays at every stage in the execution of the project, the Committee enquired as to what lessons had been learnt from these delays and whether any measures had been taken to effect improvements to safeguard against the pit-falls. In a note, the Posts & Telegraphs Departments have stated as follows:

> "The delay in completion of this project was due to the following reasons and the steps which have been taken to prevent the recurrence of such delays in future are also discussed therein:
>
> (1) Acquisition of land and encroachment by the Municipality Improvement Trust.
>
> The main reason for the delay was the encroachment by the Municipality/Improvement Trust. This type of encroachment is a rare occurrence. However, instructions are being issued to all the field units that at the time of taking over possession of land, the plot should be clearly demarcated and pegged, and its location should be clearly indicated on the site plan with reference to prominent objects like adjoining building/structures, centre of the road and culverts etc.

(2) Preparation of building drawings by Architect and approval of the building drawings by Ludhiana Municipality:

In order to cut short such delays the Civil Engineering Staff and the Architectural Staff have been strengthened with the experience gained, the time for preparation and approval of the plans has since been considerably reduced. Instructions are being issued to the Circles/Districts that the suitability of any land proposed for purchase/acquisition should be got examined not only by the Civil Engineering Officers but also by the Architects to avoid cases of such nature.

(3) Delay in supply of Stores by M/s. Indian Telephone Industry.

In order to reduce the delays in supply, the I.T.I. are furnished projections of requirements on a three year horison the first year's requireme.it being indicated in detail, and the subsequently years as forecastes. Periodical meetings are held to monitor the progress of supplies against orders. Further, for supplies to telephone exchange installations a scheme for packets of stores to be supplied in sequennce has been evolved and is being generally followed. The attempt also is to reduce the total spread over of supplies to excharges. The aim at present is to reduce this spread over to about 18 months, and the I.T.I. have also assured the same."

1.44. The Exchange was expected to be commissioned in August, 1971 but was actually commissioned in February 1973. According to Audit, the annual profit expected from the exchange was Rs. 4.88 lakhs. The Committee, therefore, desired to know the approximate additional yield of revenue, had the Exchange been commissioned in August, 1971 as scheduled. The information furnished by the Posts & Telegraphs Department is given in the* table below :

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*. Not vetted by Audit.

Year	Equipped capacity	Connectable capacity 90% of (2) after 30-9-1971	Actual Working connections	Average revenue per DEL during the year	Average number of connection during the year	Balance connections that could have been given (3)—(6) after 30-9-71	Additional revenue that could have been earned if all possible connections had been provided
1	2	3	4	5	6	7	8
71-72 . . .	6000	5400	3822 (31-3-71) 4114 (31-3-72)	938	3968	1432	9,73,175
72-73	6000	5400	4114 (31-3-72) 4338 (31-3-73)	943	4226	1174	11,07,082

PRODUCTION IN INDIAN TELEPHONE INDUSTRIES

1.45. Referring to production below installed capacity in Indian Telephone Industries the Committee on Public Undertakings in their 34th Report (5th Lok Sabha) (April, 1973) have observed as under :

> "Apart from the financial losses, the Committee would like to point out that at a time when the country is seriously short of telephone equipment and the waiting list runs into several years in metropolitan towns, it is unfortunate that we should not have been able to manufacture equipment of the requisite quality at ITI up to the installed capacity. The Committee are greatly dissatisfied with the lack of urgency with which the various manufacturing problems encountered have been tackled in ITI and desire that the matter should be looked into at the highest level in order to take concerted measures to overcome these deficiencies and reach production as per the installed capacity."

1.46. The Government in their reply had stated that the total plant and machinery supplied by BTM had failed to give the rated capacity. As a result of series of discussions, the BTM finally accepted the inadequacy of the plant and machinery and supplied, free of cost, additional plant and machinery by the year 1972. It had also been stated that the ITI had now got adequate plant and machinery to manufacture equipment as was envisaged in the agreement. The Government had assured that the production was coming up to the rated capacity.

1.47. The Committee desired to know the further action taken in pursuance of the above recommendation of the Committee on Public Undertakings. In reply the Chairman, Indian Telephone Industries, informed the Committee as follows :

> "During the last three years, we have made an intensive drive to mop up the shortcomings and to reach the required capacity of 100,000 lines per year and I am glad to report that not only have we reached this capacity, but we have done a tremendous amount of work in balancing up the previous supply, where the time lag was three to four years."

AIR CONDITIONING OF THE EXCHANGE

1.48. It has been pointed out by Audit that sophisticated crossbar type exchange equipment was required to be installed in air-conditioned room to prevent ingress of dust and corrosion from humidity. Indent for the air-conditioning plant was sent to the Director General, Supplies and Disposals in April, 1970 and the order was placed in April, 1971 for supply and installation of the plant by September, 1971. Installation of the air-conditioning plant was completed after a delay of nearly sixteen months in January, 1973 but its performance was not satisfactory and its blower motor was getting excessively heated at the time of winter test. The supplier took one year to rectify the defects and the plant passed winter test in February, 1974 and summer test in August, 1974. The plant was offered for monsoon test in August, 1974, but the test had to be abandoned due to burning of a cable. It was again offered for monsoon test in August, 1975 but it had to be abandoned as the power supply was showing a low voltage.

1.49. As the air-conditioning plant was not ready, eighteen window type air-conditioners were obtained (between June, 1971 and March, 1973) at a cost of Rs. 0.98 lakh. The Posts & Telegraphs Department intimated Audit in January, 1976 that the window type air-conditioners would be diverted to other exchanges when the air-conditioning plant would start functioning.

1.50. Giving general background about the expertise available in the country for the manufacture of air-conditioning equipment particularly required for the telephone exchanges, the Secretary, Ministry of Communications has informed the Committee during evidence:

> "We have at present 200 air-conditioning plants in our Department. These are very sophisticated requirements because in an equipment room like a cross-bar exchange the air-conditioning plant has not only to maintain the temperature. That is not a very crucial matter. There are two other crucial matters. One is dust filtration which has to be almost 100%—say 99.99% because dust is the main cause of faults in our exchanges. The second is humidity. The humidity has to be completely controlled. Otherwise it causes defects in the equipment. These are the two very stringent requirements and in our air-conditioning plants we find these specifications are not being met. In a building like the telephone exchange where not only the temperature is being controlled but also heat is being generated by the persons there, this dust filtration and moisture control has to be provided. This places great limitations on the specifications..... I must admit that we do not have proper expertise in the country to-day. Even now we do not have it either in the department or in the CPWD or even in the manufacturing firms—8 or 10 of them are supplying these equipments. Previously they used to import the equipment and supply when we had a satisfactory working of the air-conditioning plants. Now many parts of the equipment *viz.*, Blowers, compressors, etc. are manufactured in the country. But the private expertise is not available to give us an equipment which is satisfactory. When we call for tenders, we indicate the area of the room, the heat that will be generated and the number of persons who will work there and filtration and moisture requirements and various firms quote and on the basis of the quotations, the firm is chosen. We do not have knowledge to see whether the number of compressors they provide or the number of blowers they provide or other components of the equipment will really ultimately give us the desired result. When installed, we find it goes on failing in the various tests which are very stringent."

1.51. Explaining the difficulties and the reasons for delay in the installation and commissioning of the air-conditioning plant in the instant case the representative of the Department of Supply has stated during evidence:

> "I would submit that the delay that has taken place in the installation and functioning of the air-conditioning plant in Ludhiana cannot be justified.....Certain delivery periods were given. Within that they were not able to deliver the goods to our satisfaction."

1.52. The witness has further added:

"Till about 10--12 years ago, it appears, this equipment was always imported. After that people started manufacturing it here and the DGS&D tried to obtain it from the local people. So, initially, there was no expertise or experience with these suppliers because they were starting from scratch so to say. So, at that time, from 1965 onwards to 1970-71 or so these so-called manufacturers who came forward undercut each other, naturally, in competition and someone would quote a very low price and according to Government rules you have to go by the lowest price. These contracts were awarded but these so-called manufacturers hardly manufactured anything themselves. They merely collected components from different people and put them together and sent it to the site. This was at the time of the supply of the goods as distinct from installation, when the DGS&D inspecting staff used to check the components and the items of equipment in order to see whether they confirmed to the specifications laid down or not. In all these things when the whole work was put together and the equipment made to perform, it did not perform satisfactorily, mainly because of lack of know-how.

The other difficulty that arose was that till 1971 these firms used to get 90% of the price as soon as they supplied the equipment. The contract terms were such that they got 90% of the contracted price as soon as the equipment was delivered at the site and after that they did not take as much interest as they should have taken partly because the sites at which these were located were very far away from the headquarters of these companies and they did not feel it remunerative to go all the way or to send their people to the sites to rectify the defect."

1.53. The Committee desired to know the steps taken by the Director General Supplies and Disposals from time to time to ensure timely insllation and satisfactory functioning of the air-conditioning plant in Ludhiana. In a note, the Department of Supply (DGS&D) have stated* as follows:

"The order was placed in March, 1971 stipulating delivery and instal lation by 30-9-71 which was extended to 30-5-72 due to power shortage at the firm's works. As the progress of the work war not very satisfactory the following steps were taken to expedite the job.

On 26-5-72 DGS&D wrote to the firm pointing out that they had not completed the work as promised by them. The firms was told to improve upon the delivery period and confirm that the same be completed by 30-6-72.

On 4th July '72 a meeting was arranged in the DGS&D at Directors' level with the representatives of the firm to expedite the firm for early installation of the Air-conditioning Plant.

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*Not vetted by Audit.

On 21st August, 72 a meeting was held in DGS&D at the level of Additional Director General with the Vice-President of the firm to expedite the firm for early installation of the plant.

On 28-11-72 a meeting was again held at the level of Additional Director General with the representative of firm to expedite them for early completion of the work.

On 6-1-73 another meeting at the level of Additional Director General was held with the Regional Manager of the firm wherein the firm was asked to complete the installation of the A/C plant on top priority basis.

On 3-2-73 a meeting at the level of Director with the firm's representatives was held wherein they were asked to give top priority to Ludhiana work and to give a definite target date when the plant can be made available in working condition. The representative of the firm stated that they will be able to complete the job by 10-2-73.

On 17-2-73 a detailed report from the Field Officer, Ludhiana, was received regarding the progress of the installation of A/C Plant made by the firm. He stated that the heating system had been completed but cooling system was yet to be installed.

On 26-5-73 the firm was again asked by DGS&D to commission the plant immediately and told that serious view was being taken of the delay on their part.

On 9-10-73 a meeting was called in the room of Director with the Vice-President of the firm wherein the firm stated that the plant had been commissioned but there were some testing troubles which they hope to overcome in about two weeks' time.

On 3-12-73 a meeting was again held in the room of Director to expedite the firm for early commissioning of the A/C Plant at Ludhiana and to offer the same for winter test by 15-12-73.

On 12-12-73 firm asked Posts & Telegraphs Inspectorate with copy to Director of Inspection for fixing the date for winter test as the heating cycle of the plant was working satisfactorily.

On 15-2-74 consignee intimated that winter test has been conducted and the plant will be taken over after summer test.

On 15-4-74 firm asked Director of Inspection to conduct summer test since all defects have been removed by them.

On 20-5-74 to 22-5-74 summer test was conducted during which some defects were observed and plant was not taken over.

On 28-9-74 the firm was asked to remove the defects/troubles developed in the A/C Plant so that the same can be commissioned for efficient working of the Telephone Exchange.

On 6th November '74 the firm was asked to comment in the light of the Indentor's complaint regarding non-commissioning of A/C Plant at Ludhiana.

On 31-12-74 P&T was asked to give detailed position of the plant so that the matter can be discussed with the firm who had been called for meeting on 4-1-75 in the room of Deputy Director General.

On 4-1-75 list of cases was furnished by the P&T to be discussed with the firm on 14-1-75.

On 8-2-75 firm informed P&T regarding meeting on 27-1-75 held in DGS&D that all the defects have been removed in September, 1974 after Summer test on 20-5-74 to 23-5-74. Monsoon test could not be conducted due to restriction imposed by Punjab on power.

On 24-2-75 the firm informed consignee that when their representative visited plant site, he found that the plant has been damaged and asked the consignee to take immediate action to avoid further damage to plant.

On 18-3-75 firm's letter of 8-2-75 was referred to P&T for comments

On 4th April, 1975, P&T informed that firm's excuse for non-availability of power was not correct but Monsoon test was abandoned due to fault in power cable and that compressor had developed fault.

On 3rd April, '75, Divisional Engineer Telephones Ludhiana informed that one number Electonic filter imported from United States of America had been received but rectifier tube was briken in transit.

On 23-4-75 the firm informed that damaged rectifier tube can be replaced by them provided Import Recommendation Certificate is issued.

On 19-5-75 the firm was asked to furnish documentary proof for damaged rectified tubes.

On 23-5-75 the firm asked for Import Recommendation Certificate for damaged rectified tube.

On 26-5-75 the firm informed that tube was damaged on land and not on sea.

On 4-6-75 thefirm was asked to confirm whether final Inspection Note had been issued.

On 27-6-75 Consignee was asked to confirm availability of Foreign Exchange so that fresh arrangements for import of rectified tube could be made.

On 23-6-75 the firm asked Director of Inspection for Monsoon test.

On 30-6-75 Posts & Telegraphs asked firm to depute one mechanic at plant site till Monsoon test was carried out.

On 9-7-75 the firm asked consignee to confirm availability of power and water.

On 15-7-75 Posts & Telegraphs informed that case was being processed with Director General Technical Development for Foreign Exchange for import of Rectified Tube.

On 19-7-75 the firm asked Director of Inspection to give date for Monsoon test.

On 28-8-75 the firm asked consignee to make arrangement for water and power for Monsoon test and Consignee and P&T to provide Foreign Exchange for tube.

On 3-9-75 the firm informed that Monsoon test could not be carried out due to non-availability of power. From joint inspection report for the Monsoon test conducted on 27-8-75 and 28-8-75, it is observed that consignee was asked to provide sufficient power so that Monsoon test can be carried out.

On 29-9-75 Director of Inspection informed that Monsoon test could not be conducted due to non-availability of power and water.

On 27-10-75 Posts & Telegraphs was asked to confirm firm's statement that Monsoon test could not be carried out due to water and power shortage.

On 24-2-76 Posts & Telegraphs confirmed validity of Foreign Exchange up to 16-11-76.

On 10-3-76 the firm confirmed validity of their offer for 2 Nos. rectified tube.

On 8-4-76 Posts & Telegraphs asked DGS&D to instruct firm to hand the plant.

On 17-5-76 a meeting was held in the room of Director with the representative of the firm regarding taking over the plant for running till the final tests are carried over by Director of Inspection.

On 18-5-76 the firm agreed to hand over the plant as decided in meeting on 17-5-76 held in Director's room.

On 17-6-76 amendment letter for additional Foreign Exchange issued.

On 5-7-76 the firm asked Director of Inspection for date for conducting Monsoon test. According to the joint inspection report dated 23-8-76 the Monsoon test has been deferred and firm have been asked to run the plant continuously for few days more before the Monsoon test is conducted."

1.54 According to the supply order, the air-conditioning plant was required to be installed by September, 1971 but it was actually installed in January, 1973. The Committee, therefore, desired to know the action taken against the firm for the delay of 16 months and also whether the final payment had been to the firm or not. In a note,* the Department for Supply (DGS&D) informed the Committee as follows:

> "The contract value is Rs. 4,34,885/- and the firm's payment to the extent of Rs. 63,385/- is held up. Action will be taken to recover damages/loss in consultation with the indentor as per terms of the contract at the time of finalisation of the case. This will arise when all tests are completed and the plant is taken over by the consignee."

1.55 In reply to a query the representative of the Department of Supply has informed the Committee during evidence that "DGS&D are no longer purchasing air-conditioning equipment for the telephone exchanges and that they have taken over themselves from 1974 onwards. We are continuing with the process of purchasing it from Defence, Railways and so on....."

1.56 The Committee desired to know if any damage was done to the exchange due to the non-functioning of the air-conditioning plant and if so, steps taken by the Government to protect the exchange. The Secretary, Ministry of Communications, has informed the Committee as follows:

> "We have installed now the air-conditioners in the room. The main enemy to the equipment is dust. When we keep the room closed and the doors and windows closed and the room air-conditioners are functioning then the dust is reduced to an extent if not to the same extent when the air-conditioning plant is not functioning. That is the main thing that has been done.
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> Of course, temperature is already controlled by them but there is no humidity control. In the rainy season, humidity gets slightly higher. These are the two things which should be corrected. That can be done only after a regular plant comes into operation."

1.57 The Committee pointed out that humidity which was equally harmful to the sophasticated exchange equipment was also required to be tackled. The Committee, further desired to know the deterioration caused to the exchange due to humidity in the absence of the regular cooling plant. The Secretary, Ministry of Communications, stated—

> "It is correct that the humidity through room air-conditioners cannot be reduced. Humidity is there. The life of this equipment is from 25 to 30 years. It is very difficult to judge as to what effect it will have on the life of the equipment. But, the performance as such has been considerably stabilised. But when the regular room air-conditioner works, the performance will still be better."

1.58 To a question whether similar situations have developed in respect of other exchanges, the Secretary, Ministry of Communications has informed the Committee that there were many such places where they were somehow or other carrying on.

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*Not vetted by Audit.

1.59 The Committee, therefore, desired to know whether inspite of a number of such cases, the Department had been able to assess the ultimate damage caused to the equipment in terms of money. The Secretary, Ministry of Communications, has informed that they had not done any such study in relation to the plants to assess the damage, it would cause. He has further added:

> "If I may submit had the other air-conditioners been working, the damage that could have been caused could have been reduced to some extent. I entirely agree with this. As I said earlier, if the dust accumulates, there can be conversation failure or some noise on the line that might occur; or there may be a switch failure because of dust and excessive humidity. In course of time it may affect the life of the equipment because it is not supposed to work in high humidity condition. We will now keep a watch on these particular equipments to see that later on we are able to assess the effect that it may have."

1.60. The Committee desired to know whether before the selection of M/s. York India Ltd., on whom the order for supply and installation of the plant was placed, the DGS&D had duly verified their antecedents. The representative of the Department of Supply has informed :

> "At that time all the firms were newly trying to develop this thing and as such, their previous performance was not available. Subsequently, DGS&D have been able to assess which firms did deliver the goods and they have by and large avoided the firms which did not perform well and as such more recently we have been able to place more effective contracts. Further, this firm was not a new firm. They were registered with us for refrigeration and air conditioning equipment."

MAZDOOR DAYS

1.61 The Committee desired to know the reasons for taking 21,839 mazdoor days for the installation of the equipment as against 11,250 mazdoor days, originally intimated, involving an extra expenditure of Rs.0.64 lakh. The Secretary, Ministry of Communications has stated as follows :

> "It is unusual. But I must submit that Ludhiana and other cross bar exchanges were the first few exchanges which we were installing of this type. We have considerable experience of strowger type exchanges where proper number of man-days are provided, but in these cases, certain projection was made, i.e. less than two mazdoor days per line. We have certain lines where as many as 4 mazdoor per line are provided. In some cases it is three and in some other it is 3.5. Now, we have taken a decision in September, 1975 that they should provide for three mazdoor days per line. But even that is not satisfactory. Now, we have put up a special group to make a study of this. Actually, we have different types of installations. In Ludhiana, it was a complete installation.

So, the mazdoor days required are more in this case. Sometimes it is only an expansion scheme and there the mazdoor days are less Our experience has shown that more than two man days are required for cross bar exchange."

1.62. The Posts & Telegraphs Department have intimated on 19 April, 1977 that the Special Group appointed in September, 1976 to make a study of the question of mazdoor days required for execution of different facets of work, have since submitted their Report (March 1977) and the same is under examination in consultation with Posts and Telegraphs Finance. The Special Group have recommended as below:

"The norms recommended for the crossbar installations of telephone Districts and Circles are as follows:

Sl. No.	Size of the installation	Norms of Mazdoor days per frame for	
		Telephone Circles	Districts
(i)	6000/5000 Lines	20	22
(ii)	4000 Lines	21	23
(iii)	3000 Lines	22	24
(iv)	2000 Lines	23	26
(v)	1000 Lines	23	26
(vi)	Extensions	15	17

The above norms now may be tentatively adopted, and these may be reviewed after a period of three years based on the data for the installations which will be commissioned in future."

UTILIZATION OF THE CAPACITY

1.63. According to the Audit Paragraph, as per the instructions issued in September 1970, ninety per cent of the exchange capacity should be utilised soon after its expansion or, in any case, not later than six months of such expansion, and ninety-four per cent about six months before the due date of

commissioning of the next expansion. The actual utilisation of the installed capacity of the new exchange was as shown below:

Month	Installed capacity in lines	Connectable capacity in lines	Working connections		Spare capacity	Number of applicants in waiting list.
			number	as percentage of installed capacity		
March 1973 . .	6000	5400	4338	72·3	1062	6683
September 1973 .	6000	5400	4883	81·4	517	6795
December 1973 .	6000	5640	5325	88·8	315	7184
March 1974 . .	6000	5640	5624	93·7	16	7016
April 1974 . .	8000	7440	6586	82·3	854	7825
November 1974 .	8000	7520	7071	88·4	449	8773
January 1975 .	8000	7520	7231	90·4	289	8642
March 1975 . .	9000	8420	7239	80·4	1181	8549
June 1975 . .	9000	8420	7293	81·0	1127	8563
September 1975 .	10000	9320	7860	78·6	1460	9533

1.64 It has been pointed out by Audit that due to delay in the release of new telephone connections the Department lost a potential revenue of about Rs. 13.40 lakhs upto September 1975.

1.65 The Committee desired to know the broad guidelines followed with regard to the optimum utilisation of the existing telephone capacity as also the capacity augmented from time to time. The Secretary, Ministry of Communications has stated as follows:

> "We have certain definite instructions that have been issued. If a new exchange capacity is developed, within six months of the installation, the load should be brought to 90 per cent. And before the next expansion takes place, it should be taken to 94 per cent so that we get the maximum revenue realisation. These are the broad instructions. In the case of cross bar exchange, we have not been able to apply these instructions because in these exchanges our experience showed that they would not take load to the extent of 90 per cent. So, in addition to the broad principle of 90 and 94 per cent, we have directed them to examine the traffic of these exchanges, i.e., to what extent the equipment was utilised. The instructions are that we can load the equipment upto 60 per cent. That is why, the Ludhiana exchange could not achieve 90 or 94 per cent capacity."

1.66. Clarifying the position, the Member (TD), Posts & Telegraphs Board informed the Committee as follows:

> "In this exchange which is a cross-bar exchange, we had difficulties in loading this exchange fully taking into account the traffic that it carries. The instructions about loading the exchange to 90 per cent stand modified in this case and other similar cases of cross-bar exchanges to the extent that they should watch the traffic and then load them up gradually.
>
> That is how it was less than 90 per cent. It has been gradually increasing and the latest position is that in March, 1976, it had 9,018 lines working out of 10,000 lines."

S.T.D. Facility

1.67. According to Audit Paragraph, S.T.D. facility is not yet available between Ludhiana and Chandigarh and between Ludhiana and Delhi. The Posts & Telegraphs Department informed Audit in January 1976 that "the project for installation of the exchange at Ludhiana did not include provision of S.T.D. and, therefore, the equipment even at Ludhiana was not included in the exchange order. Channels are also not available even today to provide S.T.D. between Ludhiana and Chandigarh and Delhi....."

1.68. The Committee desired to know the reasons for the non-provision of S.T.D. facilities from Ludhiana to Delhi and Chandigarh even till date. The Secretary, Ministry of Communications, has stated during evidence:

> "STD is something which we very much like because it increases our revenue and makes the projects which we have for expansion very viable. S.T.D was first introduced in 1960 between Lucknow and Kanpur as an experimental measure. Now it extends to a large number of stations. About 60 per cent of the total number of trunk calls made by people all over the country are self-dialled through STD and only 40 per cent go through operators. This is being gradually increased. We are very keen that an exchange with a capacity 10,000 lines should have STD because it is a very large exchange and it will give a large revenue.
>
> In the case of Ludhiana, certain thing happened because of which the whole thing has been delayed. For STD we have to use either the co-axial cable or the microwave system. The co-axial cable had been laid on this route by the end of 1965. This cable has accommodated 960 circuits. At that time Ludhiana was definitely on the cards as an exchange where we should have STD, but the Ludhiana installation came up only in 1973. We could not keep this cable capacity idle and so it was utilised for providing STD to Srinagar, Jammu, Jullundur and Amritsar. After this exchange was commissioned in 1973, we found there were no circuits available to give STDs to Ludhiana. We are now planning for additional medium on this route for which estimate have been sanctioned. The equipment has been ordered and by 1978-79 we will have the additional medium available when we can have STD for Ludhiana."

1.69. Further elucidating the reasons for the non-provision of STD facility, Member (TD), Posts & Telegraphs Board has informed the Committee as follows:

> "As far as Ludhiana Exchange is concerned, there is no question whether it deserves STD or not. It definitely deserves STD being a very big exchange and people put in a lot of trunk calls from Ludhiana to various other places. The basic requirements for STD are that it should be an automatic exchange and it should have a number of circuits emanating from that exchange. The plan was that Ludhiana Automatic Exchange would be connected by a large number of circuits from the Ambala Trunk Automatic Exchange. STD network is planned on a higher network of trunk automatic exchange of higher order and lower order and then spread out into a particular area. In this scheme, Ludhiana was given a place in STD to be connected with Ambala. But, unfortunately, the medium that we provided at that time was that we initially thought that it would be adequate for the purpose....."

Difference in the Estimated cost and the Original Expendit ure

1.70. The Committee desired to know the details of the originally estimated cost on the different facets of the projects *vis-a-vis* the actual expenditure incurred thereon, together with precise reasons for the difference. In a note the Posts & Telegraphs Department have stated as follows:

> "Following the sanctioned cost and expenditure booked upto 31-1-76 in respect of each component of the project for installation of 6000 lines Cross Bar Exchange at Ludhiana:

Component	Sanctioned Cost			Expenditure Booked			Difference		
	Cash	Stores	Total	Cash	Stores	Total	Cash	Stores	Total
Land . . .	1,63,200	..	1,63,200	1,63,200	..	1,63,200	..	..	..
Bldg. & F. I. .	25,12,400	..	25,12,400	20,12,886	..	20,12,886	(—)4,99,514	..	(—)4i99,514
Cables . . .	3,85,000	38,50,000	42,35,000	2,85,886	54,63,174	57,49,060	(—)99,114	(+)16,13,174	(+)15,14,060
Lines and Wires .	68,000	6,12,000	6,80,000	1,25,053	7,86,777	9,11,830	(+)57,053	(+)1,74,777	(+)23,1,830
Apparatus & Plant .	74,52,000	2,07,000	74,45,200	89,61,070	1,18,192	90,79,262	(+)15,09,070	(+)1,24,992	(+)16,34,062
Equipment		(—) 213,800							
Air Conditioning .	4,00,000	..	4,00,000	3,74,136	..	3,74,136	(—)25,864	..	(—) 25,864
Subscribers equipment	34,000	4,44,000	4,78,000	42,525	5,53,389	5,95,924	(+)8,535	(+)1,09,389	(+)1,17,924
Total . .	1,10,14,600	48,99,200	1,59,13,800	1,19,64,766	69,21,532	1,88,86,298	9,50,166	20,22,322	29,72,488

The sanctioned cost of the cable was Rs. 42.35 lakhs while expenditure booked is Rs. 57.49 lakhs. The excess of Rs. 15.14 lakhs was mainly due to the increase in prices of cable between 31-8-1967, when the project was sanctioned and the actual laying of the cable in the year 1972-73.

The increase in the cost of Rs. 2,31,830 in lines and wires and Rs. 16,34,062 under apparatus and plant and Rs. 1,17,924 under subscribers equipment was also mainly due to the increase in the prices between 1968-69 and 1972-73.

In Air-conditioning plant there is a saving of Rs. 25,864. This saving is mainly due to the fact that the plant has not been finally taken over and some payments are still to be made to the firm.

As regards saving of Rs. 4,99,514 under building and electric installation, this was mainly due to the reason that the original sanctioned was issued on the basis of preliminary estimate (based on preliminary drawings) wherein provisions for various sub-heads is made on the basis of general plinth area rates and normal percentages. The lower actual cost was due to more competitive tenders and reduction in quantities of items as actually executed based on detailed drawings and estimates."

1.71 In the execution of the project for the installation of a 6000 lines automatic telephone exchange at Ludhiana, the P& T Department have displayed an indefensible lack of planning and coordination resulting not only in enormous delay in execution but also escalation of costs on the project itself. That a project conceived in April 1961 should have been commissioned almost twelve years later in February 1973 be speaks of the inept handling by the project authorities right from the start in utter disregard of the elementary economic considerations and administrative accountability. The Committee strongly deprecate the unconscionable delay of long 12 years in the Commissioning of the Exchange.

1.72 The Committee need hardly point out that Ludhiana for the last two decades has been in the vanguard of industrial development of the country particularly in the small-scale sector. This town has a distinction of executing very largeexport orders for hosiery goods as also for manufacturing intricate components and tools for the internal and external markets. Since it is Government's avowed policy to provide infra-structure facilities in the interest of accelerating industrial and economic development, the Committee can see hardly any valid reason for the indifference displayed by the P& T authorities in expanding and improving the inadequate tele-communication facilities. This is all the more reprehensible when the Secretary, Communications has candidly admitted during evidence that the period of 12 years taken in the execution of the project was "very very long period and there was no basic defence for such a long period having been taken," as according to the Ministry's own calculation the project should have been completed in not more than six years. In fact, the Committee feel that even this period of six years is much too excessive as the Tele-communication authorities with all their vast experience in the field should be able to complete

the initial works in less than two years and the work of construction and installation should be so phased and synchronised as to be completed at the earliest, say, within 2 to 2½ years instead of the margin of four years taken. The Committee desire that a thorough study should be made of the manner in which the entire project was planned and executed so as to fix responsibility and take action within six months against those who have been derelict in the performance of duties and derive lessons to ensure that such indefensible delays do not recur and that the work is so planned and executed as to be completed in the least possible time.

1.73 The glaring deficiencies noted during execution of the project at various stages require to be highlighted. It is a matter of considerable concern that the basic requirement, namely preparation of a time-schedule to watch the execution of such a big project, was lost sight of in this case. The Ministry have, in a written note, conceded that the detailed time-schedule of various activities was not drawn up at that time. The Committee would like the Ministry to investigate how the fulfilment of such an essential pre-requisite, viz. preparation of a time-schedule in the case of an exchange of this magnitude was overlooked. This lapse has proved costly and the responsibility therefore should be fixed.

1.74 The Committee note that in pursuance of their earlier recommendation, *vide* para 1.316 of 145th Report (5th Lok Sabha) (1974-75), the P&T Department have now introduced the system of PERT (Progress Evaluation Programme and Review Technique) for monitoring the progress of projects and ensuring better coordination than what hitherto existed among different agencies entrusted with the execution of various components of the projects. While the Committee would watch with interest the impact of this system they would also like to be apprised in categorical terms that the system is being assiduously follows in respect of all the major projects under execution. The Committee need hardly emphasise that continuous improvement should be effected in preparation of PERT charts etc. and in monitoring the progress in the interest of adhering strictly to prescribed time schedules for projects.

1.75 It has been admitted by the Ministry that the purchase of plot, which is another basic requirement, for the setting up of the exchange, was made without examining its suitability from the engineering point of view. This is evident from the fact that the Architect, who was entrusted with the task of preparation of Plans, had expressed the view that the plot was not suitable for the exchange as it was triangular and was in low-lying area. The mere fact that the P&T Civil Wing was not setup at that time does not absolve the Department of the responsibility of not issuing proper guidelines in this regard. In fact, prudence required that an expert of the P&T Department should have visited the site and given his report about the suitability or otherwise of the plot before purchase. Settling of the disputed points in relation to the suitability of the land for the Exchange Building delayed the preparation of plans and it took about 14 months to draw up the final blue-prints, an exercise which, according to the Ministry, should not have taken more than 4 months. The Committee have been assured that in

order to avoid recurrence of situations like this, instructions are being issued to the Circles/Districts that the suitability of any land proposed for purchase/acquisition should be got examined not only by the Civil Engineering Officers but also by the Architects. The Committee desire that comprehensive instructions and guidelines should be issued in the matter so as to ensure that all the concerned authorities, namely, engineers, architects, technical experts etc. are fully associated and consulted before acquiring land for setting up telephone exchanges and other buildings of technical nature and complexity.

1.76 As the requirements of telephones are bound to increase perceptibly in years to come, it is essential to design and construct buildings for housing telephone exchanges in such a manner that these can be suitably expanded for housing the additional equipment. In this context, the Committee commend the concept of modular construction which could be put to effective use to design most economic buildings for housing telephone exchanges and equipments.

1.77 After the purchase of the plot, the Department failed to exercise due caution and care which they should have as an owner of a landed property. The result of this lapse was that there was an encroachment by the Municipality/Improvement Trust, which came to the notice of the Department only when the field unit started preparation of the surveyed site plan asked for by the Architect. This contributed to further delay because the matter had to be sorted out with the State Government who were persuaded to give additional land to compensate for the encroachment. This lapse is deplorable. The Committee have been assured that Government would issue necessary instructions in this regard to all the units.

1.78 Apart from issuing instructions, the Committee stress that there should be a close follow-up and implementation thereof for they feel that if ordinary precautions and care had been exercised by the Department they would have become aware much earlier about the possible encroachment of their land and taken remedial measures in time.

1.79 Another feature of the delay is in the planning, manufacture and supply of the equipment by the Indian Telepho e Industries, which took 59 months from August 1967 to July 1972. It took 20 months for the installation of the equipment from June 1971 to February 1973. The construction of the building was completed in August-September 1969 but the installation of the equipment could commence only in June 1971. According to original anticipations, supply of the equipment was expected to be completed in 1967-68 itself. But actually, these supplies were spread over the period from December 1968 to June 1971. Further, the stores were not supplied in sequence as the supply of major iron frames on which the whole equipment is mounted was commenced by the Indian Telephone Industries in February 1969 and by July 1970 only 60 per cent of the frames were supplied, resulting in delay in commencing the installation work which was taken in hand with effect from June 1971 only. The Secretary, Ministry of Communications has conceded during evidence that if there had been proper coor-

dination with the Indian Telephone Industries and there were no delays in the pre-construction works, better results would have been achieved. According to the Chairman of Indian Telephone Industries, the main reason for the delay in supply of the equipment was that there had been slippages on the part of their foreign collaborators. During 1965—68, Indian Telephone Industries had to supply 1,67,007 lines of equipment to the P&T Department. Against this, the actual supply was only 54,800 lines, resulting in a slippage of 1 lakh lines over that period. Consequently, the supply of equipment from the Indian Telephone Industries was coming in such a way that if for any exchange the first pack came on a certain date the last pack came after about 4 years. The Committee deprecate this lack of coordination between the telephone project authorities and the Indian Telephone Industries, a public undertaking working under the same Ministry of Communications. The responsibility for not taking due care in planning, coordination, manufacture, delivery, installation, which resulted in the unconscionable delay of four years and more should be thoroughly investigated and responsibility fixed on the erring officials so as to act as a deterrent to others for such indifferent attitude in discharging public responsibility.

1.80 The Committee are somewhat assured to find that the representatives of the Ministry during the course of evidence had categorically stated that the telephone project authorities and the Indian Telephone Industries have now reached a stage of complete coordination and laid down time-frame and sequence for supply of the equipment. The Committee would like a watch to be kept at higher level to see that the time schedule and sequence for supplies are honoured scrupulously in the field so as to obviate recurrence of cases of the nature dealt with in this Audit paragraph.

1.81 According to the Department's own forecasts, the Exchange was expected to be commissioned in August 1971 whereas it was actually commissioned in February 1973, resulting in a delay of about 1½ years. As per the Project Report estimate, the net annual profit expected from the exchange was Rs. 4·88 lakhs. However, according to the P&T Department, if the exchange had been commissioned as per schedule instead of February 1973, about Rs. 21 lakhs of additional revenue could have been earned if all possible connections had been provided. It is, therefore, apparent that due to the failure of the Department to ensure effective coordination and dovetail the various components of the Project as per a fixed time-schedule, there has been a significant loss of potential revenue during this period of 1½ years. This potential loss of revenue would be manifold if calculated keeping in view the optimum period of six years for the completion of the project.

1.82 In this connection, the Committee would like to invite the attention of the Ministry to the following recommendations contained in paras 1·314 and 1·316 of their 145th Report (5th Lok Sabha):

> "As a result of the delay in the execution of the projects, there has been invariably an escalation of the project estimates,

non-utilisation of the facilities available and the consequent loss of revenue which was due to the Government.

* * * *

The Committee would, therefore, like the Department to issue suitable instructions to the effect that persons entrusted with the execution of the projects would be held responsible for any loss of revenue to the Government as a result of delay in the execution of the projects. The Committee hope that the PERT chart which the Department propose to introduce will take care that there is proper synchronisation of the different components of the project from the very beginning and that there is proper supervision in regard to the estimation of requirements, placement of indents and the utilisation of stocks."

1.83 Another major contributory factor for the delay in execution of the project was the long time taken in the commissioning of the air-conditioning plant which was indented for in April 1970 for protecting the delicate and sophisticated exchange equipment from dust and humidity. Defects noticed at various stages of the functioning of the plant were attended to perfunctorily by the firm and that too after continuous follow-up action by the Department. The position as on 23 August 1976 was that the firm was yet to conduct the monsoon test. The Committee are surprised that despite persistent lapses the Department concerned took no action whatsoever against the firm for transgression of the terms of the contract. All that has been done is that against the contract value of Rs. 4,38, 885/- the firm's payment to the extent of Rs. 63,385 was held up. The Committee do not appreciate the logic of the Department of Supply (DGS&D) that "action would be taken to recover the damages/loss in consultation with the indentor after the plant was taken over by the consignee." The Committee would like to know whether the plant has since been taken over and the action taken to recover the loss.

1.84 It is a matter of serious concern that the air-conditioning plant supplied and installed in September 1973 after a delay of about 1½ years as per the supply order, started giving troubles soon after installation. At the time of the first winter test conducted immediately on installation, its performance was far from satisfactory as its blower was getting excesssively heated. The Committee regret to note that the supplier took one year to rectify the defects and the plant passed winter test in February 1974 and summer test inMay 1974. The plant was offered for monsoon test in August 1974 but the test had to be abandoned due to burning of a cable. The Committee are distressed to note that the plant could not pass the final test till August 1976 due to one defect or the other. As the Plant was not ready, the Department had to incur an additional expenditure of Rs. 98,000 for obtaining 18 window-type air-conditioners between June 1971 and March 1973. The Committee need hardly point out that had the air-conditioning plant been commissioned in time, the additional expenditure of Rs. 98,000 on the window type units could have been saved. The Committee recommend that a serious view should be taken about the performance of the firm by the DGS&D with a view to taking appropriate action against the firm for the breaches committed.

1.85 The Committee note that the window type units are not able to control the humidity. This not only affects the performance of the exchange but in course of time it may affect the life of the equipment. It is surprising that the Department have not been able to assess the ultimate damage caused to the equipment in terms of money. The Committee feel that such a study is very essential so that the amount of loss thus sustained can be taken note of while deciding the course of action against the firm.

1.86 The Committee have come across some instances earlier, where in similar circumstances, window type air-conditioning units had to be per force put in Telephone Exchanges instead of the package air-conditioning unit. The Committee would like the Department to have a closer look at this problem and ensure that the air-conditioning package units are installed, tested and pressed into service to synchronise with the commissioning of sophisticated telephone exchange equipment. The Committee would like to be informed of the action taken in this behalf.

1.87 The Committee note that as against 11,250 estimated mazdoor days for the installation of the equipment, 21,839 mazdoor days were actually spent involving an additional expenditure of Rs. 0.64 lakh in wages. As there was no uniform formula in this regard, the P&T Department constituted a Special Group to go into the matter and lay down broad guidelines. The Committee have been informed that the Special Group have since submitted their Report and the same is under consideration. The Committee would like to be informed of the conclusive action taken in pursuance of this Report.

1.88 The Committee have noted that according to the instructions issued by the P&T Department in September 1970, ninety per cent of the exchange capacity should be utilised soon after its expansion and ninety-four per cent about six months before the due date of commissioning of the next expansion. In the case of Ludhiana Exchange, however, the percentage of loading has not been done in accordance with these instructions and has fluctuated between 72·3 per cent to 93·7 per cent of the existing capacity. As per the calculations made by Audit, the Department lost a potential revenue of about Rs. 13.40 lakhs upto September 1975 on this account. The Committee are not convinced with the argument advanced by the Ministry that in the case of cross bar exchanges these instructions could not be applied as they could not take load to the extent of 90 per cent. But the fact is that in March 1974 and January 1975, the exchange had actually been able to take a load of 93·7 per cent and 90·4 per cent of the capacity, respectively. The Committee would like the Government to examine this aspect *de novo* with a view to laying down some specific and realistic guidelines and norms with regard to the percentage of loading in respect of cross bar exchanges also. The Committee need hardly stress that the norm should be kept high so as to enjoin on all concerned to make concerted efforts to achieve a higher level of efficiency and performance in the interest of public service and earning larger revenue on public assets.

1.89 The Committee are concerned to note that an important commercial and industrial centre like Ludhiana does not have Subscribers Trunk Dialling facility with other important places like Delhi and Chandigarh. The Committee have been informed that due to non-completion of the project in time, the spare capacity available on the co-axial cable laid on this route by the end of 1965 had to be utilised for providing STD to Srinagar, Jammu, Jullundur and Amritsar. The Committee need only point out that the least that the Department could have done was to have foreseen this eventuality and initiated action well in time to ensure that the supplementary additional facilities as required were provided so that these could be pressed into service along with the new telephone exchange keeping in view the commercial and industrial importance of Ludhiana.

1.90 The Committee have further been informed that estimates for providing an additional medium on the route have already been sanctioned and the additional medium is expected to be available by 1978-79. The Committee hope that keeping in view the commercial importance of Ludhiana, STD facility would be made available to this place on priority basis.

1.91 STD facility being a revenue yielding medium, the Committee are convinced that the Department has been put to a considerable financial loss by the non-provision of the facility in a 10,000 lines exchange like Ludhiana. The Committee recommend that Government should issue specific instructions for extension of this facility to commercial and other places of importance.

Telephone Exchange at Sanathnagar, Hyderabad

Audit Paragraph

2.1 In December 1963, the Distirict Manager, Telephones, Hyderabad sent to the Director General, Posts and Telegraphs a project estimate for installation of a 2000 lines main telephone exchange in Sanathnagar locality of Hyderabad and sought approval for acquisition of a plot of land measuring 7,000 square yards for the exchange building. In justification of the proposal it was stated that Sanathnagar was fast developing into an industrial locality and the demand of the telephones in the area was expected to be 1311 in 1967, 2208 in 1972, 2933 in 1977 and 3528 in 1982. Sanction for purchase of land was conveyed in April, 1966 and the site was acquired through the State Government in October 1966 at a cost of Rs. 0.40 lakh.

2.2 In the meantime a small satellite exchange was opened in August 1964 in a rented building in that locality. In April 1967, 392 connections were working from the satellite exchange.

2.3 In December 1964, the Director General, Posts and Telegraphs approved a schedule of accommodation (19,900 square feet) to be provided in the building. In August 1967, an estimate for Rs. 14.83 lakhs was sanctioned for construction of a two storey building, with a built-up area of 2575 square feet to accommodate a 5000 lines exchange initially, with foundation suitable for construction of additional storeys to accommodate ultimately a 10000 lines exchange. Tenders for construction of the building were invited in October 1969 and the work was awarded to a contractor in December 1969; the work was to be completed by July 1971.

2.4 The completed building was handed over in February 1974. The Executive Engineer in charge of the construction work stated in March 1973 that the delay in completion of the work was due to dislocation in communications restrictions on consumption of power and non-receipt of cement. Water and electric connections were provided in the building in October 1974 and December 1974 respectively. Installation of equipment was commenced in December 1974.

2.5 By March 1971 the satellite exchange was expanded to 6000 lines capacity and 551 connections were working therefrom with a waiting list of 89. In March 1971, the District Manager, Telephones, Hyderabad submitted a project estimate for installation of 1200 lines main telephone exchange in the new building in replacement of the satellite exchange. The project estimate was returned in May 1971 by the Directorate as the equipment for the proposed exchange was not included in the manufacturing programme of the Indian Telephone Industries for the year 1972-73. The District Manager requested the Directorate (May 1971) to reconsider the matter because if equipment was not allotted for the exchange, the new

building would remain unused. He also pointed out that as the building was located far away from the centre of the town it would not be possible to shift any of the major offices to it for utilising the accommodation. Thereafter, in December 1971 the Directorate agreed to provide equipment for a 900 lines main exchange in replacement of 600 lines satellite exchange and sanctioned a project estimate for the work in February 1973 for Rs. 14.11 lakhs (excluding the cost of land, building and electric installtions totalling Rs. 18.61 lakhs). The equipment required for this exchange was included in the manufacturing programme of the Indian Telephone Industries for 1972-73, but due to back-log in the supply position, the manufacture of the equipment was shifted to 1973-74. In the justification for the project estimate, the likely demands for telephoens from the exchange were indicated as 3751 in 1972, 6692 in 1977 and 11038 in 1982.

2.6 The indent for equipment for the exchange was placed in March 1973 and the supply commenced in May 1974. Installation of equipment (commenced in December 1974) was completed in March 1975.

2.7 The capacity of the satellite exchange was increased to 800 lines by February 1972, before commissioning of the new 900 lines exchange in March 1975. By then the 800 lines satellite exchange had 760 working connections with a waiting list of about 150 applicants. It was, therefore decided not to close and dismantle the satellite exchange as projected earlier but to keep it working in addition with a view to clearing the waiting list, of applicants by release of connections from the new exchange. On 31st July 1975, 1235 connections were working from the two exchanges having combined capacity of 1700 lines (1600 for ordinary connections and 100 for public call offices with Coin Collecting Boxes) and 242 applicants were waiting for new connections. The Department stated (December 1975) that expansion of the new main exchange to 1500 lines had been sanctioed and the satellite exchange would be closed down on the commissioning of additional 600 lines in that exchange.

2.8 Since equipment for only 900 lines has been installed in the new building constructed to accommodate 5000 lines, a large portion of the built-up area is lying unutilised. As mentioned earlier, the demand for telephones in 1972 was estimated in December, 1963 as 2208 connections. In the justification for the estimate sanctioned in February 1973 the demand for 1972 was indicated as 3751 connections in 1972. As against these estimates, the actual demand in July 1975 was for 1477, telephones only. The Department stated (December 1975) that the forecast made by the District Manager "was not taken into account by the Directorate and that the project estimate was sanctioned on the basis of demand projected under the used method as applicable to similar telephone expansion projects."

[Paragraph 15 of the report of C&AG for the year 1974-75, Union Government (Posts and Telegraphs)].

29. As stated in the Audit Paragraph the District Manager, Telephones Hyderabad sent to the Director General, Posts and Telegraphs a project estimate for installation of a 2000 lines main telephone exchange in Sanathnagar near Hyderabad. In justification of the proposal it was stated that

Sanathnagar was fast developing as a large industrial locality and the demand of the telephones in the area was expected to be 1311 in 1967, 2208 in 1972, 2933 in 1977 and 3528 in 1982. The Committee desired to know the basis on which the demand was calculated. The Ministry in a written note furnished to the Committee have stated as under :—

> "The telephone district authorities carried out a detailed survey of the existing working connections and telephone demand in Hyderabad-Secundrabad area and its suburbs in 1963, and drew up a forecast for the next 20 years to frame a long term plan for the development of the telephone system. This survey took into account the existing telephone connections and waiting lists, the normal annual growth and growth due to special development plans of the local and State Government authorities. In the case of Sanathnagar area, there was a demand of about 140 in 1961 and 328 in 1962. Further it was understood that the area was being developed as a larger industrial estate. The district authorities had forecast 1311 lines in 1967, 2208 in 1972, 2933 in 1977 and 3528 in 1982 based on the growth of demand in early sixties and the proposed plans for development of the area as an industrial estate.
>
> This forecast and the fact that the area was situated about 8 kilometres from the nearest existing exchange as Saifabad was used basically to arrive at a decision that a separate new exchange would be required and to take up the acquisition of land and construction of building for the purpose."

2.10 Purchase of land measuring 7,000 sq. yards for the exchange building was sanctioned in April, 1966 and the site was acquired through the State Government in October, 1966. But in the meantime a small satellite exchange was opened in August 1964 in a rented building in that locality, and in April, 1967, 392 connections were working from the satellite exchange.

2.11 Asked whether there was any re-assessment of the demand based on the number of lines working in the satellite exchange and the waiting list as at the beginning of 1966, the Ministry have informed the Committee that "no further re-assessment of demand was undertaken in 1966.

2.12 The Ministry have further added that "such an assessment was made in 1972 in the Posts and Telegraphs Directorate while examining sanctioning of a 900 lines MAX installation.

2.13 The method of assessment followed is given below :

Date	Capacity	Working connections	Waiting List	Demand
31-3-66	400	262	..	262
31-3-67	600	392	..	392
31-3-68	600	459	7	466
31-3-69	600	503	..	503
31-3-70	600	531	29	560
31-3-71	600	551	89	640

Future growth based on figures for 1967-71

Date	Based on A.P. (a)	Based on G.P. (b)	Average of (a)+(b)
31-3-72	716	768	742
31-3-73	792	921	856
31-3-74	868	1105	986
31-3-75	944	1386	1160
31-3-76	1020	1663	1341

A.P.—Arithmetic Progression

G.P. —Geometric Progression.

2.14 While suggesting the procedure adopted in reassessment of the demand of the telephones the Ministry have stated that "This method was adopted since a study carried out of past growth of demands had indicated that the above formula closely matched the actual growth in a number of exchanges."

2.15 In December, 1964, the Director General Posts and Telegraphs approved a schedule of accommodation (19,900 sq. feet) to be provided in the building. In August 1967, an estimate of Rs. 14.83 lakhs was sanctioned for construction of a two storey building, with a built-up area of 27,575 sq. feet.

2.16 When asked to furnish a note indicating the basis on which the schedule of accommodation was approved by the Director General, Posts and Telegraphs in December, 1964 and again the determination of the size of the building in 1967, the Ministry have stated as under :

"To simplify the planning and construction of buildings for telephone exchanges, the Directorate had evolved certain schedules of

accommodation for different sizes of installations. Basically the schedules were drawn up for initial building construction, capable of taking up to 5,000, 10,000 and 20,000 line telephone exchanges and of being further extended either by vertical or horizontal extensions to the extent of double these capacities. Further a decision was taken that wherever the demands for telephones would justify an initial installation of 1500 lines of exchange equipment, we would take up the construction of a building suitable for 5,000 lines and capable of further expansion to accommodate another 5,000 lines.

In 1964, the Directorate took the decision to constuct a 5000+5000 lines building on this basis and a schedule of accommodation covering usable carpet area of 1860 sq. meters (19,900 sq. ft.) (plinth area of 31840 sq. ft.) was approved. Action to draw up preliminary drawings was also taken up on this basis.

In 1967, the Directorate approved a building estimate. No fresh schedule of accommodation was drawn up or approved at this stage. The sanction covered a plinth area of 2577 sq. meters (27,575 sq. feet) as against the original 1860 sq. meters of carpet area."

2.17 The Ministry have informed the Committee that the following factors were taken into consideration at the time of approval of the schedule of the accommodation :

"1. Initial capacity of exchange justified and the project found to be viable.

2. Requirements of technical installations like switch room, power and battery room, trunks and auto manual boards, carrier and other transmission equipment etc.

3. Requirements of essential office accommodation and staff amenities.

4. Residential accommodation for essential maintenance staff."

2.18 The work of the telephone exchange building at Sanathnagar was sanctioned in August, 1967. After preparation of working and detailed drawings, finalisation and technical sanction of detailed estimate, and approval of NIT tenders were called for in October, 1969. The work was awarded in December 1969 with the stipulated date of completion in July 1971. The building was actually completed in November 1973 and handed over for installation in February 1974. There was a delay of 28 months in construction of this telephone exchange building beyond the stipulated period. It took another 8 months to provide water and electricity by December, 1974.

2.19 The Committee desired to know the reasons for the inordinate delay in the construction of the building. The Ministry in a written note furnished to the Committee, have stated :

"This delay was caused due to a combination of different factors, which are mainly as follows :

(i) There was some delay due to the Telengana agitation.

(ii) There was shortage of cement supply during the course of construction due to which there was a delay of 60 days.

(iii) Certain changes had to be made in architectural details and consequently in structural designs with a view to further improve the efficiency of the building and to accommodate the detailed requirements of the exchange as noticed and suggested during the course of the work.

(iv) Finally considerable delay occurred due to non-avaliability of electric supply. During the period when this work was in progress, there was restrictions on electric power supply due to acute shortage of power throughout the country. Electric-power supply connection was applied for in July, 1972, but the actual electric connection was given in April, 1973."

2.20 In regard to steps taken by the Ministry for expediting the construction work, the Committee were informed that :

"For expediting the construction of the building work Civil Wing of the P&T Directorate was calling for regular progress reports and reviewing the same. Steps have recently been taken in the Directorate to set up a monitoring cell in the Directorate to watch major building projects."

2.21 According to Audit Paragraph, the capacity of the satellite exchange was increased to 800 lines by February 1972, before commissioning of the new 900 lines exchange in March 1975 in the new building. On 31st July, 1975, 1235 connections were working from the two exchanges (Satellite exchange and main exchange) having a combined capacity of 1700 lines and 242 applicants were waiting for new connection.

2.22 When asked to furnish a note indicating the present position of satellite and the main exchanges the Ministry have informed the Committee as under :

"As on 30-9-76 the equipped capa city and w rking connections from the Main and Satellite Exchauing are as follows:

	Equipped capacity	Working connecs	Waiting List
Sanathnagar Main	900	832	Nil
Satellite	800	681	Nil
	1700	1513	— "

2.23 It has been stated in the Audit Paragraph that since equipment for only 900 lines has been installed in the new building constructed to accommodate 5000 lines, a large portion of the built-up area is lying unutilised. The Committee desired to know the exact portion of the building actually out to use so far *vis-a-vis* the portion still remaining unutilised and the manner in which the Department proposed to use the building till the demand picked up. The Ministry in a written note furnished to the Committee have stated as under :—

The total area constructed in the building, the area which is being used for the purpose for which it was planned, and the balance of the area and how it is now utilised are indicated below :

	Area available sq.ft.	Area used for original purpose sq. ft.	Balance sq. ft.	
1. Equipment Room	4100	2000	2100	Note 1
2. A.C. Plant Room	1000	..	1000	
3. M.D.F. room	2600	1100	1500	
4. Power room	780	780	..	
5. Battery room	1170	1170	..	
6. Cable Chamber	1430	1430	..	
7. Engine room	300	300	..	
8. Store room	700	700	..	
9. Sub station	1000	..	1000	Note 2
10. Office accommodation . . .	2200	2200	..	
11. Staff amenities	4420	4420	..	
Total accommodation in building .	19,700	14,100	5,600	

Note 1: This accommodation is being utilised by the Central Telephone Workshop, and the accommodation will be released gradually as the exchange grows.

Note 2: This accommodation is being used as a Store-room by the electrical wing temporarily till such time as the sub-station work can be taken up."

2.24 According to the Audit Paragraph the demand for telephones in 1972 was estimated in December, 1963 as 2208 connections. However, in the justification for the 900 lines project estimate sanctioned in February, 1973, the likely demand for 1972 was indicated as 3751 connections. As against the estimates, the actual demand in July 1975 was for 1477 telephones only. Thus there was wide variation in the estimated and actual demand for telephones.

2.25 In regard to steps taken or poposed to be taken by the Department for better estimation of demand, the Ministry have informed the Committee that the Department has been carrying out detailed studies of the growth of demand in all areas with a view to working out a definite pattern of growth of demand in a given system at different stage of its development. In many cases the forecasts made have proved to be fairly accurate while in others the forecasts have either fallen considerably short or have proved to be too optimistic. The various factors contributing to this are stated as under :

"(a) An uneven rate of national economic growth. Thus during the particular period (1964-67) under consideration, due to various abnormal factors there was an actual fall in the *per capita* national income. The pace of growth picked up around 1969 but again suffered a set back in the early 70's. The position has improved considerably in the last 18 months or so.

(b) Even when there is an even economic growth at national regional and local factors effect the economic growth in particular towns and places. Thus it is possible that the Telengana agitation in the late sixties perhaps adversely effected the growth of the industrial estate at Santhanagar and consequently the growth of demand in this area.

(c) While the pattern of growth in similar areas can generally be used for forecasting demand in well established urban centres, difficulties always arise when new urban and industrial centres are being established. With no existing population, business or industry normal rates of growth, cannot be adopted. Reliance has to be placed mostly on the plans and forecasts indicated by the planners of such centres."

The Ministry have further added—

"To remedy the situation, greater vigilance is now being exercised and frequent review of the forecasts against actuals are made. It may, however, be stated that still decisions on acquisition of

land, construction of buildings and placing of equipment orders have to be taken up to 10 to 15, 5 to 8 and 3 to 5 years respectively in advance of commissioning an exchange. Some of these decisions are such that not much can be done, by way of remedial action after a commitment has been made even if the review indicates that forecast demand may not be in line with actual growth."

2.26 The Committee note that no realistic estimation of the demand for telephone in Sanathnagar locality of Hyderabad was made as it evident from the fact that in December 1963, the District Manager, Hyderabad sought approval for a 2000-line main exchange on the justification that Sanathnagar was fast developing into an industrial locality and that the demand of telephones in the area was expected to be 1311 in 1967, 2278 in 1972, 2933 in 1977 and 3528 in 1982. Although it was stated to be perspective plan, no action whatsoever was taken by the authorities to re-assess the demand while sanctioning the purchase of land for the man telephone exchange in 1966. No cognisance was taken also of the fact that during the same period 262 lines were working on the satellite exchange, which was already set up in a rented building in the locality *w.e.f.* August 1964, as a temporary measure.

2.27 In March 1971, when the new building which provided for a 5000-lines exchange was almost ready, a revised project-estimate for 1200-lines was submitted in replacement of the satellite exchange which was then working with 551 connections and a waiting list of 89. In December 1971, the P&T Directorate, however, finally agreed to provide equipment for a 900-lines main exchange. At that time the likely demand for telephones indicated in justification for the project estimate was 3751, 1972, 6692 in 1977 and 11038 in 1982. Surprisingly enough, the actual demand on 30 September 1976 against these estimates stood at 1513 telephones only.

2.28 The Committee are unable to appreciate the *raison d'etre* of the inflated forecasts made in December, 1971, particularly when the growth of demand from the time the proposal for the exchange was mooted in 1963 was stagnant. It appears to the Committee that no attempts were made to study the actual growth of demand before the acquisition of land, construction of building and deciding the size of the project. It is distressing to note that it took the authorities about 9 years to decide the size of the Exchange.

2.29 The Committee stress that suitable steps should be taken to improve the process and procedure for estimation of demands while drawing up any long-term plan for expansion. At the same time, appropriate administrative action should be taken to reduce the time-lag between the acquisition of land, construction of building and placement of equipment orders.

2.30 The Committee are constrained to note that the work of the telephone exchange building at Sanathnagar though sanctioned in 1967 was completed in February 1974, over a period of about 6½ years. The inordinate delay of 28 months in the construction of

the building alone, beyond its stipulated period of July 1971 is inexcusable. The Committee also note that after the building was put up, another 8 months were taken to provide water and electricity which became available by December 1974 only. The contributory factors for the delay like cement shortage etc. could have been tackled as these were foreseable and had not arisen abruptly. As regards subsequent changes in the structure, the need, nature and extent of changes brought about are open to question. The Committee would like the P&T Directorate to examine in depth the reasons which were responsible for the delay in the construction of the building with a view to taking suitable remedial measure for future. The Committee would like to be informed of the actions taken in pursuance of this recommendation.

2.31 **The Committee note that a decision was taken by P&T Directorate that wherever the demands for telephones would justify an initial installation of 1500 lines of exchange equipment, a building suitable for 5000 lines and capable of further expansion to accommodate another 5000 lines would be constructed. Keeping this decision in view, the original proposal of 2000 lines exchange, a main exchange building in Sanathnagar, with a capacity of 19,700 sq. ft. was constructed to accommodate a 5000-lines exchange initially. The Committee further note that on completion of the installation of equipment in March 1975 in the main telephone exchange building, a 900-lines exchange was actually commissioned in it. By then the 800-lines capacity satellite exchange had 760 working connections with a waiting list of about 150 applicants. As a result of this 5600 sq. ft. of accommodation in the new building remained unutilised.**

2.32 **The Committee are unable to understand why only 900 lines exchange was commissioned in the new building when a rented building is being used separately as a satellite exchange with a capacity of 800 telephone lines, whereas, as already stated, an accommodation to the extent of 5600 sq. ft. in the new building is lying unutilised. The Committee would like the P&T Department to review the matter so as to locate the satellite exchange in the departmental building. The Committee would like to be informed of the action taken in the matter.**

INSTALLATION OF TRUNK AUTOMATIC EXCHANGE AT AMBALA

Audit Paragraph

3.1 The four co-axial microwave schemes mentioned in the table below (which have been commissioned since 1965) are each capable of providing upto 960 telephone trunk circuits. These schemes were stated to be for coping with the growth of trunk traffic handled by the manual system. The actual number of circuits commissioned under the scheme and the number terminated at Ambala, out of those commissioned, were as follows;

Scheme	Total number of circuits commissioned	Between stations	Number of circuits terminated at Ambala	Month of termination
1. New Delhi-Jullundur Co-axial Cable	384	Ambala-Jullundur	96	September 1965
		Ambala-New Delhi	276	December 1965
2. Ambala-Chandigarh Simla Microwave	84	Ambala-Chandigarh	36	May 1966
		Ambala-Simla	24	May 1966
3. Extension of New Delhi-Jullundur Co-axial Cable to Amritsar	204	Ambala-Amritsar	24	August 1969
4. Ambala-Patiala-Bhatinda Co-axial Cable	216	Ambala-Patiala	48	June 1970

3.2 Four manual trunk boards were installed at Ambala in June 1966 and another four in March 1967 for the utilisation of trunk circuits.

3.3 The question of installing a trunk automatic exchange (TAX) at Ambala was under consideration since 1965. In November 1967, a project estimate (Rs. 57.03 lakhs) was sanctioned for installation of a crossbar type 2000 lines TAX at Ambala by 1969-70.

3.4 The object was to link the local telephone exchange at Ambala, Chandigarh, Simla, Ludhiana, Jullundur, Amritsar, Jammu, Panipat and Karnal in due course to the TAX at Ambala for the purpose of introducing subscriber's trunk dialling (STD) among these stations and to extend STD

to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi (commissioned in April 1969). On completion of all these services, the annual revenue expected was Rs. 62.21 lakhs from STD receipts. Rupees 20.74 lakhs, being one-third of these STD receipts, were to be allocated to Ambala TAX. The annual recurring expenditure of that TAX was estimated to be Rs. 10.51 lakhs, leaving a net surplus of about Rs. 10.23 lakhs per annum for that TAX.

3.5 Three component works of the TAX project at Ambala were to be executed in the following sequence:—

(i) construction of building (Rs. 4.29 lakhs)

(ii) air-conditioning (Rs. 2.00 lakhs) and

(iii) installation of equipment (Rs. 45.56 lakhs).

(a) Building Construction of building was commenced in September 1968 and completed in March 1970 at a cost of Rs. 4.88 lakhs (estimated cost : Rs. 4.29 lakhs) By this time (March 1970) even the specifications for the air-conditioning plant were not ready.

(b) Air-conditioning plant.

3.6 The air-conditioning plant was to be installed in the building before commencement of installation of equipment. Specifications for the air-conditioning plant were finalised by the Director General, Posts and Telegraphs only in December 1970. An indent was sent to the Director General, Supplies and Disposals in April 1971 for purchase and installation of the air-conditioning plant. Tenders were called for in August 1971, and those received were sent in October, 1971 to the Director General, Posts and Telegraphs for technical scrutiny. After scrutiny an order was issued by the Director General, Supplies and Disposals on firm 'A' in January 1972 for supply and installation of the air-conditioning plant by 30th September 1972 at a cost of Rs. 3.09 lakhs.

3.7 At the request of firm 'A' the scheduled date of delivery and installation of the plant was extended up to 30th May 1973 by the Director General, Supplies and Disposals. Firm 'A' completed installation of the plant in January 1975. Winter test of the plant was conducted in January 1975 and monsoon test in July 1975. The plant failed in both the test. According to the specifications, air supply duct was to be insulated by fire resistant and moisture-*cum*-acid proof material. Firm 'A' however, had covered the duct by hard board, which was objected to by the Department in March, 1974. The insulation is yet to be replaced by appropriate material (October 1975). The Department stated (October 1975) that "the matter is being pursued with the firm for the completion of the work satisfactorily."

(c) *Installation of equipment*

3.8 In March 1967 the Director General, Posts and Telegraphs placed an indent for supply of equipment on the Indian Telephone Industries (I.T.I.) and asked the I.T.I. to include the same in its manufacturing programme for 1967-68. In January 1968 the Depatrment shifted the manu-

facturing programme from 1967-68 to 1968-69 and again in July 1968, from 1968-69 to 1969-70. The Department stated (October 1975) that "it was not until 1971 that production of TAX equipment was stabilised in I.T.I." The Department further stated (October 1975) that "originally it was planned to accommodate 2000 lines in the TAX building but when the actual engineering of the exchange was prepared by the Indian Telephone Industries it was found that the size of the switch room available could accommodate only 1700 lines of equipment. Hence, equipment for 1700 lines only was obtained." Supply of equipment from the Indian Telephone Industries commenced in January 1971, and equipment costing Rs. 120.12 lakhs was received up to January 1975, as against the provision of Rs. 43.74 lakhs in the sanctioned estimate.

3.9 It was expected at the time the detailed estimate was sanctioned (October 1969) that the installation of the equipment would take about one year's time after receipt of all the equipment. Installation of equipment was commenced in December 1972 after receipt of essential items like iron works. As the Indian Telephone Industries failed to adhere to the schedule of deliveries and a large number of items had not been supplied, the Director General, Posts and Telegraphs assessed in November 1973 that the installation of the equipment would be completed by June 1975. In October 1975 the Department stated that the exchange was "in an advanced stage of installation" and was expected to be commissioned in November 1975 with 50 per cent initial capacity. The Department also stated (October 1975) that "installation of 1700 lines TAX is equivalent in effect to about 6,000 lines local crossbar exchange and would normally need 36 months for completion. During early stages of development of the crossbar system in India, we did not have adequate experience regarding the extent of work required in the installation of TAX equipment, and the period of installation of 12 months shown in the detailed estimates, apparently based on the information given by the manufacturers, was too short." With the experience gained in installing 5 to 6 TAX's in the last few years the Department is stated to have found that about 30 to 40 months were required for installation of a TAX.

3.10 The crossbar type of equipment which was being manufactured by the Indian Telephones Industries since 1966-67 with the collaboration of a foreign firm suffered from certain design deficiences. A Task Force has been on the job to mdoify the designs of equipment and circuits. The first phase of modifications up to September 1971 were incorporated in regular production designs of the Indian Telephone Industries. The equipment supplied for Ambala TAX upto July 1974 was accordingly of the designs modified upto September 1971. The process of further modification and upgradation of equipment was still in progress, when, in August, 1974, the Department considered the question whether to proceed with the completion of installation and commissioning of the equipment, modified according to September 1971 design or to postpone commissioning on the equipment till further modifications. It was decided in October 1974 that,

(i) the equipment received for Ambala TAX should be installed and loaded to about fifty per cent of its capacity at the time of its commissioning;

(ii) the balance fifty per cent capacity should thereafter be fully modified according to the latest changes in the designs, after obtaining additional materials from the Indian Telephone Industries;

(iii) the working load should then be transferred to the fully modified 50 per cent equipment mentioned in (ii) above; and

(iv) then the other 50 per cent equipment mentioned in (i) above which would carry the load till transfer to the equipment mentioned in (ii) above, should be similarly modified and put into service.

3.11. In November, 1974, instructions were issued for commissioning of Ambala TAX initially with a load of 535 lines, and providing STD between Ambala-New Delhi (both ways), Ambala-Chandigarh (one way) and Ambala-Jullundur (one way) ; these were expected (October 1975) to be commissioned in November 1975.

3.12. Actual expenditure of Rs. 131.81 lakhs on the project, upto January 1975, has exceeded the sanctioned estimate (Rs. 51.85 lakhs) by over 154 per cent. The expenditure was likely to go up further due to the proposed modifications to the equipment. The Department stated (October 1975) that as against the provision of Rs. 2,100 for TAX equipment per line in the estimate, the actual cost was Rs. 6,000 to Rs. 8,000 per line "due to increase in cost of basic materials as well as other inflationary factors". According to an assessment (October 1975) of the Department the share of the STD revenue earned from the utilisation of even 535 lines would cover all revenue expenditure of the TAX and leave an annual surplus of Rs. 1.12 lakhs.

[Paragraph 16 of the Report of C&AG of India for the year 1974-75, Union Government (Posts and Telegraphs)]

3.13. According to the Audit Paragraph four co-axial microwave schemes connecting Ambala with Jullundur, New Delhi, Chandigarh, Simla, Amritsar and Patiala were commissioned for coping with the growth of trunk traffic handled by the manual system. Four manual trunk boards were also installed at Ambala in June, 1966 and another four in March, 1967 for the utilisation of trunk circuits. The Committee desired to know the number of circuits utilised through eight trunk boards installed in June, 1966 and March, 1967 and the manner of utilising the remaining circuits. The Ministry of Communication (P&T Board) in a written note furnished to the Committee, have stated:

> "From the information available from the multiplexing diagram it is found that 108 channel ends were made available at Ambala out of which only 29 were terminated in the trunk exhange for putting through calls originating or terminating at Ambala. The other channels were connected directly to other places or given on lease to others e.g. Railway, Defence etc."

3.14. As stated in the Audit paragraph, a project estimate (Rs. 57.03 lakhs) was sanctioned for installation of a crossbar type 2000 lines TAX

at Ambala by 1969-70 with a view to linking the local telephone exchanges at Ambala, Chandigarh, Simla, Ludihana, Jullundur, Amritsar, Jammu, Panipat and Karnal in due crourse to the TAX at Ambala for the purpose of introducing subscribers' trunk dialling (STD) among these stations and to extent STD to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi.

3.15. Three component works of the TAX project at Ambala were to be executed in the following sequence:

(i) Construction of building (Rs. 4.29 lakhs)

(ii) Air-conditioning (Rs. 2.00 lakhs)

(iii) Installation of equipment (Rs. 45.56 lakhs)

3.16. On completion of all these services, the annual revenue expected was Rs. 62.21 lakhs from STD receipts. Rupees 20.74 lakhs, being one-third of these STD receipts, were to be allocated to Ambala TAX, The annual recurring expenditure of that TAX was estimated to be Rs. 10.51 lakhs leaving a net surplus of about Rs. 10.23 lakhs per annum for that TAX.

(a) *Building*

3.17. Construction of the building which commenced in September, 1968 was completed in March, 1970, when even the specifications for the airconditioning plant were not ready. The Department was asked to furnish a note indicating whether prior detailed plant for the completion of the project comprising construction of the building, air-conditioning and installation of equipment was prepared.

3.18. In reply, the Ministry of Communication have stated as under :—

> "It is normal practice to plan the various components of exhange projects like building, air-conditioing, equipment etc. However, no PERT Chart, as is done now, was being parepared and included in the EFC Memos. Indicating the exact time schedule and interdependence of various activities cannected with the completion of the project.
>
> According to the note available in the files it was proposed to srart the building construction in 1967-68 and commission the exchange by 1971. The building construction started as scheduled. However, equipment supplies which were proposed for 1967-68 got delayed and were effected in the period 1971 to 1975. As regards the air-conditioning the preliminary work needed for design of the air-conditioning plant was completed in 1970 and orders placed on DGS&D in April 1971. The installation of A/C Plant was scheduled to be completed by September, 1972 in advance of commencement of equipment installation. Thus although the works relating to the completion of the project were started in time, they got delayed due to unforeseen difficulties."

(b) *Air-conditioning plant*

3.19. According to Audit paragraph, an indent was sent to the Director General, Supplies and Disposals in April, 1971 for purchase and installation of the air-conditioning plant. Tenders were called for in August, 1971 and those received were sent in October, 1971 to the Director General, Posts and Telegraphs for technical scrutiny. After scrutiny an order was issued by the Director General, Supplies and Disposals on firm M/s Frick India Ltd., Faridabad in January 1972 for supply and installation of the air-conditioning plant by 30th September, 1972 at a cost of Rs. 3.09 lakhs.

3.20. The Committee desired to know the reasons for placing the indent for the air-conditioning plant in April, 1971 when the building was completed in March, 1970. The Ministry of Communications, have stated as under:

> "The indent for air-conditioning plant is placed keeping in view the progress of building and the exchange equipment supply and installation programme as the air-conditioning plant is required at the time of commencement of exchange equipment installation only. In this case the supply of exchange equipment commenced only in 1971 and the installation commenced in December, 1972. With the indent placed in April, 1971, the air-conditioning plant could normally be anticipated to be commissioned in time before the installation commenced."

3.21. The time of eight months taken in the placement of order for the supply of "Air-conditioning Plant" in January, 1972, after the indent was sent in April, 1971 has been explained by the Department of Supply in the following *chronological order:

Date	Events
1	2
16-4-1971	Indent received in the DGS&D from the P&T Department.
27-4-1971	A reference was made to the P&T Department seeking clarification on some technical issues.
9-6-1971 & 8/9-7-1971 . .	Further letters were sent to the P&T Department inviting reference to DGS&D's letter dated 27-4-1971.
15-7-1971	Copy of P&T Department's letter dt. 21-5-1971 containing the required technical clarifications was received by the DGS&D through the P&T Liaison officer attached to the DGS&D.
3-8-1971	After checking of technical particulars by the Inspection Wing of the DGS&D, the indent was received for the procurement action by the Purchase Directorate.

*Not vetted by Audit.

1	2
11-8-1971	Advertised tender enquiry was issued.
24-9-1971	Tenders were opened.
29-9-1971	A comparative statement of the offers received was put up.
6-10-1971	Duplicate copies of five tenders received from the trade were sent to the P&T Department for technical comments.
7-12-1971	Reminder was issued to the P&T Department for sending their comments on the tenders.
24-12-1971	Technical comments were furnished by the P&T Department.
3-1-1972	As desired by the P&T Department, technical clarifications were called for from the firms.
14-1-1972 & 21-1-1972 . .	Technical clarifications were received from the firms.
24-1-1972	Decision was taken to place an order on M/s. Frick India.
31-1-1972	Order was placed on M/s. Frick India Ltd., Faridabad.

3.22. The Committee desired to know the factors which necessitated the extension of the date of delivery and installation of the plant from 30th September, 1972 upto 30th May, 1973. The Department of Supply in a detailed note furnished to the Committee, have stated* as under:

> "After issue of contract on 31-1-72, a copy of P&T's drawing No. PT/H-2602 was handed over to the afirm by the P&T Department on 2-3-72. Thereafter, the firm submitted their Plant room lay out drawing on 30-3-72. They were advised by the P&T Department on 14-4-72 to furnish duct layout drawings also to coordinate with the Plant room layout drawing. The firm replied on 16-5-72 that it would not be possible for them to finalise the duct layout drawing unless the location of the Air Handling Unit had been approved by the P&T Deptt. However, on 19-5-72, the firm submitteed a revised layout drawing showing layout of the main duct in the weather maker/ Plant room alongwith a print of required alternative position of the cooling tower. They further informed the P&T Department on 19-7-72 that till the position of the supply and return air shaft had been decided they would not be in a positon to prepare the duct layout drawing and the plant room layout drawing also could not be finalised. They further expressed their inability to undertake erection work till the shaft was ready. The matter remained under correspondence between the firm and the P&T Deptt. and the drawing for A/C Plant room layout and location of the Cooling tower was eventually approved by the P&T Department on 27-1-73 subject to the condition that the stability of the foundations would be the firm's responsibility.

*Not vetted by Audit.

Various stores and components offered by the firm on 24-6-72 were, in the mean-while inspected and accepted *vide* Inspection Note dt. 19-8-72.

The firm informed the P&T Department on 13-2-73 that the plant room, where the equipment was to be installed, was not yet ready and that the same might be handed over to their erection staff urgently. They later on intimated to DGS&D on 20-3-73 that though the erection work was in full swing, masonary shaft for ducting was not yet complete. Further, the consignee had to arrange for removal of some trees near the location of the cooling tower. Under the circumstances the firm requested for extension upto 30-5-73, for completion of the job.

A provisional extension upto 30-5-73, with reservation of right and usual denial clauses was granted on 8-5-73."

3.23. In reply to a question whether DGS&D had consulted the P&T Department while agreeing to the aforesaid request, the Department of Supply have stated:

"P&T Department were not consulted before granting the above extension."

3.24. When asked to furnish a note indicating the reasons for the delay and the steps taken by DGS&D to ensure the timely installation of the air-conditioning plant, the Department of Supply have *stated as under: —

"The installation of the plant was completed in May, 1973 as reported by the firm but the plant could not be commissioned and put up for summer test for want of masonary job for ducting by the consignee. DGS&D expedited consignee on 29-5-73. However, on 27-12-73 the firm informed the DGS&D that plant could not be offered for summer test due to non-completion of said job.

On 7-2-74 the firm reported that the plant had been working satisfactorily and requested for fixing up a date for winter test. On 13-3-74, the consignee reported completion of the plant in all respect (except for installation of electronic filter which was to be imported and might not hamper the working of the plants).

On 25-3-74, DGS&D issued a reminder to the consignee for early completion of masonary shaft work for ducting for want of which summer test was likely to be delayed. The plant was offered for summer test on 4-7-74, but the summer test ultimately could not be carried out due to non-availability of required outside Ambient temperature.

DGS&D issued from time to time reminders to the consignee for completion of the job."

*Not vetted by Audit

3.25. The Department of Supply have further *added in this connection:—

> "In July, 1975 when the plant was again put up for summer and monsoon test, the same could not be carried out due to fault on the consignee's end in the incoming main switch and cable connection to switchboard. This was duly rectified but again the testing had to be stopped midway due to overheating of cable and insulation from L & T Panel to Main Switch Board. However, certain defects short-comings etc. were pointed out by the consignee and the firm was asked to rectify the same before the plant was re-offered for further test."

3.26. As regards the action taken against the firm for delay in the commissioning of the plant, the Committee have been *informed by the Department of Supply that:

> "There has been delay in commissioning the plant for reasons which may be attributed both to the consignee and the firm. Necessary action for penalising the firm for their avoidable delays will be taken while finalising the case for balance payment."

3.27. As regards the present position of the air-conditioning plant the Committee have been informed by the Department of Supply in a written *note as under:

> "Winter test was found satisfactory, as per Inspection Report dt. 22-1-75 Monsoon test conducted between 25-9-75 to 27-9-75 was, however, not found satisfactory. Summer test carried out between 24-5-76 to 27-5-76 was deemed satisfactory, subject to rectification of certain defects/discrepancies. The Plant was re-offered for monsoon test on 17-8-76. P&T Department in their letter dated 26-8-76 pointed out that the Plant had not been put into operation. They desired that the Plant should be first put into operation and the defects/discrepancies pointed out earlier rectified. The Plant was thereafter put into operation on 11-9-76 and re-offered for test on 15-9-76. Monsoon test, however, could not be carried out due to non-availability of adequate internal heat load, which was only 3 KM stipulated in the contract. Besides the ambient conditions were also not available."

3.28. In this connection, the Ministry of Communications (P&T Board) have *explained as under:

> "It was intimated by the Firm *vide* its letter dated 15-9-1976 that their staff has been operating the plant for a few days but because of the lack of inside load, the humidity conditions as given in the A T cannot be achieved. The firm requested to provide the required inside load or create artificial load for the conduction of monsoon test. It was intimated by our officer incharge testing *vide* his letter dated 20-9-1976 that it is not known why the firm is insisting of the artificial load when the plant has already maintained the inside conditions during the winter and summer test with the same inside load. It was, however, mentioned by

*Not vetted by Audit.

the consignee *vide* his letter dated 20-9-1976 that the artificial load as requested by the company has also been arranged in the switch Room but even then the plant was not able to maintain the humidity conditions."

3.29. When asked whether provision of appropriate insulation of Air supply ducting had since been made, the Department of Supply, in reply have* stated as under:

"Regarding insulation of air supply ducting the provision in the contract is that the insulation is to be done with 1/2" thick soft board. However, the firm in their letter dt 5-1-73 addresseed to DGP&T and copy to DGS&D wanted to be advised if return air boxing was to be lined with soft wood or AC Sheet which could not be 1/2" but 1/4" thick, which was available in the market. P&T *vide* their letter No. 28-18/68-TPS(BT) dated 27-1-73 informed the firm directly to use Jolly Insulex (soft wood) material for insulation purposes. The firm had accordingly despatched Jolly Insulex material and the required insulation was carried out in May, 1973."

3.30. In this connection, the Department of Supply have further *added:

"No action against the firm is called for since they have carried out the insulation of the air ducting with the material approved by the P&T Department."

(c) *Installation of equipment*

3.31. In March, 1967, the Director General Posts and Telegraphs placed an indent for supply of equipment on the Indian Telephone Industries (I.T.I.) and asked them to include the same in their manufacturing programme for 1967-68. The Department informed the Audit in October, 1975 that it was not until 1971 that production of TAX equipment was stabilised in I.T.I. Explaining the reasons for delay in supply of the equipment, the Ministry of Communication (P&T Board) have stated:

"Ambala TAX equipment was scheduled for production in Period VI (February '67—January '68) according to the original production programme of the ITI for the Pentaconta Crossbar equipment. However, M/s. ITI were unable to stick to the target due to delay in stabilisation of TAX circuits. Frequent review meetings were held with ITI for coordination of the production. In the 15th Co-ordination Meeting held in May 1971, ITI clearly indicated that targets for TAX supplies will not be met until the circuits are stabilised. The supplies, had, therefore, to be rescheduled a number of times and ultimately the supply commented in January 1971. This also came in trickles and the actual position indicated in the 17th T.C.C. Meeting held in January 1972 was:

Package I to VI : ..... June 1972 to March 1973.

Actually, the power plant for the TAX was further delayed and completed only in March, 1975."

*Not vetted by Audit.

3.32. The Department of Posts and Telegraphs informed the Audit in October, 1975 that—

> "Originally it was planned to accommodate 2000 lines in the TAX building but when the actual engineering of the exchange was prepared by the Indian Telephone Industries it was found that the size of the Switch room available could accommodate only 1700 lines of equipment. Hence, equipment for 1700 lines only was obtained."

3.33. Explaining the reasons for this planning having been proved to be wrong the Ministry of Communications have stated as under:

> "The planning of accommodation for TAX was being done at the scale of 2 ft. per line for the switching equipment on the basis of the layouts made by the B.T.M. for the exchanges supplied by them. This was adopted as adequate experience of the installation of TAXs which was neither available with the P&T nor with ITI.
>
> The requirement of accommodation depends on the number of terminations of different types of circuits (Strowger, crossbar, manual etc.). Correspondingly, the quantity of common control equipment also depends upon the type of termination.
>
> Against the requirement given in the approved schedule of 4,400 sft. actual provision is 4,170 sft. It was only after the design of the exchange and layout of equipment was completed that the limitation of space came to light."

3.34. Asked whether Indian Telephone Industries was consulted before planning the construction of the building, the Ministry of Communications have stated on 7 May, 1977 :—

> "It is not the practice to consult ITI before planning the construction of an exchange where basis already exists. The planning of accommodation for TAX is being done at the scale of 2 sft per line. Marginal variations in individual cases occur."

3.35. It is pointed out in the Audit para that it was expected at the time the detailed estimate was sanctioned (October, 1969) that the installation of the equipment would take about one year's time after receipt of all the equipment. Installation of equipment was commenced in December, 1972. In October, 1975, the Department of P&T informed the Audit that the exchange was in an advanced stage of installation and was expected to be commissioned in November, 1975 with 50 per cent initial capacity. The Department was asked to furnish a note indicating the present position about the installation of the equipment and commissioning of the exchange.

3.36. In reply, the Ministry of Communications have stated as under:

> "Installation of Ambala TAX is undertaken in two phases to enable modification of the equipment without affecting the service

to the level recommended by the task force. Accordingly, approximately 50% of the capacity *viz*. about 850 lines was commissioned on 10-3-76 and progressively stations like Ambala, Chandigarh, Amritsar, Simla and Jullundur have been connected till date. Commissioning of inter-TAX route between Ambala and Delhi will be done in November 1976 completing the first phase of installation. Thereafter the remaining 50% of the equipment will be modified and existing routes transfered to it. The equipment thus spared will be modified and it expected to be re-commissioned to provide the rated capacity of 1700 lines by the middle of next year."

3·37. The Committee desired to know whether the STD facilities, which were expected to be completed by November, 1975 have since been completed. The Ministry of Communications, in a written note furnished to the Committee, have stated:

"The commissioning of routes through Ambala TAX originally anticipated for November 1975 could not be commissioned due to large volume of testing needed, difficulty in getting adequate trained staff and delay in termination of the medium. Initially, therefore, the TAX was commissioned with one-way STD from Ambala to Jullundur. Thereafter all the routes envisaged *viz*. Amritsar, Simla, Chandigarh (one way) ands Jullundur (one way) have since been commissioned. The difficulty arose in connecting Chandigarh and Jullundur both ways due to their being already parented to Delhi TAX. The transfer of these stations to Ambala TAX will be effected on commission, ing of the inter-TAX working between Ambala TAX and Delhi TAX in November 1976. The dates of commissioning the various routes are as given below:

Routes	*Date of commissioning*	
Stn. A. Stn. B.	A	B
Ambala—Amritsar	30-6-76	2-10-76
Ambala—Jullundur	10-3-76	to be commissioned
Ambala—Simla	15-8-76	Do.
Ambala—Chandigarh	17-5-76	Do"

3·38. When enquired the date on which the Ambala TAX would be able to work with 1700 lines, the Ministry informed the Committee that:—

"About 850 lines out of 700 lines have been commissioned in the first phase. The balance equipment has to be modified to task force level on receipt of the modification material from the ITI. According to the programme furnished by the ITI in the 6th P.C.C. meeting held on 30-7-76, modification materials

are expected during the current financial year. It is expected that upgradation of the entire exchange to full capacity of 1700 lines will be completed by December, 1977."

3·39. It is seen from the Audit Para that actual expenditure of Rs.131·81 lakhs on the project upto January, 1975 has exceeded the sanctioned estimate (Rs. 51·85 lakhs) by over 154 per cent. The expenditure was likely to go up further due to the proposed modification to the equipment. The Ministry of Communications, have furnished the following note, indicating the approximate revenue foregone by the Department due to the delays in the commissioning of the exchange as per schedule:—

"According to the schedules adopted in the project estimate the TAX would have been completed in March, 1969. The annual revenue expenditure and profit anticipated in the P/E were Rs. 20,73,600; 10,49,100 and 10,24,500 respectively. The revenue foregone is thus Rs. 71,00,000 on account of the dealy in commissioning. The revenue foregone is however national and not real as M/s. ITI were not able to manufacture TAX equipment during that period and no capital outlay was made on the equipment."

3.40. The Committee note that though the question of installing a Trunk Automatic Exchange (TAX) at Ambala for extending STD to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi has been under consideration since 1965, a project estimate (Rs. 57 lakhs) for istallation of a crossbar type 2000 lines TAX at Ambala by 1969-70 was sanctioned only in November 1967. The object was to link the local telephone exchange at Ambala, Chandigarh, Simla, Ludhiana, Jullundur, Amritsar, Jammu, Panipat and Karnal in due course to the TAX at Ambala for the purpose of introducing subscribers' trunk dialling (STD) among these stations and to extent STD to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi (commissioned in April 1969). On completion of all these services, the annual revenue expected was about Rs. 62 lakhs from STD receipts. The work was started in September 1968 and still the project is not fully commissioned in all respects. Though the building was completed in March 1970 there was long delay in the completion of other components of the project viz. air-conditioning, installation of equipment etc. This delay was evidently due to lack of advance planning and proper synchronisation at various stages. The Committee are unable to agree with the Department of Communications that delays occurred because no PERT chart as is done now, was introduced indicating the exact time schedule and inter-dependence of various activities connected with the completion of the project as other ways and means could have been adopted to watch closely the progress and coordinate the execution at various stages.

3.41. The Committee was distressed to note that by the time the construction of the building was completed in March 1970, even the specifications for air-conditioning plant were not finalised by Director General, Posts and Telegraphs, though the plant was to be

installed in the building before commencement of installation of equipment. An indent was sent to DGS&D in April 1971 for purchase and installation of the air-conditioning plant when the supply of equipment for the Exchange from the Indian Telephone Industries had already commenced in January 1971. The Committee are constrained to note that another 8 months were taken in placing the order on the firm in January 1972. Of these 8 months, approximately two months were lost in tracing out a letter issued by P&T Department to DGS&D on technical clarifications sought by DGS&D and another 2 1/2 months were taken by P&T Department to comment on the tenders received for the installation of the plant. The delay due to this protracted correspondence and routine work is most reprehensible. Had the P&T Department taken appropriate and timely measures to facilitate the placing of the order for the plant before completion of the construction of the building in March 1970, the inordinate delay of 22 months that occurred between March 1970 and January 1972 could have been avoided.

3.42. Another factor which has also contributed to the delay in installation of the air-conditioning plant is the fact that the P&T Department took almost one year after placing the order on 31 January 1972, in approving the drawing for A/C Plant room lay-out and location of the cooling tower. The reslut of these delays was that the installation of the plant was completed in May 1973 instead of September 1972 and that too could not be commissioned and put up for summer test for want of masonary job for ducting by the consignee.

3.43. Though the Plant was put into operation on 11-6-1976 after summer and winter tests, it is still to undergo the monsoon test, which could not be carried out earlier due to non-availability of adequate internal heat load as stipulated in the contract. It is distressing that even 3½ years after the installation of the plant in May 1973, the plant has still to carry out the monsoon test successfully. The Committee need hardly emphasise that the precise reasons for delay in the installation and commissioning may be indentified with a view to fixing responsibility and to take remedial measures for future. The Committee may be informed of the action taken in this matter.

3.44. The Committee note that though the indent for supply of equipment for the exchange was placed on the Indian Telephone Industries in March 1967, the manufacturing programme was deferred till 1971 when the production of TAX equipment was stabilised in ITI. Consequently, the supply of equipment, which cost Rs. 120.12 lakhs against the provision of Rs43.74 lakhs in the sanctioned estimate commenced in January 1971 and was completed in March 1975. As it was found that the size of the switch room available could accommodate only 1700 lines of equipment as against 2000 lines originally planned, the equipment for only 1700 lines was obtained afterwards. The Committee are not convinced by the reply of the Posts and Telegraphs Departement that because of inadequate experience of the installation of TAX available with P&T

and ITI, they could not estimate the size and capacity of the accommodation required, as in that case they should have been more cautious. The Committee also find that besides taking about 4 years initially in stabilisation of the TAX circuits, it took more than 4 years to instal the equipment in the Project after the work was commenced in January 1971, as against the stipulated period of one year.

3.45. The Committee find that though 50% of the capacity viz. about 850 lines was commissioned on 10 March 1976 and subsequently stations like Ambala, Chandigarh, Amritsar, Simla and Jullundur had been connected till date, difficulty cropped up in connecting both ways Chandigarh, Simla, Jullundur which continued till November 1976. The Committee would like to know whether this difficulty which was to be overcome on the commissioning of inter-TAX working between Ambala TAX and Delhi TAX in November 1976, has since been removed. The Committee hope that concerted efforts would now be made to expedite the balance equipment so that the project is upgraded to provide the rated capacity of 1700 lines without loss of further time. The Committee would like to be apprised of the further progress made in this regard.

3.46. The Committee are further concerned to note that the actual expenditure of Rs. 131.81 lakhs on the project upto January 1975, has exceeded the sanction estimate of Rs. 51.85 lakhs by over 154 per cent and was likely to go up further due to the proposed modifications. It is seen from the reply of the P&T Department that the annual revenue, expenditure and profit anticipated in the project estimate were Rs. 20,73,600; Rs. 10,49,100 and Rs. 10,24,500 respectively. The revenue forgone is thus Rs. 71,00,000 on account of delay in comissioning the project as it was expected that the TAX would be completed in March 1969 according to the schedule adopted in the Project Estimate. The Committee are conveniced that the heavy capital epxenditure beyond the sanctioned estimates could have been reduced to a great extent and more revenue earned thereby, if the authorities concerned has made concerted and coordinated efforts to keep to the time schedule to complete the project. The Committee regret that due to these lapses in handling the project the country had to pay heavily.

EXPANSION OF CALCUTTA '24' TELEPHONE EXCHANGE

Audit Paragraph

4.1. As against the equipped capacity of 6600 lines (raised from 5400 to 6600 lines in January 1965) of the telephone exchange '24' in Central Calcutta, the total demand was for 6844 connections in March 1964, with an annual growth of demand for 800 connections. A project estimate for expansion of the exchange '24' by 3300 lines more was sanctioned in April 1965 for Rs. 59.48 lakhs, of which Rs. 29.45 lakhs were for equipment and Rs. 30.03 lakhs for lines and cables.

Equipment

4.2. Indent for supply of equipment was placed on the Indian Telephone Industries (I.T.I.) in May 1965. Details of supplies received against this indent are given below :—

	Value of stores received (lakhs of rupees)
1965-66	2·12
1966-67	8·01
1967-68	13·52
1968-69	3·36

The Department stated (January 1976) that "major portion of the equipment was received by September 1968. On receipt of these major items of stores installation work started in full swing....." Installation of equipment for the additional 3300 lines was completed in January 1970 at a cost of Rs. 33.64 lakhs. Actual expenditure exceeded the estimate (Rs. 29.45 lakhs) by Rs. 4.19 lakhs due to increase in the price of equipment received from the I.T.I.

Cables

4.3. Three detailed estimates were prepared for laying of cables, of which two estimates were for junction cables. One estimate for 26 kilometres of junction cables was sanctioned in May 1965 for Rs. 8.93 lakhs and another estimate for 1.87 kilometres of junction cables was sanctioned in December 1969 for Rs. 2.89 lakhs. Indents against these estimates were placed in May 1965 and December 1969 respectively. The work of laying junction cables against the first estimate, which was expected to be completed within six months of the receipt of all stores at site, was commenced in June 1967 and completed in March 1974. The work against the second estimate was started in December 1971 and completed by September 1974.

4.4. Detailed estimate for laying subscribers' cables (60.3 kilometres) was sanctioned in January 1969 for Rs. 14.46 lakhs; the work was expected to

be completed in 300 days. The work was commenced in 1968-69 and completed upto 30 per cent by March 1970, 50 per cent by September 1970, 65 per cent by September 1972, 90 per cent by March 1973, 95 per cent by September 1973 and 98 per cent by March 1974. The Department stated (January 1976) that "the estimate for subscribers" cable work was sanctioned in January 1969 with the anticipation that this work would be completed by the time the installation of exchange equipment was completed in January 1970. Unfortunately cable work could not be completed in time due to some delay in recipit of cable and the disturbed conditions of Calcutta prevailing at that time. Moreover, there were repeated underground cable thefts in this area which posed a big problem. There were as many as 41 cases of theft of underground cables in this area from February 1970 to March 1973 and the staff, therefore, concentrated on restoration of communications instead of laying new cables and this is responsible for the delay in laying of both the junctions and subscribers' cables."

4.5. The actual expenditure on the above three cable works up to March 1975 was Rs. 61.16 lakhs, as against the provision of Rs. 30.03 lakhs in the sanctioned project estimate; the excess expenditure of Rs. 31.13 lakhs was due to increase in price of cables.

4.6. According to the instructions (September 1970) of the Department ninety per cent of the capacity should be utilised by release of new telephone connections soon after expansion or, in any case, not later than six months of such expansion, and up to ninety four per cent about six months before the due date of commissioning of the next expansion.

4.7. As the subscribers' cables were not ready when expanded capacity for 3300 additional lines was available in January 1970 there was delay in utilising the additional capacity. Utilisation of the expanded capacity was as below :—

Month	Equipped capacity	Connectable capacity	Working connections	Spare capacity	Number of applicants awaiting new connections
September 1970 . . .	9900	8910	6960	1950	53
March 1971	9900	8910	7245	1665	1665
September 1971 . . .	9900	8910	7370	1540	1586
March 1972	9900	8910	7481	1429	1716
September 1972 . . .	9900	8910	8190	720	2488
March 1973	9900	8910	8642	268	1997
September 1973 . . .	9900	8910	8736	174	2540
March 1974	9900	8910	8817	93	2847
September 1974 . . .	9900	8910	8821	89	3189
March 1975	9900	9306 (94 per cent of 9900)	8883	423	2811

4.8. The Department stated (January 1976) that "the exchange equipment is ordered to deal with a certain amount of originating and terminating traffic and the number of lines that can be connected is dependent upon traffic handling capacity."

4.9. The Department further stated (January 1976) that when "the expansion was commissioned in January 1970, the exchange could not be loaded on the basis of traffic consideration. With low handling traffic capacity of the exchange upto September 1972 the permissible loading was 7500 lines only, thereafter for quarter ending December 1972 the loading was revised to 8266 lines and for quarter ending June 1973 to 8745 lines. Full loading was possible only from July 1974 after adding necessary traffic relief equipment."

4.10. Due to delay in fully utilising the expanded capacity, applicants had to wait longer for new connections. The Department also lost potential revenue of about Rs. 31 lakhs (March 1975).

4.11. Actual demand being 11,664 in March 1974 and 11,694 in March 1975, equipment for another 1500 lines was installed by March 1975 in the exchange by diverting the same from expansion projects of other exchanges (Cossipore and Salkia). On 1st August 1975, there were 9229 working connections against the equipped capacity of 11400 lines; there were 3,246 applicants waiting for new telephone connections on that date.

[Paragraph 17 of the Report of the Comptroller & Auditor General of India for 1974-75, Union Government (P&T)].

Supply and Installation of Equipment

4.12. A project estimate for expansion of the Calcutta '24' telephone exchange by 3300 lines more was sanctioned in April, 1965 for Rs. 59.48 lakhs, of which Rs. 29.45 lakhs were for equipment and Rs. 30.03 lakhs for lines and cables.

4.13. According to Audit Paragraph, an indent for supply of equipment was placed on the Indian Telephone Industries in May, 1965, and the details of supplies made against this indent are as follows :—

	Value of stores received (Lakhs of rupees)
1965-66	2·12
1966-67	8·01
1967-68	13·52
1968-69	3·36

4.14. The P&T Department informed Audit in January, 1976 that major portion of the equipment was received by September, 1968, when the

work of installation was started in full swing and completed in January 1970. Actual expenditure incurred on the equipment was Rs.33.64 lakhs as against Rs. 20.45 lakhs originally estimated.

4.15. The Committee desired to know the reasons for taking a very long period of about three years in completing supply of the equipment by Indian Telephone Industries. The Chairman, Indian Telephone Industries has explained during evidence :—

"In 1965-66 the P&T Department gave us a programme of 73,500 lines of main Exchanges. We have an optimum capacity for this strowger type of exchange of 150,000 lines under ideal conditions, and this capacity is split up for different purposes. The same capacity can be used for the supply of main automatic exchanges, for STD equipment, for Telex, for private automatic exchanges, for PABX and so on. So the whole capacity will have to be distributed. When we received this programme for 73,500 lines for 1965-66, we pointed out to the P&T Department that the capacity that had been earmarked for main automatic exchanges was only 40,000 lines during that year and, consequently, the supply of these will have to be shifted to next year, *i.e.* 1966-67, and the suceeding years. Though the programme was given, it had to be catered to within the capacity we had earmarked for certain types of exchanges. Consequently, this supply was scheduled for 1966-67 also. We started the supplies in November 1965 and finished it in May 1968."

4.16. The witness further added :—

"Calcutta is the only exchange system in India which is different from all other exchange systems. This Exchange system is called the Director type of Strowger system, for which the relays and the circuitry needed are different from all other Exchanges which we manufacture. Consequently, this is not part of the standard manufacture and the type of effort that has to be put in for manufacturing this type Exchange is so much more than for the standard equipment we manufacture. That was the reason why the supplies could not be completed in 1966-67 and went on a little beyond upto May, 1968."

4.17. The Committee enquired about the initial programme for the supply of the equipment. The Chairman, Indian Telephone Industries has deposed :—

"In these cases, the programme was not drawn up. There is a serial given, and this is a sort of roll on plan. For 1965-66 the total orders were for 73,500 lines, and the total capacity earmarked for this type of exchanges was 40,000. Hence, the remaining part of the exchange had only to be done the next year obviously. This programme of ITI manufacture, therefore, was scheduled for 1966-67."

4.18. The Committee enquired whether deferring the priority of this exchange was for the sake of providing STD facility elsewhere. The Member (TD), P&T Board has explained :—

"The programme of supply of equipments in 1965-66 contained 41 items of new exchanges and extensions totalling 73500 lines. This

expansion is there at item No. 25. This programme was discussed in the Technical Coordination Committee Meeting held between P&T and ITI. It was indicated that priority is to be given for supply of equipment for STD, MLOD, SLOD, even if there were certain number of reductions in the lines. Based on this the programme was revised in 1965-66 to cover 41,700 lines up to and including No. 22 in the list mentioned above. The rest of the items were shifted to 1966-67. In this way this expansion of Calcutta Telephone Exchange happened to be shifted to 1966."

4.19. Questioned about the advisability of shifting the priority for supply of the equipment meant for an exchange located in an important place as Calcutta, the Secretary, Ministry of Communications has explained :—

"I want to tell you first of all that in the 22 exchanges which were included in the programme are the two exchanges of Calcutta-Calcutta circuit—2900 lines and Calcutta Repeater 2400 lines which are in Sr. Nos. 8 and 21. They were within Serial No. 22 in the programme. But, Calcutta Central, that is, 3300 lines, Ex. 24, was deleted. I may submit that in the deleted exchanges from Sr. Nos. 23 to 41, there are seven exchanges in Bombay which were also deleted. So it is not that the deletion was only from Calcutta. But this one Exchange came in the deletion."

Cables

Junction Cables

4.20. According to the Audit Paragraph three detailed estimates were prepared for laying of cables, of which two estimates were for junction cables. One estimate for 26 kilometres of junction cables was sanctioned in May 1965 for Rs. 8.93 lakhs and the another estimate for 1.87 kilometres of junction cables was sanctioned in December 1969 for Rs. 2.89 lakhs. Indents against these estimates were placed in May 1965 and December 1969 respectively. The work of laying junction cables against the first estimate, which was expected to be completed within six months of the receipt of all stores at site, was commenced in June 1967 and completed in March 1974. The work against the second estimate was started in December 1971 and completed by September 1974.

4.21. The Committee enquired the reasons for the gap of four years between according sanctions to the two estimates for junction cables. In a note the P&T Department has stated:

"These refer to detailed technical estimates for laying junction cables between the exchanges. Within the project provisions detailed estimates are sanctioned according to the requirements details of which are worked out as the main work progresses. The junction requirements were first assessed on some routes and estimate was sanctioned in May, 1965. On assessment of junctions on other routes, a second estimate was sanctioned in December, 1969."

4.22. The Committee further desired to know the reasons for an abnormal delay in laying the junction cables. In a note the Department has informed :—

"Most of the cables were received by 1969, and it is reported by the General Manager Telephones that they were also physically laid by May, 1970. The completion indicated as March '74 apparently pertains to the completion of payments, closing of accounts, etc. The delay, therefore, between the sanction of the cable works and its physical completion was due to delay in receipt of cables. The reasons for the same is the limited capacity of M/s. Hindustan Cables Limited, who are the sole indigenous supplier. The progress of laying of cables was considerably retarded by the disturbed conditions in Calcutta prevailing at that time and was further aggravated by the repeated thefts of working cables which necessitated diversion of cable jointing staff for restoration of communication."

4.23. The Committee sought specific clarification to the position stated in the Audit Paragraph that the work of laying the junction cables against the first estimate, which was expected to be completed within six months of the receipt of all stores at site, was commenced in June, 1967 and completed in March, 1974, the work against the second estimate was started in December, 1971 and completed by September, 1974. The Secretary, Ministry of Communications has stated:

"In the first case it was completed within the expected period of 6 months but there was large delay in the receipt of the junction cable from Hindustan Cables Ltd."

4.24. Subsequently, in a note, the P&T Department have furnished the following details of the total quantity of cables ordered and received by them during the period from 1969-70 to 1973-74 :—

Year	Total quantity ordered	Total supply received
	KM.	KM.
1969-70	4820	2600
1970-71	3728	212:
1971-72	6096	1640
1972-73	4040	1938
1973-74	4640	2489

4.25. It has been stated that due to shortage of cables, all the cables required for 24 Exchange could not be supplied in time.

4.26. The Committee desired to know the steps taken by the Department to obtain the supply of junction cables early from the Hindustan Cables Ltd. In a note, the P&T Department have stated as follows :—

"The orders on M/s. HCL are placed in bulk by the P&T for the entire year. The production of these cables is taken up by M/s. HCL according to their manufacturing programme, depending upon the availability

of raw material and the product-mix as decided by them to obtain the optimum use of the machinery etc. The cables ordered on M/s. HCL are allotted to various Stores Depots all over the country and the cables as they are produced are despatched to the Departmental Store Depots who issue them to the project authorities against indents received from the field units. However, due to very limited production of cables at that time in HCL, Cables required for these works could not be made available in time.....

The supply of the cables from M/s. HCL was discussed in periodical meetings between the Officers of the P&T Directorate and M/s. HCL."

Subscribers' Cables

4.27. According to the Audit Paragraph, detailed estimate for laying subscribers' cables (60.3 kilometres) was sanctioned in January 1969 for Rs. 14.46 lakhs; the work was expected to be completed in 300 days. The work was commenced in 1968-69 and completed up to 30 per cent by March 1970, 50 per cent by September 1970, 65 per cent by September 1972, 90 per cent by March 1973, 95 per cent by September 1973 and 98 per cent by March 1974.

4.28. The P&T Department informed Audit in January 1976 as follows :—

"the estimate for subscribers' cable work was sanctioned in January 1969 with the anticipation that this work would be completed by the time the installation of exchange equipment was completed in January 1970. Unfortunately cable work could not be completed in time due to some delay in receipt of cable and the distrubed conditions of Calcutta prevailing at that time. Moreover, there were repeated underground cable thefts in this area which posed a big problem. There were as many as 41 cases of theft of underground cables in this area from February 1970 to March 1973 and the staff, therefore, concentrated on restoration of communications instead of laying new cables and this is responsible for the delay in laying of both the junctions and subscribers' cables."

4.29. Elucidating the reasons for delay in laying the subscribers' cables the Secretary, Ministry of Communications, has informed the Committee as follows :—

"There are two types of cables in telephone system; one is which connects the two exchanges and the other is which connects the telephone exchange to the telephone; that is called subscribers' cable. 60 kilometres of subscribers' cables had to be laid. By September 1969, 24 kilometres of cables had been received and of this 18 kilometres had been laid by March 1970. By February 1970, 32 kilometres of cables had been received and by September 1970, 30 kilometres had been laid. We received nearly the entire cables except one kilometre in 1972 and 90% were laid by March 1973. There has, thus, been a progressive laying of these cables as the cables were received progressively starting from March 1969 right upto July 1973."

4.30. The Committee were informed during evidence that 86 per cent of the subscribers' cables was received by 1970. The Committee, therefore desired to know as to why the remaining 14 per cent of the requirement of cables was not met in 1970 itself instead of delaying the supply by 2 years, as the supply of cables from the Hindustan Cables was received by P&T Department in bulk for all the exchanges. In a note, the P&T Department has stated:

"These 14% cables received after 1970 were 5385 meters of 100 pairs/ 6½ lbs. 2467 meters of 50 pairs 6½ lbs. The supply of cables from HCL is received by the P&T in bulk and they are distributed to all exchanges also in the country. Due to general shortage of cable these cables could not be made available for this exchange earlier."

4.31. The Committee enquired as to why the work of laying of the subscribers' cables was not coordinated with the completion and installation of the exchange equipment, that is, by January, 1970. The Secretary, Ministry of Communications, has stated as follows :—

"Subscribers' cables consisted of 60 km. lengths of cables. The supplies were not made at one time. The first supply was made in March 1969 when we received 1.5 km. of cables. In May 1969, 9 km. of cables were received, in June 1969—3.6 km. and September 1979—8.4 km. The total amounts to 24 km. of cables. By March 1970 we had laid 18 km. of cables which, as I mentioned, amounts to 30% of 60 km. which was to be laid. Progressive laying went on and by September 1970 we have laid another 12 km. of cables and this accounted for 50%."

4.32. The Committee enquired whether the Hindustan Cables Limited had at any stage expressed their inability to fulfil the commitment within the scheduled time. The Member (TD), P&T Board has explained :—

"It is like the case of ITI where there is a regular annual drill with the Hindustan Cables. We place orders on an annual basis. In this case they told us that they had difficulties."

4.33. The witness has added :—

"Their difficulty was not so much in their installed capacity, nor it was in obtaining the materials. They pleaded that owing to their difficulties with the labour the production was not coming. From time to time they had been telling that they were discussing it with the Union and adequate necessary steps were being taken."

4.34. The Committee pointed out that the P&T Department consumed 90 per cent of the total production of cables by Hindustan Cables Ltd. The Committee, therefore, desired to know the extent of control exercised by the Department over the Hindustan Cables Ltd. The Secretary, Ministry of Communications has stated during evidence :—

"We have been trying our best to bring this Unit under us, but we have not succeeded."

4.35. In this connection, the Committee desired to know the action taken by Government on the following observation made by them in Paragraph 1.91 of their 204th Report (5th Lok Sabha) (1975-76) :—

"Incidentally, the Committee find that about 90 per cent of the total production of Hindustan Cables Ltd. is being consumed by the Ministry of Communications and that the Administrative Reforms Commission had recommended that the control of Hindustan Cables should vest with this Ministry instead of the Ministry of Industrial Development. The then Secretary, Ministry of Communications, while tendering evidence before the Estimates Committee in 1972-73, had also pointed out that if the administrative control of the company vested with this Ministry, a 'lot of time in dialogue would have been saved'. The Estimates Committee had then been informed that a proposal for the transfer of the company to the Ministry of Communications was under consideration of the Committee of Secretaries. The Committee have, however, been informed that the Company still continues to be under the administrative control of the Ministry of Industrial Development. While the reasons for continuing with this arrangement are not known to the Committee, they feel that it would be a more satisfactory arrangement if Hindustan Cables Ltd. is placed under the administrative control of the Ministry of Communications, and accordingly desire that this should be examined afresh."

4.36. The Secretary, Ministry of Communications has informed the Committee during evidence as follows :—

"From the side of the Communications, we feel that this transfer should take place and this industry should be under the Ministry of Communications. The Minister of Communications had taken up this matter with the Ministry of Industrial Development in the context of the observations that have been made and the matter has not yet been finalised."

4.37. Subsequently, the P&T Department in a note* has informed the Committee as follows :—

"This question was taken up at the Minister's level and it has been decided that Hindustan Cables Ltd. should continue under the administrative control of the Ministry of Industrial Development."

4.38. One of the reasons for delay in laying the cables was the disturbed conditions of Calcutta prevailing at that time. While ascertaining the specific instances of distrubed conditions, the Committee desired to know as to what extent these were responsible for the delay in laying the cables. In a note, the P&T Department has informed the Committee as follows :

"The G.M., Telephone Calcutta has intimated that in those days there were disturbed conditions in Calcutta although his office had not kept any record of the same. He has further indicated that the staff felt insecured and were reluctant to move about freely particularly after sunset. It was also stated that there were frequent dislocations of

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*Not vetted by Audit.

transport facilities. As a result the working hours were very much restricted and it was not possible to achieve the desired progress on development works."

Theft of cables

4.39. 41 cases of theft of underground cables in the area from February 1970 to March, 1973, are stated to be yet another reason responsible for delay in laying of both the junctions and subscribers' cables. The Committee therefore, desired to know the security steps taken by the P&T Department, besides the steps taken by the State authorities to control the incidence of theft during the last five years. In a written note, the P&T Department has informed the Committee as follows :—

"Besides the action taken by the State Police, at the instance of P&T nine resistance groups were formed in 1972 to guard the telephone cables in affected areas. In addition, an intelligence Cell has been formed under the West Bengal State Government, from March, 1974. With the functioning of these two agencies the incidence of cases of theft has come down as shown below :—

Year	No. of theft cases
1973-74	166
1974-75	163
1975-76	120
April, 1976 to June, 1976	16"

4.40. When the Committee apprehended the involvement of the P&T staff in such cases, the General Manager (Telephone) Calcutta, has stated:

"We have one case where a junior engineer was caught while selling telephone cable—he had sold it to one of the local shops. We took up the matter with the police and with their aid we were able to apprehend him; this man was subsequently arrested and we have suspended him from service."

4.41. The witness has added—

"From time to time we have been able to apprehend officials involved in thefts. From the Class IV cadre too we have one or two cases and the cases are in the courts. By and large, we do not have large scale thefts involving our own staff. As regards the thefts, in Calcutta we regularly lodged cases with the police as and when they occurred. It used to be of the order of 150 to 170 cases per year. As you know we have also got surveillance groups which we have started with the aid of the police and also the Intelligence Wing. These intelligence groups have been working and I am glad to say that in the first three months of this year, the number of thefts have come down to 16. But it is a chronic problem in Calcutta, which we are trying to grapple with. In fact, in

the main thoroughfare at the crossing of Chowranghee and Theatre Road, thefts of cable distribution boxes have taken place. We have been grappling with the general problem of thefts for the last four or five years. We have been reporting these matters to the Police Commissioner from time to time. Close liaison is always maintained with the Police..."

4.42. When the Committee expressed their surprise over the cases of thefts in a busy traffic centre of Chowranghee and Theatre Road, the witness has added—

"I can only say that we have been reporting these incidents to the Police Commissioner from time to time. It is likely that our own staff may be hand in glove with these persons."

4.43. About the outcome of the Police investigations into the said 41 cases of theft, the Committee have been informed as follows :—

"In respect of all these 41 theft cases the final reports from the Police are awaited. No involvement of the P&T staff has been established so far."

4.44. Explaining briefly the number of cases of theft of cables in Delhi and Madras, etc,. *vis-a-vis* Calcutta, the Secretary, Ministry of Communications explained :—

"Though we have thefts in different parts of the country, the number of cable thefts in local cables is a situation which is peculiar to Calcutta. We have one or two thefts in Delhi and Madras but 160 cable thefts in a year is something peculiar to Calcutta."

4.45. When the Committee enquired as to where did the thieves pass on the stuff, the Secretary, Ministry of Communications has stated :—

"There are dealers in non-ferrous metal which handle this. They take the cables and melt them. It does not retain the shape of the cables."

4.46. About the extent of loss suffered by the P&T Department from the copper wire thefts etc., the Secretary, Ministry of Communications has informed the Committee :—

"In Calcutta, the loss in 1973 was Rs. 7.21 lakhs, in 1974 Rs. 3.19 lakhs and in 1975, Rs. 3.78 lakhs. The amount of loss may be less, but the fact that it involved a large number of telephones going out of operation bothered us. The difficulty caused to thousands of subscribers is much more important."

4.47. The Committee desired to know whether the Department had tried to change from copper wire to some other wire to discourage the cases of thefts, the Secretary, Ministry of Communications has stated :—

"That is not in the case of local cables. It is in respect of long distance cables, i.e. cables going from one place to another. We are changing

those conductors from copper to aluminium ones. Earlier we changed the copper weld. There are two types of conductors.... even the copper ply and aluminium conductors are being stolen, even though not in the same quantity."

4.48. Drawing attention to the following observation made by them in Paragraph 8.23 of their 143rd Report (5th Lok Sabha) (1974-75), the Committee desired to know whether the details of these thefts had been reported to Audit :—

"The P&T Board have not made any reference in their reply to the point made by the Committee that the Department should have informed Audit of the theft of copper wire at least after it had received the Audit Paragraph. Existing rules require that thefts exceeding the monetary limits prescribed from time to time should be reported to Audit. The Committee desire that this should be followed religiously in future."

4.49. The Secretary, Ministry of Communications has confirmed that the local Audit knew about each theft and its value.

Wide difference in the estimated and actual expenditure on Cables

4.50. According to the Audit Paragraph, the actual expenditure on the cables works upto March, 1975 was Rs. 61.16 lakhs, as against the provision of Rs. 30.03 lakhs in the sanctioned project estimate. The Committee desired to know the reasons for 100 per cent increase in the cost of cables. The Secretary, Ministry of Communications has deposed :—

"The major portion of the cost of the cable is the cost of metal—copper or lead and paper insulation. Time and again the cost of these metals has been increasing and as a result the cable cost has been increasing. I will give you the average cost I have estimated. In 1965-66 the average cost per conductor km was Rs. 66. 1970-71 it has gradually increased to Rs. 123. That is almost twice. In 1975-76 it was Rs. 230, that is four times. When we made the estimate, we took the price of the Hindustan Cable prevalent at that time and the actual price is the cost of the cable at the time of supply."

Loading of the Exchange

4.51. According to the instructions (September 1970) of the Department, ninety per cent of the capacity should be utilised by release of new telephone connections soon after expansion or, in any case, not later than six months of such expansion, and upto ninety-four percent about six months before the due date of commissioning of the next expansion.

4.52. Audit has pointed out that as the subscribers' cables were not ready when expanded capacity for 3300 additional lines was available in

January 1970 there was delay in Utilising the additional capacity. Utilisation, of the expanded capacity was as below :—

Month	Equipped capacity	Connectable capacity	Working connections	Spare capacity	Number of applicants awaiting new connections
September 1970 . . .	9900	8910	6960	1950	53
March 1971	9900	8910	7245	1665	1665
September 1971 . . .	9900	8910	7370	1540	1586
March 1972	9900	8910	7481	1429	1716
September 1972 . . .	9900	8910	8190	720	2488
March 1973	9900	8910	8642	268	1997
September 1973 . . .	9900	8910	8736	174	2540
March 1974	9900	8910	8817	93	2847
September 1974 . . .	9900	8910	8821	89	3189
March 1975	9900	9306 (94 per cent of 9900)	8883	423	2811

4.53. The P&T Department informed the Audit in January, 1976 that the exchange equipment was ordered to deal with a certain amount of originating and terminating traffic and the number of lines that could be connected was dependent upon traffic handling capacity.

4.54. The Committee desired to know the traffic handling capacity of the exchange as planned in the Project Estimate in relation to the actual volume of traffic in January, 1970. In a note, the P&T Department has informed as follows :—

> "The '24' Exchange was designed to carry originating traffic of 0.0628 Traffic Units (T.U.) per subscriber in the busy hour. The actual traffic as measured in June '70 was 0.071 T.U. per subscriber, which was about 15% more.
>
> After the commissioning of 3300 lines expansion in January, 1970, the traffic readings were taken in June, 1970."

4.55. Explaining the position about loading of the exchange, the P&T Department informed Audit in January 1976 that when—

> "the expansion was commissioned in January 1970, the exchange could not be loaded on the basis of traffic consideration. With low handling traffic capacity of the exchange upto September 1972 the permissible loading was 7500 lines only, thereafter for quarter ending December

1972 the loading was revised to 8266 lines and for quarter ending June 1973 to 8745 lines. Full loading was possible only from July 1974 after adding 5 necessary traffic relief equipment."

4.56. To a question whether the traffic relief equipment was originally planned, the Department have informed that Traffic relief equipment was not planned along with the expansion of the Exchange as it was not anticipated at that time.

4.57. The Committee desired to know the reasons for the low handling traffic capacity upto September, 1972 and revision of the loading to 8266 lines and 8745 lines for the quarters ending December, 1972 and June, 1973 In a note, the P&T Department has stated as follows :—

"The expansion of 24 Exchange by 3300 lines (from 6600 to 9900 lines) was designed in 1964 to carry an originating traffic of 0.0628 TU per line. The expansion was completed in January, 1970. When the project for this Exchange was initially formulated, the area which was planned to be served from this Exchange was predominantly residential. Subsequently after the expansion the area was redemarcated and considerable portions of office areas with high calling rate subscribers had to be included in the '24' area. About 1400 lines were tranferred from '23' and '44' Exchange areas in June, 1970 to permit more connections being given from these exchanges. The exchange loading had therefore to be limited to 7500 lines. This position continued upto the quarter ending September, 1972, when after installation of some additional equipments and junctions, the loading capacity was revised to 8266. The loading capacity was further revised to 8745 in June, 1973 after more junctions were added on '23' and '34' routes."

4.58. Due to delay in fully utilising the expanded capacity, applicants had to wait longer for new connections. According to Audit, the Department lost a potential revenue of about Rs. 31 lakhs till March 1975.

4.59. According to Audit Paragraph actual demand being 11,664 in March 1974 and 11,694 in March 1975, equipment for another 1500 lines was installed by March 1975 in the exchange by diverting the same from expansion projects of other exchanges (Cossipore and Salkia). On 1 August, 1975, there were 9229 working connections against the equipped capacity of 11400 lines; there were 3,246 applicants waiting for new telephone connections on that date.

4.60. The Committee desired to know the latest position about loading of the exchange *vis-a-vis* the applicants standing in the queue for telephone connections. The Secretary, Ministry of Communications has stated—

"The latest picture is that at present, we have got 9793 connections working, and 708 cases are committed in the sense that it has been decided that these connections will be provided. They are in the process of being provided. With these 708 cases, the number will go up to 10471. After providing these 708 connections, 704 people will still be on the waiting list. I requested the General Manager to provide

another 200 connections, even though the loading would come to 960% . Thereafter, relief to this exchange will be possible, when we have installations in the Tiratha Bazar, for which equipment has been ordered, from outside. When the area connection scheduled for 1978-79 is there, these other 500 peopel, and any more who apply now, will be provided telephone connection."

Telephone system in Calcutta

4.61. Raising a matter about the breakdown of Telephone System in Calcutta, in the Lok Sabha on 27 May 1976, a Member, *inter alia*, stated as follows :

"Thousands of telephone connections are out of order for weeks causing great inconvenience and suffering to thousands of subscribers. It appears that a controversy is going on as to the causes for the breakdown. The telephone authorities in Calcutta seem to be of the view that because of lack of spare parts and equipments as also because of the activities of the Calcutta Metropolitan Development Authority proper services cannot be rendered by the telephone authority, while the Calcutta Metropolitan Development Authority is disowning any responsibility for the same."

4.62. Explaining the reasons for he said break-down of telephone system in Calcutta, the Minister of Communication stated:

"As the hon. House is aware, for the past several years there has been tremendous development activity going on in Calcutta. Extensive digging of roads and footpaths has been taken up from time to time by various utility services and agencies like Calcutta Metropolitan Development Authority, Calcutta Electricity Supply Corporation, Calcutta Corporation etc. These diggings caused damage to the telephone cables. The extent of damage came to be known only when Calcutta experienced heavy showers during early April and thereafter. A number of cables in various parts of the city broke down affecting telephone services to about 8 percent subscribers. As soon as the telephone authorities detected the breakdown, they took prompt action for the repair work. The subscribers were kept informed of the position through advertisements in the local newspapers from time to time. There was no attempt to hide anything and we have done this through advertisements in the newspapers. For quicker restoration of the services, the management of Calcutta Telephone have deployed additional staff and temporarily suspended other work such as opening of new telephone lines, laying of new telephone cables etc.

The Calcutta Telephones have spared no efforts in restoring the faulty lines at the earliest."

4.63, Explaining the steps taken to coordinate the activities of different agencies and departments engaged in underground works in Calcutta, the Minister further informed the House:

"A cell for coordinating the activities of different agencies and departments engaged to undertake works in Calcutta is functioning under the

aegis of the Calcutta Metropolitan Development Authority. This cell comprises of representatives from different administrations including Calcutta Telephones. The Additional General Manager (Planning) and the Deputy General Manager (External Plan) who are responsible for all underground cable works have been attending the coordination meetings. Some of the meetings were also attended by the General Manager, Telephones. It is felt that but for the useful functioning of this Underground Services Cell, the damages caused to the telephones cables would have been far more numerous."

4.64 About the problem of spares for the telephone exchanges, the Minister explained the position thus:

"The Hon. Member has made a reference to the problem of spares for the telephone exchanges in Calcutta. I may mention that the supply position has considerably improved in the recent past. However, there are still a few critical items for which the supplies have not been fully satisfactory. The matter is being vigorously pursued with the Indian Telephone Industries and it is expected that the supply of these items during the current year will further improve. We have decided that so far as the spares are concerned, 10 per cent of the capacity of the ITI would be devoted to spares."

4.65 The Minister also informed the House that the following remedial measures were taken in the recent past for improvement of telephone services including those in the Calcutta Telephone System:

"In this connection, I would like to refer to some organisational changes effected in the Calcutta Telephones. One Additional General Manager has been posted in Calcutta to look after the operational aspects of the Telephone System including the maintenance of underground cable net work. The Calcutta Telephone District has been divided into six areas each under the direct charge of an Area Manager. These Area Managers have their offices located in the respective areas for closer and better supervision.

Under a crash programme for improving the efficiency of the Calcutta Telephone System, separate teams were set up to systematically analyse deficiencies in the working of exchange equipment as well as external plants.

Remedial actions have also been taken in respect of most of the deficiencies noticed. Survey was also conducted to find out subscribers' satisfaction about the service. The efficiency of the Calcutta Telephone System as measured in terms of effective calls is now of the order of 80 per cent. Five new Exchanges with total equipped capacity of 11,700 lines have been commissioned during 1975-76 and another 16,000 lines are planned for commissioning during the current year. The total number of new connections provided during 1975-76 was about 8,000 and this year the target is 15,000 new connections. With these additions, the efficiency is likely to increase further.

With a view to detect damages to the cables before they developed into electrical failures, technique of gas pressurisation of underground cables has been adopted as a part of maintenance policy for larger telephone networks. In the first instance, it has been planned to pressurise all heavy traffic cables such as junction and primary cables. This technique would prevent a large-scale disruption as has been experienced in the Calcutta Telephone District now. It is expected that by March 1977, junction cables on critical routes in Calcutta would be brought under gas pressure. Later on, primary cables will also be gas pressurised. A programme for introduction of cabinets and pillars for underground cable network has already been drawn up and the work is under progress."

4.66. For meeting the requirements of the users in an industrial and commercial city like Calcutta, a project for the expansion of Exchange No. 24 by 3300 lines was sanctioned in April 1965 for Rs. 59.48 lakhs of which Rs. 29.45 lakhs was for equipment and Rs. 30.03 lakhs for lines and cables. From the picture that emerged after the perusal of the material furnished by the Department and the oral evidence of the representatives of the concerned Ministries, the Committee have noted with considerable consternation that not only has the actual expenditure on the project exceeded the original estimate by more than 50% but all the calculations of the Department for the early completion of the project were turned away on account of the failure of the different agencies concerned with the execution of the project. The upshot was that the project for the expansion of the Exchange '24' was delayed by more than five years.

4.67. The Indian Telephone Industries was responsible for the supply of equipment for the project. The indent for the supply of equipment was placed on them in May 1965 and the supply was completed in 1968-69, i.e., after a lag of three years. To suit their convenience, the Indian Telephone Industries shifted their schedule for the supply of equipment from 1965-66 to 1966-67. The reason advanced by them that "the shifting of the schedule was due to the fact that against the programme of 73,500 lines of new exchanges in 1965-66, the capacity earmarked for such exchange was only 40,000" does not appear to be convincing. The I.T.I. should have planned their supplies in concert with the P&T Department well in advance.

4.68. The Committee have earlier been told that the optimum period now planned by the Indian Telephone Industries for effecting supplies has been reduced to 18 months. On this basis, the period of three years taken in effecting supplies for the Telephone Exchange at Calcutta seems to be very much on the high side. The Committee are led to think that the I.T.I. have not yet geared up their machinery for ensuring the observance of the time-schedules for the completion of indents received from the P&T Department. The Committee consider it imperative that the I.T.I. also should work on the basis of the time-bound programmes and also to devise an in-built mechanism for fixing the responsibility for delays in effecting supplies for the execution of urgent projects.

4.69. The position in regard to laying of cables was no better. As a result of the delay in sanctioning estimates—there has been a wide gap of about 4½ years even in the sanctioning of two estimates of junction cables—the commissioning of the Telephone Exchange was held up. The justification given by the Department that "within the project provisions detailed estimates are sanctioned according to the requirements, details of which are worked out as the main work progresses" is hardly convincing. The Department should have viewed the entire project as one of urgency and no administrative delays whatsoever should have been allowed to occur at any stage.

4.70. Equally unaccountable is the delay in the completion of the work relating to the laying of the junction cables. The work against the first estimate was expected to be completed within six months of the receipt of stores at site. The work commenced in June 1967 and was completed in March 1974. The work relating to the second estimate was started in December 1971 and completed in September 1974. It has taken nearly seven years to complete the work against the first estimate and almost three years against the second estimate. The argument of the P & T Department that most of the cables were received in 1969 and also physically laid by May 1970 is not correct. The explanation offered by the Department, namely, that "most of the cables were received by 1969, and it is reported by the General Manager, Telephones that they were also physically laid by May 1970. The completion indicated as March '74 apparently pertains to the completion of payments' closing of accounts etc." appears to be a laboured one. Assuming that the work of layting of cables was completed in May 1970, the Committee would like to know what prevented the completion of the payments,closinge of accounts, etc. till May 1974.

4.71. The delay in the laying of subscribers' cables the estimate for which was sanctioned in January 1969, is also indefensible. The work should have been completed in 300 days but by March 1974 only 98% of the work had been completed. Assuming that there were disturbed conditions in Calcutta and also thefts of underground cables in that area from February 1970 to March 1973, the Committee fail to understand why the P&T Department could not complete the work of laying of the subscribers' cables when 86 per cent of the cables were received by March 1970. Obviously the requirements of the particular Exchange were not given the importance that it deserved.

4.72. The Hindustan Cables Limited, which is the sole supplier of cables to P&T Department, has also failed to come up to expectations in the matter of supply of cables for this Exchange. During the years 1969 to 1974 the performance of the undertaking has been anything but satisfactory. During the years 1971-72 to 1973-74, against the orders for 6096 km., 4040 km. and 4640km., the actual supplies effected were only 1640 km., 1938 km. and 2489 km. respectively. Considering the ever-widening gap between the demand and supply of cables, the Committee had in paragraph 1.92 of their 204th Report (5th Lok Sabha—1975-76) recommended to the Government "to give a serious thought to this problem and take measures to bridge the gap by stepping up the indigenous production of cables, so as to

ensure a fuller utilisation of the capacity of the telephone exchanges and to meet the long pending demands from subscribers for fresh telephone connections." The Department had assured the Committee in their Action Taken Note that special efforts were now being made to procure quantities of cables to match the supply of exchange equipment. During the years 1974-75 and 1975-76, the supplies made were to the extent of 88 per cent and 92 per cent of the orders placed. The Committee had stressed the need for concerted and sustained efforts for ensuring execution of the annual supply orders for cables in entirely. It is perplexing that despite the recommendations of the Committee in their 204th Report (5th Lok Sabha—1975-76) that the Hindustan Cables should be placed under the administrative control of the Ministry of Communications, the Government have decided that this undertaking should continue under the administrative control of the Ministry of Industrial Development.

4.73. Keeping in view the fact that a potential loss was suffered by the P&T Department due to the abnormal delay in the completion of the cable laying part of telephone project for want of timely supply of cables and also the fact that the Ministry of Communications was the principal consumer of the cables produced by Hindustan Cables Ltd., the Committee once again stress that the question of transfer of control of this company to the Ministry of Communications should be reconsidered in all its ramifications and finalised expeditiously.

4.74. The Committee have noted that there have been a large number of cases of thefts of underground cables in and around Calcutta during February 1970 to March 1973. Since the cases of such thefts are on the increase, the question of collusion of the offenders with the staff of the P&T Department cannot altogether be ruled out. The Committee desire that this aspect of the matter should be gone into thoroughly with a view to taking suitable remedial measures.

4.75. The Committee note with concern that the departmental instructions of utilising ninety per cent of the capacity by release of new telephone connections soon after expansion or, in any case, not later than six months of such expansion have not been followed on the commissioning of the expanded capacity for 3300 lines in January 1970. As pointed out by Audit, this was due to the reason that the subscribers, cables were not ready, when expanded capacity became available. However, according to the Department, the exchange on expansion could not be loaded to a prescribed limit due to the low handling capacity of the Exchange. As against the actual traffic of 0.071 Traffic Units measures in June 1970, the Exchange was designed to carry originating traffic of 0.0628 Traffic Units. The loading was increased subsequently on the installation of some additional equipments and junctions and the full loading was possible only with effect from July 1974, on adding necessary traffic relief equipment. Even if the argument put forward by the Department is accepted, the Committee fail to understand why the traffic relief equipment was not planned along with the expansion of the exchange. Had this equipment been planned initially, the exchange might have been loaded according to the existing instructions. The Committee are unhappy to note that

due to not loading the exchange according to existing departmental instructions, the Department lost a potenetial revenue of about Rs. 31 lakhs till March 1975 as worked out by Audit.

4.76. Considering the fact that delays in the commissioning of this project are responsible not only for the escalation of costs but also of loss of potential revenues, the Committee recommend that a departmental probe should be conducted to fix responsibility for the glaring lapses that have occurred at every stage of the execution of the project. The deficiencies noted should lead to an awareness in the minds of the project authorities as to the need for an effective planning and coordination with various authorities right from the very beginning. The Committee have already stressed this point in paragraph 1.80 of this Report.

4.77. The Committee note that in April-May 1976, there was large-scale collapse of telephones in Calcutta, when a number of cables in various parts of the city broke-down affecting the telephone services to about 8 per cent subscribers. According to the statement made in this behalf by the Minister of Communications in the Lok Sabha on 27 May 1976, there has been extensive digging of roads and footpaths taken up from time to time by various utility services and agencies like Calcutta Metropolitan Development Authority, Calcutta Electricity Supply Corporation, Calcutta Corporation etc. The extent of damage came to be known only when Calcutta experienced heavy showers during early April and thereafter. The Committee regret to note the lack of coordination among the various service agencies despite the existence of a cell for achieving such coordination. The Committee cannot too strongly recommend the over-riding need for maintaining effective functional coordination among the various service agencies functioning in Calcutta.

4.78. The Minister of Communications had also informed the Lok Sabha on 27 May, 1976, that various remedial measures were taken in the recent past for improvement of telephone services including those in the Calcutta Telephone System. This included the division of Calcutta Telephone District into six areas each under the direct charge of an Area Manager and the posting of an Additional General Manager to look after the operational aspect of the Telephone System including the maintenance of underground cable network. Further, under a crash programme for improving the efficiency of the Calcutta Telephone System, separate teams were set up to systematically analyse deficiencies in the working of exchange equipment as well as external plants and remedial actions have also been taken in respect of most of the deficiencies noticed.

4.79. The Committee also note that with a view to detect damages to the cables before they developed into electrical failures, technique of gas pressurisation of underground cables has been adopted as a part of maintenance policy for larger telephone networks. The first phase of this project was to bring under gas pressure all junction cables on critical routes in Calcutta by March 1977 and thereafter the primary cables were also to be gas pressurised.

Work on the approved programme for introduction of cabinets. and pillars for underground cable network waw also stated to be under progress. The Committee would like to know the concrete progress made on these projects so far together with details of the other remedial steps taken for eliminating the chances of break-down of telephone system in Calcutta as occurred in April-May 1976.

4.80. During the course of his statement the Minister had also informed the House that five new exchanges with total equipped capacity of 11,700 lines were commissioned during 1975-76 and another 16,000 line, were planned for commissioning during 1976-77. Similarly, the total number of new connections provided during 1975-76 was about 8,000 and the target of new connections for 1976-77 was 15,000. The Committee would like to know the actual achievements in respect of commissioning of lines and the provision made of new connections in Calcutta during 1976-77. It will be appreciated that Calcutta is not only a premier metropolitan city but one of the most important industrial and commercial centres in the country with a long history and a well-knit industrial base around it. As such it was evidently all the more important that the Department should have identified the deficiencies in the telephone exchange system in Calcutta well in advance and taken concerted and well coordinated measures to ensure that the tele-communication facilities were improved as per a time-bound programme and the capacity increased and commissioned to meet the outstanding requirements. It is regrettable that the facts narrated in the foregoing paragraphs clearly bring out that the Department neither realised the urgency of the matter nor did it take adequate measures to see that the much sought for facilities were expanded and commissioned at the earliest.

EXPANSION OF CALCUTTA TELEX EXCHANGE

Audit Paragraph

5.1. For meeting the growing demand for telex connections in Calcutta, a project estimate for tbe expansion of Calcutta telex exchange from 1000 to 2500 lines was sanctioned in December 1967. The total estimated cost of expansion of the exchange was Rs. 193·55 lakhs as per details given below :—

	(lakhs of rupees)
(i) Exchange equipment (including power plant)	41·24
(ii) Teleprinter machines (1200)	138·39
(iii) Cables, wires etc.	13·92
	193·55

5.2. The order for the exchange equipment (including power plant) was placed on the Indian Telephone Industries in February 1968 and the equipment started arriving from March 1969, the supplies were, however, spread over a number of years as shown below :—

	Value of equipment supplied (lakhs of rupees)
1969-70	18·58
1970-71	8·33
1971-72	5·02
1972-73	3·21
1973-74	0·24
1974-75	0·78

5.3. Consequently installation of equipment, except the power plant, was commenced only in July 1969 and was completed in March, 1973.

5.4 The Director General, Posts and Telegraphs allotted for this exchange 450 teleprinter machines in August 1971, 200 maehines in November 1971 and 400 machines in August 1973 ; the machines were to be supplied by the Hindustan Teleprinters. Only 483 machines were received for this exchange between October 1973 and September 1975.

5.5. The number of applicants waiting for new connections and the number of connections working from the telex exchange, the capacity of which was expanded to 2500 lines in March 1973, were as under :—

As on	Number of connections added in the preceding six months	Total number of connections working on the date mentioned in column 1	Percentage of utilisation of the capacity of exchange (2500 lines)	Number of applicants waiting for new connections
30th September, 1973	70	1160	46·4	374
31st March, 1974	92	1252	50·1	335
30th September, 1974	139	1391	55·6	333
31st March, 1975	147	1538	61·5	225
30th September, 1975	173	1711	68·4	211*

*(On 1st September 1975)

5.6. The Department stated (January 1976) that "telex connection were being given progressively depending upon the supply of teleprinter machines as also the limitation imposed by the power plant...."

5.7. Consequent on the increase of the capacity of the exchange 2500 lines in March 1973, it needed a higher capacity power plant in replacement of the existing power plant meant for a 1000 lines exchange. The Department stated that "the higher capacity power plant was received only later in June 1974. The power plant showed some defects on installation, which were rectified by the Company and the plant was commissioned ultimately by August 1975".

5.8. Even on the basis of the number of applicants waiting for new connections at the end of August 1975 and the average annual revenue receipts per telex, additional potential revenue might have been Rs. 31·79 lakhs per annum.

[Paragraph 18 of the Report of C&AG for the year 1974-75, Union Government (P&T)].

5.9. According to the Audit Paragraph a project estimate for the expansion of Calcutta telex exchange from 1000 to 2500 lines was sanctioned in December, 1967. The order for the exchange equipment (including power plant) was placed on the Indian Telephone Industries in February 1968 and the equipment started arriving from March, 1969. The supplies were, however, spread over a number of years. When asked to furnish the reasons why the Indian Telephone Industries took five years to complete the supply of the equipment, the Ministry of Communications (P&T Board) have stated as under :—

> "In this particular case, the expansion work was of a large magnitude involving the manufacture of 47 racks of different types, 1585 switches, 1732 Relay Sets, 1500 dialling units and about 700

other associated items. The time required for detailed engineering of these items is, according to ITI, about 12 months and the manufacturing time about 36 months. The special Power plant of larger capacity required for this was ordered for the first time on indigenous suppliers and entailed longer lead time. Most of the equipment was, in fact, supplied by ITI during the year 1969-70 to 1972-73 (about 4 years). Considering the large number of orders on ITI for various types of equipment required all over the country and the growing volume of orders from year to year, the supplies in this case were effected in quite a reasonable period."

5.10 Explaining the schedules of supply of equipment by Indian Telephone Industries, the Ministry have further elucidated :—

"The supply of equipment by ITI is according to the terms mutually agreed to between ITI and P&T in an agreement. ITI is the sole supplier in the country for all the switching equipment required by P&T. After advance planning, P&T places orders on ITI for supplies so that ITI can place orders for components and piece parts. Considering the needs of individual stations all over the country and the production capacity of ITI for the different types of switching equipments like SAXs, MAXs (Strowger) MAXs (Cross-bar), TAXs, Telex's etc., priorities are drawn up by P&T on all India basis and the programmed supply schedules are discussed with ITI at half yearly intervals."

5.11 As stated in the Audit Para, installation of equipment, except the power plant, was commenced only in July, 1969 and was completed in March, 1973. In this connection the Committee have been informed by the Audit—

"While the General Manager Telephones Calcutta stated (April 1971) that installation was commenced in January 1969, the Department stated (January 1976) that installation was taken up at a later date. The Financial Stock Taking Report for the half year ending September 1969 onwards, however, indicated commencement of work from July, 1969."

5.12 The Committee desired to know the total period initially planned for the installation of the equipment *vis-a-vis* the actual dates of commencement and completion of installation of the equipment. The Ministry of Communications (P&T Board) in a written note furnished to the Committee, have stated as under :—

"According to the project estimate for this work, the installation work was expected to be completed within one year after the receipt of all the stores. The supply of the equipment was spread over a number of years and the value of the stores received in various years is indicated below :

	Value of equipment (lakhs of Rs.)
1969-70	18·58
1970-71	8·33
1971-72	5·02
1972-73	3·21
1973-74	0·24
1974-75	0·78
	36·316

The equipment was received in phases and therefore, the installation of the equipment was also taken up in phases. The installation of the equipment, except the power plant, was completed in March, 1973. The Power plant was received in June, 1974 but on installation, some defects were noticed. Though the case was vigorously pursued with the manufactures, they took time to remove the defects. The power plant was finally commissioned in August, 1975 *i.e.* within 14 months of receipt."

5.13 The higher capacity power plant was ordered on the 6th March, 1968. The estimated cost of this power plant was Rs. 1,11000. The power plant of 200 amps. capacity was ordered for the first time on the indigenous suppliers and, therefore, the manufacture of this equipment conforming to the specifications took a long time.

5.14 According to the Audit Paragraph the Director General, Post and Telegraphs allootted for this exchange 450 teleprinter machines in August 1971, 200 machines in November 1971 and 400 machines in August 1973; the machines were to be supplied by the Hindustan Teleprinters. Only 483 machines were received for this exchange between October 1973 and September 1975. The Committee wished to know the latest position about the supply of teleprinters by Hindustan Teleprinters Ltd. The Ministry of Communications (P&T Board), in a written note furnished to the Committee, have stated :

"For the current year (1976), orders have been placed on Hindustan Teleprinters Ltd. for a total of about 3500 machines. The supply position is as follows :—

	1st Quarter	2nd Quarter
(i) Total number of machines allotted for various Circles/ Districts (depending upon individual Circle-wise demands)	914	875
(ii) Total number of machines supplied.	454	821
(iii) No. of machines required by Calcutta Telephone District depending upon the Waiting List and subject to technical feasibility.	136	113
(iv) No. of machines allotted for Calcutta Telephone District.	120	30
(v) No. of machines supplied by HTL for Calcutta Telephone District.	120	27

As regards the reasons for delay in supply of these machines by Hindustan Teleprinters Ltd., the Ministry have further stated :—

> "HTL was handicapped very much due to a severe cut in the Electric Power Supply for the factory, but the production is now expected to pick up."

5.15 It is seen from the Audit Para that 211 applicants were still awaiting for new connections as on 1st September 1975. The Audit were informed by the P&T Department in January 1976 the telex connections were being given progressively depending upon the supply of teleprinter machines. The Committee enquired of the Ministry of Communications whether there were any spare teleprinter machines available in other telex exchanges for diversion to Calcutta. The Ministry in a written note, have stated as under :—

> "The allotment of teleprinter machines is made on the basis of the existing/anticipated demands of telex connections in the respective telex exchanges. No spare machines are allotted except a small percentage (about 5 % required for routine maintenance purposes, repairs replacements etc.) Generally, therefore, diversion of machines from one exchange to another is not specially advantageous excepting that this will mean helping one exchange at the cost of another."

5.16 It has been pointed out by the Audit that on the basis of the number of applicants waiting for new connection at the end of August, 1975 and the average annual revenue receipts per telex, additional potential revenue might have been Rs. 31·79 lakhs per annum. The details of this revenue as furnished by the Audit to the Committee are as under :

Calcutta telex	Rs.
Actual Revenue	1,80,82,000
Average No. of telex connections in 1973-74 .	1,200
Average Revenue per connection . . .	1,80,82,000÷1,200=15068
Average Revenue per annum on waiting applicants as on 31-8-75	175,068X211=31,79,348 or 31 79 lakhs.

5.17 The Committee desired to know the steps taken by the P&T Department to ensure that maximum possible utilisation of the capacity of telex exchange was not delayed for want of teleprinter machines. In a written note furnished to the Committee, the Ministry of Communications have stated :—

> "While Telex equipment is ordered on ITI individually for each exchange requirement, TP machines are ordered in bulk to meet the total annual requirement for all places. The TP machines are allotted quarterly to various users in the depart_

ment who draw them from the Store Depots as convenient for their use from time to time. These allotments take into account the requirements for expansion, maintenance, etc. In this particular case, though the Telex equipment was ordered in February, 1968, the supplies were spread over a number of years but the installation was completed in time. The power plant was then received in June, 1974 but on installation, some faults were noticed. Though the case was vigorously pursued, the manufacturer took time to clear all the faults and the power plant was finally commissioned in August, 1975. Due to the delay in commissioning of the higher capacity power plant, the loading of the exchange had to be done cautiously. The waiting list as in September, 1973 was 374 and the T/P machines were progressively received during the period from September, 1973 to March 1975. The waiting list was also progressively cleared as and when T/P machines were received.'

5.18 For meeting the growing demand for telex connections in Calcutta a project estimate for the expansion of Calcutta Telex Exchange from 1000 to 2500 lines was sanctioned in December 1967 at an estimated cost of Rs. 193·55 lakhs. The supply of equipment (including the Power Plant) for which an order was placed on Indian Telephone Industries in February 1968 started in March 1969 and was completed in 1974-75. It has been submitted to the Committee that as the equipment (without power plant) was received in phases its installaton was also phased and completed in March 1973 (1972-73). The Committee fail to understand how the istallation of equipment could be said to have been completed in March 1973 when the supply of the equipment was spread over beyond 1972-73 to 1974-75 and equipment worth Rs. 1 lakh was still to be received during 1973-74 and 1974-75. The Committee would like to be informed about the correct position in this respect.

5.19 The Committee are distressed to note that the power plant which was a part of the whole expansion programme sanctioned in December 1967 was received in June 1974 i.e. 15 months after the completion of the installation of the equipment in March 1973 and was commissioned as late as August 1975 only after rectifying the defects which were noticed after its installation. At that time(30 September 1975) the Telex Exchange had utilised 68·4 percent of its capacity (2500 lines) with 211 waiting applicants (on 1 September 1975). The main reason, as it appears to the Committee for the Exchange not working to full capacity by Sptember 1975 was that by that time only 483 teleprinter machines had been received as against total estimated requirement of 1200 machines.

5.20 What has distressed the Committee more is the fact that no firm time-schedule was laid down for completion of the project. The date of completion of installation was fixed veguely as one year after the receipt of the equipment from Indian Telephone Industries. The ITI itself instead of supplying the equipment according to its manufacturing capacity, spread the supplies over a number of years. As submitted by the Ministry, the ITI needed four years to supply the equipment, after receiving the order in Febraury 1968. As such, the requisite supply of the equipment should

have been completed by February 1972 instead of 1974-75. The Committee regret to observe that it was 7 years after placing the order for the power plant that the project could be commissioned in August 1975, free from any defects. The Committee feel that the fact that power plant was ordered for the first time on indigenous suppliers should not be taken as an excuse for taking 6 long years to manufacture if from the date of placing the order in February 1968. The Committee would like the Ministry of Communications to investigate the precise reasons for the late supply of the power plant with a view to taking remedial measures for future.

5.21 The Committee note that only 483 teleprinter machines were supplied by the Hindustan Teleprinter Ltd. to the Calcutta Telex Exchange during the period from October 1973 to September 1975 as against an allotment of 1050 (650 in 1971 and 400 in 1973) teleprinter machines made by the Director General, Posts and Telegraphs. The Committee have been informed that the shortfall in the supply of teleprinter machines was due to severe cut in the electric power supply to the Hindustan Teleprinter Ltd. As the general position regarding supply of electric power has improved in the country, the Committee hope that concerted efforts would be made to clear the present backlog of machines. The Committee feel that had the requiste number of teleprinter machines been supplied in time and the power plant worked as scheduled, the Calcutta Telex Exchange would have worked to larger capacity and earned the additional potential revenue of Rs. 31·79 lakhs per annum.

AUDIT PARAGRAPH

Air-conditioning of telephone exchanges

6.1 (a) Bhubaneshwar—installation of a 1500 lines automatic telephone exchange in replacement of the existing 700 lines manual exchange at Bhubaneshwar was sanctioned in March 1962 for Rs. 26·39 lakhs. The project estimate was revised and sanctioned for Rs. 29.79 lakhs in Auguse 1964. It provided for construction of a building adequate to accommodate equipment for a 5000 lines automatic telephone exchange (Rs. 14·58 lakhs) air-conditioning (Rs. 0·80 lakh), installation of crossbar type equipment (Rs. 8·36 lakhs) and laying of cables (Rs. 6·05 lakhs). Construction of the building was started in March 1965.

6.2 Since the proposed 1500 lines exchange, which was expected to be ready by 1967-68, would not have been adequate to meet even the immediate demand for telephones, another project was sanctioned in September 1965 for Rs. 8·61 lakhs for expansion of the proposed exchange from 1500 to 2000 lines. Indents for supply of exchange equipment for 2000 lines was sent to Indian Telephone Industries in March 1965, and equipment costing Rs. 20·01 lakhs was received by March 1968. The building was completed by April, 1967.

6.3 However, even before installation of equipment was started, another project was sanctioned for Rs. 21.27 lakhs in June 1968 for further expansion of the proposed exchange from 2000 to 3000 lines. The Department stated (December 1975) that during the course of a review of demand for telephones at Bhubaneshwar in 1967, it was assessed that due to a back log in the production of crossbar equipment by Indian Telephone Industries, this exchange could be expected to be commissioned only by 1969 and hence further expansion of the proposed exchange to 3000 lines was approved and the production of equipment was included in the manufacturing programme of Indian Telephone Industries for 1968-69 . Installation of equipment was started in January 1969.

6.4 According to departmental technical instructions, sophisticated components of telephone equipment should be unpacked and taken out from plastic containers in airconditioned rooms to avoid ingress of dust and humidity in them which would adversely affect their performance. Even though indent for exchange equipment for 1500 lines was released in March 1965 and the building was ready in April, 1967 , indent for procurement of requisite air-conditioning plant was sent to the Director General, Supplies and Disposals only in September 1967, and the detailed specifications therefor in October 1967. The Department stated (December 1975) that "there was back-log in ITI's production of crossbar equipment and supplies for this exchange were also delayed. Release of indent in 1967 to DGS&D for supply of air-conditioning equipment, therefore, was in keeping with the installation programme."

6.5 After the drawings of the plant were finalised in December 1967 a tender notice was issued by the Director General, Supplies and Disposals in January 1968. Tenders were received in February 1968 and after settlement of terms and conditions, an order was placed on firm 'A' in July 1968, for supply and installation of the plant at a cost of Rs. 2.10 lakhs by 30th November 1968.

6.6 Firm 'A' reported (May 1971) that it had completed installation of the air-conditioning plant during December 1970 but the plant could not be commissioned as necessary water and power connections were not provided by the Department. Firm 'A' applied in May 1971 for extending the date of delivery, and in July 1971 the Director General, Supplies and Disposals extended it to 30th September 1971. The Department stated (December 1975) that the "statement of the firm that they had completed the installation work by December 1970 was not accepted as it was reported in April 1971 that the work regarding the air-conditioning plant at Bhubaneshwar was not yet commissioned. We had also written to the firm in May 1971 pointing out this position". The Department further stated (December 1975) that "the condition of the firm that non-availability of water and power was delaying the commissioning of the plant is not correct. There was no difficulty about the water supply, though there was some delay in making electric supply available. For obtaining bulk supply of power the department was required to instal a630 KVA transformer sub-station. Since procurement of high tension panel through the Director General, Supplies and Disposals, to whom indent was sent in February 1970, was delayed power could be made available only in March, 1972.

6.7 After the completion of installation of the plant the representatives of the firm, the Director General, Supplies and Disposals and the Posts and Telegraphs Department jointly conducted three tests in August 1972 (monsoon test), January 1974 (winter test) and June 1975 (Summer test) several defects were noticed during these tests.

6.8 Installation of exchange equipment which was commenced in January 1969 was completed in March 1973 for all the 3000 lines and the automatic telephone exchange, for the protection and proper functioning of which the air-conditioning plant was installed, was put into service in March, 1973 without air-conditioning.

6.9 A meeting of the representatives of the Director General, Posts and Telegraphs, the Director General , Supplies and Disposals and the firm was held in New Delhi in February 1974, when a list of unremedied faults in the plant was handed-over to the firm's representative. The firm's representative assured offering of the plant for joint test on 25th April 1974. Accordingly the representative of the Department (installation branch) reached Bhubaneshwar on 25th April 1974 but representatives of the firm and the Director General, Supplies and Disposals did not arrive. The Postmaster General, Bhubaneshwar stated in May 1974 that the crossbar telephone exchange was working without air-conditioning since March 1973 causing deterioration of life of the equipment. It was difficult to maintain the equipment without air-conditioning and the components were getting faulty". The Director General, Posts and Telegraphs stated (December 1975) that "though the provision of proper air-conditioning plant would have provided a better service and reduced faults of the equipment, the fact remains that complaints of unsatisfactory service due to exchange faults are within limit."

6.10 After the firm had failed to fulfil its assurance about offering the plant for test in April 1974, another meeting was held by the representatives of the Director General, Posts and Telegraphs, the Director General, Supplies and Disposals and the firm in New Delhi in December 1974, when the firm's representative again assured that the plant would be offered for test in January 1975 after 3 weeks' trial run. The plant was, however, offered for test in August 1975, but in the test conducted in September 1975 the plant was not found fit for taking over.

6.11 Firm 'A' also failed to commission the plant within the time stipulated in the following exchanges :

6.12 (i) BELGAUM.—Indent for the procurement of air-conditioning plant was sent by the Department in July 1967 and the Director General, Supplies and Disposals placed an order (Rs. 2.90 lakhs) in July 1968 on firm 'A' for installation of the plant by January 1969. Though installation of the plant was stated by the firm to have been completed in October 1970, power supply was made available by the Department only in April 1972. The plant failed in tests conducted in June 1973, February 1974 and October 1974. The Department stated (December 1975) that the date of next joint test of the plant was being finalised. In the meantime the installation of exchange equipment was commenced in April 1971 and the exchange was commissioned in December 1973. With a view to protect the exchange equipment from dust and humidity, 13 window type air-conditioners were purchased for Rs. 0.86 lakhs and installed in February 1974.

6.13 (ii) KELLYS (MADRAS).—Against an indent sent by the Department in February 1970, the Director General, Supplies and Disposals placed an order (Rs. 3.24 lakhs) in February 1971 on firm 'A' for installation of an air-conditioning plant by 30th November 1971. Installation of the exchange equipment was commenced in December 1972 and completed in December 1974. The air-conditioning plant is yet to be commissioned (December 1975). The Department stated (December 1975) that the first test of the plant was scheduled to be conducted on 15th December 1975.

6.14 (b) MADRAS.—Installation of 1000 lines trunk automatic exchange at Madras was approved by Government in February 1963. Orders for the TAX equipment were placed in May 1964 and an indent for the air-conditioning plant was sent to the Director General, Supplies and Disposals in February 1965. The project estimate for Rs. 32.71 lakhs (Rs. 30.96 lakhs for the equipment and Rs. 1.75 lakhs for the air-conditioning plant) was, however, sanctioned in July 1965.

6.15 In September 1965 the Director General, Supplies and Disposals placed an order on firm 'A' for the supply of the air-conditioning plant by April 1966 and its installation by August 1966, at a total cost of Rs. 1.85 lakhs. Eighty percent of the cost of the plant was payable against proof of despatch after inspection at the factory, and the balance after testing, inspection and acceptance of the plant. The plant was also to be guaranteed by the supplier against mechanical and manufacturing defects for a period of twelve months from the date of commissioning. Since the import licence could be issued to firm 'A' only in January 1966, the Director General, Supplies and Disposals refixed (April 1966) the period of delivery as August 1966 for the supply and December 1966 for the installation. As firm 'A' could not import many of the

components in time, the period of delivery was extended to December 1966 for the supply of the plant and to March 1967 for its installation. Firm 'A' could not adhere to this delivery period and at its request, further extension was granted up to July 1967.

6.16 By March 1966, sufficient quantity of equipment was received for commencing the installation. Since, however, the air-conditioning plant had not been received and as the sophisticated exchange equipment was to be installed in air-conditioned room to prevent ingress of dust and corrosion from humidity, twelve window type air-conditioners were installed in June 1966 at a cost of Rs. 0.51 lakh. Installation of the exchange equipment was started in April 1966.

6.17 In August 1967, firm 'A' complained that the testing of the plant under installation was hampered as power supply was not made available by the Department. The Department stated (January 1976) that the electric switch gear required for supplying the power to the air-conditioning plant could be obtained through the Director General, Supplies and Disposals only in April 1968, and the power supply was made available in the same month. Firm 'A' completed installation of the air-conditioning plant by July 1968. Meanwhile installation of the trunk automatic exchange, for which the air-conditioning plant was required, has been completed in February 1968 and the exchange had started functioning from that month.

6.18 The air-conditioning plant was subjected to tests in July 1968 and again in February 1969, when several defects were noticed. After the defects were attended to by afirm 'A' the plant was again put to test in June 1969, when again some of the components were found defective. The Department of Supply stated (December 1975) that the major defects noticed in June 1969 were "Heavy rusting and development of scales on the steel tubes of the evaporative condenser". The question of galvanising the steel tubes their replacement by copper tubes remained under protracted corrospondence Ultimately in March 1971, firm 'A' agreed to guarantee the evaporative condenser for four years. The plant was then again tested in December 1971 and accepted by the Department in January 1972.

6.19 The air-conditioning plant developed faults within five months of its commissioning and was shut down in April, 1974 ; the plant is still under repairs (January 1976). In the meantime, the Department had to purchase another 13 window type air-conditioners (cost Rs. 0.85 lakhs) for providing essential protection to the equipment of the exchange which had in the meantime been augmented to provide for increase in theload of traffic.

6.20 (c) AGRA—Against an indent placed by the Director General Posts and Telegraphs in July 1964, the Director General, Supplies and Disposals placed (May 1965) an order on firm 'A' (cost Rs. 1.23 lakhs) for supply and installation of an air-conditioning plant in the telephone exchange at Agra. The plant was to be installed by March 1966. According to the terms of the supply order, payment to the extent of 80 per cent was to be made after initial inspection of the plant and proof despatch, and the balance 20 per cent after erection of the plant at site, and final inspection and test.

6.21. Installation of the plant was completed by firm 'A' in September 1968. Thereafter five tests were conducted to check the working and performance of the plant with the following results :

Month	Season of Test	Observations
September 1968	Monsoon	The plant failed to maintain required conditions of relattive humidity. Some other defects were also noticed.
January 1969	Winter	Winter heating and conditioning was found satisfactory.
May 1969	Summer	The plant failed to provide required conditioning and relative humidity. One of the compressors developed fault. Leakage of gas was also noticed. Performance as a whole for cooling was not ststisfactory.
September 1970	Monsoon	The plant passed the monsoon test.
June 1971	Summer	The plant failed to maintain the prescribed inside conditions.

6.22. The Additional Chief Engineer of the Department at Jabalpur informed the Director of Inspection, Supplies and Disposals in August 1971, that "there have been lots of failures and breakages during the tests and also when the plant was handeled by the firm for rectification of defects. Workmanship appears to be below standard. The condition of the plant has deteriorated to such an extent that it cannot be restored by application of maximum skill at the disposal of firm. A decision should be taken to reciect the plant as unserviceable. "

6.23. It was decided in a meeting of the representatives of firm 'A' the Posts and Telegraphs Department and the Director General, Supplies and Disposals held in November 1971 that firm 'A' should continuously run the plant from 1st April 1972 to 30th April, 1972, after carrying out necessary rectifications and replacements, and if the plant performed satisfactorily during this period, it would again be inspected and tested jointly. Accordingly the plant was inspected and tested jointly by the representatives of the Department and firm 'A' in June 1972. The Department stated (January 1976) that "plant was able to maintain summer conditions for which the testing was carried out in June 1972 though a few deficiencies were noted in some items. It was mentioned in the test report that the plant may be accepted and taken over after rectification of the defects". Firm 'A' agreed (June 1972) to rectify the defects.

6.24. Another meeting was held in the office of the Director General, Supplies and Disposals in November 1972 in which firm 'A' agreed "to give guarantee against the cracks in the refrigerent lines due to vibrations for the period April 1973 to September 1973". The Department stated (January 1976) that "further discussions were held with the representative of the firm on 28-6-1973 in which it was decided that the plant will be run by the departmental staff for three days continuously after it was started by the firm's representative and the plant would be taken over immediately after, if the

plant is found satisfactory". Accordingly, the plant was run continuously for three days from 2nd July 1973 and, except for some vibrations in one of the compressors, the plant was reported to have functioned satisfactorily. The Department stated (January 1976) that "it was stated by the representative of the firm that such defects are not likely to recur in the plant in the near future. It was also agreed by the representative of the firm that the defects will be removed free of cost by the firm if they re-occur up to end of October 1973"—Thereafter the Director General, Posts and Telegraphs instructed the Divisional Engineer, Telephones, Agra to take over the plant so that firm 'A' could get the balance 20 per cent payment. The plant was taken over on 5th July 1973. According to the Department (January 1976), "the plant has not been giving satisfactory service after taking over and is lying idle at present." As the firm refused to repair the plant in spite of repeated reminders stated to have been issued by the Department, the Director General, Supplies and Disposals was requested in August 1975 to take action against it.

6.25. The Department stated (January 1976) that "a meeting was called by Director General, Supplies and Disposals during November 1975 in which the representatives of the firm were also present. The firm has, however, not agreed to attend to the plant free of cost and we have again taken up the case with the Director General, Supplies and Disposals during December 1975 for taking early decision in this case."

[Paragraph 20 of the Report of the Comptroller and Auditor General of India for 1974-75, Union Government (Posts and Telegraphs)]

a. BHUBANESHWAR

EXECUTION OF THE PROJECT

6.26. According to the Audit Paragraph, installation of a 1500 lines auatmatic telephone exchange in replacement of the existing 700 lines manual exchanges at Bhubaneshwar was sanctioned in March 1962 for Rs. 26.39 lakhs.

6.27. Since the proposed 1500 lines exchange, which was expected to be ready by 1967-68, would not have been adequate to meet even the immediate demand for telephones, another project was sanctioned in September 1965 for Rs. 8.61 lakhs for expansion of the proposed exchange from 1500 to 2000 lines.

6.28. However, even before installation of equipment was started, another project was sanctioned for Rs. 21.27 lakhs in June 1968 for further expansion of the proposed exchange from 2000 to 3000 lines.

6.29. Explaining the reasons for the final sanction for expansion of the exchange from 2000 lines to 3000 lines, the Posts and Telegraphs Department informed Audit in December 1975 that during the course of a review of demand for telephones at Bhubaneshwar in 1967, it was assessed that due to a back-log in the production of crossbar equipment by Indian Telephone Industries, this exchange could be expected to be commissioned only by 1969 and hence further expansion of the proposed exchange to 3000 lines was approved and the production of equipment was included in the manufcturing programme of Indian Telephone Industries for 1968-69. Installation of equipment was started in January 1969.

6.30. Since the project estimate for installation of automatic telephone exchange at Bhubaneshwar initially sanctioned in March, 1962 was revised and sanctioned in 1964, the Committee desired to know the reasons necessitating this revision. In a note, the Posts & Telegraphs Department have informed as follows:

> "In the original project, provision for the building was for Rs. 11.27 lakhs and a preliminary estimate for the building and electrical installation for Rs. 10.81 lakhs was sanctioned in July 1963. This needed revision to Rs. 14.58 lakhs on account of increase in cost index and provision of basement and stronger foundation for future expansion etc. The revised building estimate was sanctioned on 26 August 1964. Since on this account the project cost exceeded by more than 10%, a revised project estimate had to be sanctioned in August 1964."

6.31. When asked as to why the provision of basement and stronger foundation for future expansion etc. was not contemplated originally, the Posts & Telegraphs Department explained as follows:

> "In the original project provision for the building was for Rs. 11.27 lakhs and a preliminary estimate for the building and electrical installation for Rs. 10.81 lakhs was sanctioned in July 1963. This needed revision to Rs. 14.58 lakhs inlluding over-heads on account of increase in cost index, non-provision of baseneat and stronger foundation for future expansion, etc. Since on this account the project cost exceeded by more than 10% a revised project estimate had to be sanctioned in August, 1964.
>
> The main cause of revision in the building estimate was the increase in the cost-index resulting from the rise in prices of materials and labour. The earlier estimate was based on a cost index of 132 plus 18% whereas the revised estimate was based on a cost index of 168%.
>
> The area of basement in the original preliminary estimate was included under the items of main building, and estimated at the same plinth area rate for basement. The provision for stronger foundation is reported to have been omitted through oversight as the staff was new to the work at that time. Had this provision been made, the cost of original estimate would have increased by 19560x2.15=Rs. 42,054/-. Similarly, special provision for acid-resisting floor would have enhanced the amount of preliminary estimate by Rs. 5,845/-.
>
> The gap between the original and revised estimate being Rs. 2,41,600/- excluding overheads revision in building estimate would have been necessary due to increase in cost index as stated earlier even if provision had been correctly made for items referred to above in the original preliminary estimate."

6.32. The project for expansion of the exchange from 1500 to 2000 lines, was further revised to 3000 lines and was sanctioned in June, 1968. The Committee asked about the reasons for sanctioning the expansions so frequently and for not taking into account the actual requirement trends

while framing the project estimate initially in 1962. The Posts & Telegraphs Department have* informed the Committee:

> "There is an acute shortage of telephone exchange equipment in the country and therefore we were providing equipment just adequate to meet the requirement estimated at the expetcted year of commissioning of the exchange. Allotment of equipment, however, is made in relation to the progress of the building work. The Initial project for installing a 1500 lines exchange was sanctioned in 1962 on the basis of Bhubaneshwar having strowger equipment to cover the demand upto 31-3-66. The capacity of the exchange provided was reviewed in 1964 when the revised building estimate was sanctioned and it was decided that it will be desirable to put in crossbar equipment and also that an initial capacity of 2,000 lines would be justified to cover the period upto 1967-68. Since the initial project was already sanctioned for 1500 lines, a separate project for expansion by 500 lines was processed in October '64 and the EFC Memo. was approved after which equipment orders for 2,000 lines were placed on ITI in March 1965. The supply of equipment, however, was not according to the earlier expectations and installation could commence only in April 1969.
>
> The requirements of the exchange equipment at Bhubaneshwar were reviewed after installation and commenced in 1969. It was felt that the total telephone demand at Bhubaneshwar, by the time the exchange is commissioned *i.e.*, March'71, would be about 2600 and this capacity of 2000 would not be adequate. Therefore, a further expansion of the exchange by 1,000 lines was sanctioned."

6.33. When asked whether the Posts & Telegraphs Department has ascertained the capacity of the Indian Telephone Industries and were in touch with them while framing these estimates, the Member (TD), Posts & Telegraphs Board explained:

> "This is a case which was similar to Ludhiana and refers to the same period. Originally we had thought of a Strowger exchange for Bhubaneswar of 1500 lines. Then when the cross-bar production was supposed to have started and the ITI took on production, this important town was included for supply of cross-bar equipment and by that time the demand was re-assessed at 2000 lines and the order was placed for a 2000 lines cross-bar exchange. The estimate remained sanctioned at 1500 lines original plus 500 lines (addl.). There was no significant change except the change in the type of equipment. That is all that was there."

6.34. According to the Audit Paragraph, during the course of a review of demand for telephones at Bhubaneshwar in 1967, the back-log in the production of cross-bar equipment by the Indian Telephone Industries was

*Not vetted by Audit.

taken into account. The Committee ascertained the reasons for back-log in the production of equipment. The Posts & Telegraphs Department have *apprised the Committee:

> "The major reason for the slippages in achieving the capacity in production of Crossbar equipment by the ITI had been due to the continuous delay on the part of BTM in supplying piece parts, components, tools and machines. There were other factors also which further added to this delay, for example, some machines sent by them were received here in damaged condition and some machines sent by them were impounded at Karachi during the Indo-Pakistan confrontation in 1965. Inspite of continuous reminders from the ITI to the BTM fpr expediting the supplies and keeping the promised schedule, delay occurred in supplies at all stages.
>
> Crossbar equipment was being manufactured for the first time in the country and the ITI engineers had no actual experience of production of this type of equipment. Considering the very large magnitude and complexity in the manufacture of the equipment, the time schedules for various operations fixed initially were found to be optimistic on the basis of actual experience."

6.35. The Committee pointed out that Bhubaneshwar being the State Capital was an important place and as such required priority in the supply of the equipment. To this the Chairman, Indian Telephone Industries has stated:

> "P&T Department listed it amongst the high ups. There were 70 exchanges in the list and the position of Bhubaneshwar was at S. No. 9. At that time we were only developing the knowledge and the experience for the manufacture of these exchange and further as this capacity was increased from 2,000 to 3,000 lines we had to sufficiently engineer the project again. The initial development stages do cause problem particularly with the type of circumstances that developed with the International Telephone and Telegraph and the BTM Company."

6.36. The Secretary, Ministry of Communications, elucidated the position as follows:

> 'There was one special point about the situation. As against 1·67 lakhs they were able to supply only 54,000 lines. So, in that context you could well imagine to what extent they would have to modify the programme. This re-scheduling year after year was causing serious difficulty during that period. Since Bhubaneshwar is an important place this was decided upon. Now we have this 4,000 lines exchange and there is no waiting list now. We are able to meet the requirements of this important town."

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*Not vetted by Audit.

AIR-CONDITIONING OF THE EXCHANGE

6.37. According to Departmental technical instructions, sophisticated components of telephone equipment should be unpacked and taken out from plastic containers in air-conditioned rooms to avoid ingress of dust and huminity in them which would adversely affect their performance.

6.38. Even though indent for exchange equipment for 1500 lines was released in March, 1965 and the building was ready in April, 1967, indent for procurement of requisite air-conditioning plant was sent to the Director General, Supplies and Disposals in September, 1967 and the detailed specification therefor in October, 1967. The Committee desired to know the reasons for delay in placing the indent and that too without detailed specifications. In a note, the Posts & Telegraphs Department have *explained:

> "Preliminary action to collect necessary data for framing the specification of the air-conditioning plant was commenced well in time and the D.P.T. Orissa was also directed to sanction the relevant detailed estimate which was done in February 1965. However, it appears that in keeping with the progress of the building work and the supply of exchange equipment, the indent for the air-conditioning plant was directed to be released in March 1967.
>
> The indent was placed by the DPT Orissa on DGS&D along with a letter dated 19 April 1967. Unfortunately, the indent was not in the proper form. He was directed to submit revised indents in the prescribed form and this he did on 1-9-67. According to the DPT 14 copies of the specifications for the air-conditioning plant were sent to DGS&D along with the original indent in Aqril 1967."

6.39. Elucidating the position further the Secretary, Ministry of Communications, has stated as follows.

> "If I may intervene with your permission, there is one important fact which I would like to place before the Committee. By that time it was known fully that the exchange equipment was not likely to be installed for quite some time. Actually, rescheduling of the equipment had taken place. The installation of the equipment ultimately commenced some time in the beginning of 1969. There has been a delay on the part of Director, P&T in rescheduling the indent—five month's period was really a long one. Even after the indent was revised, the order was placed by the DGS&D. He was told that the air-conditioning plant should be installed by October 1968. Even if that was done, it should have been before the equipment installation actually commenced."

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*Not vetted by Audit.

6.40. According to the Audit Paragraph, after the drawings of the plant were finalized in December, 1967 a tender notice was issued by the Director General, Supplies and Disposals, in January, 1968 and the order was placed in July 1968. The Committee asced for the reasons for taking about a year in placing the final order. The Secretary, Ministry of Commuications has deposed:

> "Theposition is like this that when the first requisition was placed on DGS&D, that was not in the proper form. Then the Director P&T was asked to change the form. Along with the first requirsition he had sent the requisite number of drawings. On 1st September he again sent the correct form but he did not attach the drawings mentioning therein that the drawings sent earlier should be attached with this. These took some time more. That was why the drawings sent earlier could not be associated with the correct type of form. That is why the whole process was started by the DGS&D some time by the end of December. This is what we have been able to get from the records."

6.41. According to the original supply order the installation of the plan was to be completed by 30 November 1968. But the power for running the plant could actually be made available in March, 1972. The Committee, therefore, desired to know the reasons for delayed supply of power and enquired as to why the advance planning was not done to ensure the supply of power by 30 November, 1968. In a note, the P&T Department has *apprised the Committee:

> "The procedure regarding the agency which should carry out the electrical installations in telecom. buildings was under review. Earlier the work was being done by the telecom. officers. A decision was taken that this should be done by the Civil Wing instead of the Divisional Engineer Telegraphs. An Electrical Division was formed at Calcutta in June 1968 when the work of electrical installation in the Eastern Region was transferred to him. Due to this there was some initial delay in getting the electrical installations completed in time. The large amount of power required for air-conditioning and other loads in this exchange need the provision of a sub-station. The case for installation of H/T sub-station at Bhubaneshwar was initiated by the Surveyor of Works (Civil Wing) *vide* his Tour Note of November '68. After collection of some data he submitted the preliminary estimate in March 1969 and it was sanctioned in April, 1969. For carrying out the work, it was necessary to obtain transformers, H.T. & L.T. Switch Gears and cables from three different suppliers through DGS&D. The L.T. panel was received only in March 1971 and the H.T. panel in January 1973. In the meanwhile, the Orissa State Electricity Board was re-

*Not vetted by Audit.

quested to help us, as a special case, and the sub-station was commissioned in March 1972 after the Electricity Board made arrangement for controlling the H.T. supply from their own equipment."

6.42. The indent for the electrical items required for the sub-station, i.e., transformers, cables and HT/LT panels were placed by the Posts & Telegraphs Department in February, 1970. The Committee desired to know the reasons for not placing the indent simultaneously with the indent for the air-conditioning plant. In a note, the Posts & Telegraphs Department have informed the Committee as follows :—

"The procedure regarding the agency which should carry out the electrical installations in Telecom. Buildings was under review. Earlier the work was being done by the Telecom. Officers. A decision was taken that this should be done by the Civil Wing. An Electrical Dn. of the Civil Wing was formed at Calcutta in June 1968 and the work of electrical installation in the Eastern Region was transferred to it. During the transition there was some delay in getting the work of electrical installations initiated in time. The requirement of power for air conditioning and other load for this exchange necessitated the provision of a separate sub-station. The case for installation of the sub-station was initiated by the Surveyor of Works (Electrical) *vide* his tour note of November, 1968. After collection of some data, he submitted the preliminary estimate in March, 1969 which was sanctioned in April, 1969. This sanction was in the nature of administrative approval and expenditure sanction for carrying out the work. Before, however, tenders for the supply and installation of sub-station equipment could be invited it was necessary to prepare and sanction the detailed estimate showing the actual quantities of cable requirement etc. This detailed estimate was sanctioned in January 1970 and the indent for HT sub-station equipment was thus placed with DGS&D in February, 1970.

"The indent for the air-conditioning plant was placed on the DGS&D by a different unit, *viz.* the Director P&T Orissa Circle in September 1967."

6.43. According to the Audit Para, the air-conditioning plant was put on monsoon test in August, 1972, winter test in January, 1974 and summer test in June, 1975, and several defects were noticed during these tests. The Committee asked for the reasons for unusual delay in conducting the summer and winter tests and precise steps taken to rectify the defects noticed during each of the tests. The Posts & Telegraphs Department have *apprised the Committee as follows :

"Power was available in March '72. The Monsoon test was conducted in August '72. The winter test was carried out in January 1973 and summer test in June 1973. (It is regretted that these have appeared as January 1974 and June 1975 in Audit Report owing to typographical error in the reply given to AG P&T to the

*Not vetted by Audit.

original Audit Para). In these tests a number of defects were noticed and the firm was asked to rectify them. After the winter test conducted in January 1973 and summer test conducted in June 1973, a meeting was arranged in February 1974 in DGS&D office, when the firm's representative assured recommissioning of plant by 31 March 1974 and offer it for joint test on 25 April 1974. This time schedule was, however, not kept by the contracting firm. The matter was also taken up with the Managing Director of the firm in July 1974. In a high level meeting held in the Office of DGS&D during December 1974 the firm's representative assured that the plant will be offered for test in January 1975 after 3 weeks trial run. The plant was offered for joint test only during August 1975 and the joint test was conducted from 25 September 1975 to 29 September 1975 and the plant was not found fit for taking over."

6.44 The position about the plant subsequent to September, 1975 was as follows as intimated by the Posts & Telegraphs Department in a further *note :

"It was decided that before any further tests are taken on the plant, the firm should itself run the plant continuously for 2 weeks satisfactorily and then offer it for joint test. They should also keep a record during this period about the plant and the defects noticed and rectified. The firm intimated in a letter dated 1 June 1976 that the plant has been continuously run by them for one month without any trouble and have suggested for the monsoon tests before end of July 1976. Dates for joint tests are still to be fixed."

6.45. About the present position of the plant, the Posts & Telegraphs Department have informed as follows:

"The joint test on the air-conditioning plant at Bhubaneshwar was conducted during July 1976. The plant was recommended for taking over by the joint test team subject to the rectification of some minor defects in the plant by the firm. The firm has since rectified the defects and the plant has been taken over by the department on 26-8-1976."

Action Against the firm for Poor Performance

6.46. The performance of the firm—"M/s Frick India Limited" on whom the order for air-conditioning plant was placed—has been found highly unsatisfactory not only in relation to the terms of commitments with Bhubaneshwar but also with Belgaum and Madras and their last tests have also failed to satisfy. The Committee, therefore, desired to know the action taken against the firm. The representative of the Department of Supply has deposed:

"The contracts were placed some years ago on the basis that 90 per cent of the contracted price in each case was to be paid to the supplier as soon as he collected the goods and delivered them

*Not vetted by Audit.

at site. So, in these cases, the supplier whether it is Frick or any other company, has got 90 per cent payment which percentage, as you may guess, covers a great deal of what he wanted to get. After that, he lost interest in the matter. In such cases, what can be done now? In each case, the equipment is already installed. The DGS&D in consultation with the indentor arranged for tests and in certain cases, they issued a formal rejection note. They say that after testing the equipment so many times, it has not been found satisfactory and, therefore, we do not propose to take it. The legal effect of this, theoretically speaking, is that we can make fresh purchase and then get the existing equipment removed from there and get something else installed and perhaps the damages are recovered from the contractor. But there is a distinction in this matter when things are simply supplied and where things are installed. If the things is taken away, then there are practical difficulties. Therefore, an attempt is made, even though it is not satisfactory, somehow to make the contractor bring this existing equipment up to specifications and make it perfect. That is the attempt that has been made by the DGS&D. Many of the contracts placed on the parties prior to 1972 have been rather unsatisfactory. That is a fact and we are not denying that."

6.47. Subsequently, on a query about the payment of the contracted price, the representative has clarified as follows:

"Prior to 1966, the old terms were 80 per cent and 20 per cent. Then on the recommendation of a Committee which has examined the working of the DGS&D it was decided that in all such contracts relating to installation, erection, etc. 90 per cent payment should be paid. Therefore, from 1966 onwards, the things were amended to 90 per cent. Later on, when we found that it was not working well in the case of air-conditioning firms, we reduced it to 80 per cent and put strict conditions."

6.48. The Committee enquired whether some cases arising out of the poor performance of the contracts by M/s Frick India Limited were pending in the courts, and whether the DGS&D had at any point of time come to know of the performance capacity of the firm and if so, the action taken thereon and whether the antecedents of the firm were verified before placing supply order in question. In a note, the Department of Supply (DGS&D)* apprised the Committee as follows:

"No cases of DGS&D for air-conditioning plants arising out of the contracts placed with Frick India are pending in the court.

(i) DGS&D did come to know about the performance capacity of this firm and no orders for central air-conditioning plant have been placed on this firm after March, 1972.

(ii) In DGS&D, we do not call for the capacity report for each individual contract. As the firm was registered with DGS&D for supply of air-conditioning plants no capacity report was called in this particular case before placing the order."

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*Not Vetted by Audit.

6.49. The Committee enquired whether due to the bad experience of the performance of the air-conditioning contracts, the Government everconsidered to fortify their position for taking action against the defaulting firms. The representative of the Department of Supply has *stated as follows:

> "It is treated as a breach of contract and we reject the equipment altogether, it is open to us to make risk purchase and then claim damages from the firm. That is one extreme step. The other thing is that for delay in the execution of the contract we collect what is called liquidated damages or reduce the price, but all that will involve recovery from the firm out of what we have already paid them."

6.50. The Committee desired to know the detailed procedure followed with regard to the taking of action against the suppliers of the Air-conditioning Plant, found guilty of bad performance, inadequate performance etc. In a note, the Department of Supply (DGS&D) *informed as follows:

> "There is no separate procedure laid down for taking action against the suppliers of the Air-Conditioning plant found guilty of bad performance, inadequate performance etc. etc. The procedure followed is common for all the suppliers of all types of stores and machinery including air-conditioning plants. The action which can be taken against the Suppliers depending upon the circumstances of the case are as indicated below:
>
> (a) Levy of liquidated damages as per terms of the contract.
>
> (b) Recovery/Stoppages of payment till the plants are set right.
>
> (c) Ignoring their offers against subsequent demands even if their rates are lower.
>
> (d) Removal from the list of registered Suppliers.
>
> (e) Suspension/banning of business dealings.
>
> (f) Black listing."

6.51. The second test was conducted in September, 1975. After the failure of this test, a formal rejection notice was issued by the DGS&D on 15 October 1975. Consequently, the Ministry of Law were consulted. The Committee desired to know the advice given by the Ministry of Law. The representative of the Department of Supply (DGS&D) has informed the Committee during evidence that the advice of the Ministry of Law was that:

> "A notice of performance may be issued to the firm before considering the question of the cancellation of the contract."

6.52. Explaining the action taken in pursuance of the advice given by the Ministry of Law, the representative of the Department of Supply (DGS&D) has stated:

> "In terms of the Law Ministry's advice, a notice of performance was to be given. This was issued to the firm on 27th of January this year and the firm was told that all the defects which had been pointed out to them from time to time had to be removed in the plant; and the plant was handed over to them once again for a test

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*Not vetted by Audit.

The firm stated that they would do so and the test was planned for the summer of this year. Since no date was mutually acceptable, the consignee and the firm decided to hold this test in summer....

On the basis of the results of this test which is to be carried out this month and the report of that test will be available with us in a few day's time, we shall determine what further action should be taken against the firm in terms of the contract for cancellation or any damage or reduction in the prices. If the consignee feels that he can still use it at a slightly lower capacity, that matter has to be examined after the report of the test is available to us which may be in another two weeks' time."

6.53 Keeping in view the magnitude of the Government's requirement for air-conditioning plants *vis-a-vis* the poor performance of the supplying firms, the Committee enquired whether it would not be advisable to set up a public sector organisation for the purpose. The Secretary, Ministry of Communications, had stated during evidence as follows:

"Actually, we have not at all considered this matter on the basis of which you have mentioned just now. On this occasion, it seems you have mentioned about the improvement of air-conditioning plants. I might inform the Committee that so far we have 201 plants for which either the orders have been placed or expected. Out of these 201 plants, 181 are with 7 firms and 20 with various other firms. Now, the largest number of orders have been given to Voltas, i.e., 63; Blue Star—29, Frick India 13, York India 9, American Refrigeration 29, etc. Out of these 201 plants, the plants. for which we have been told that they are ready and for which tests have been conducted, are 131 and 70 are under installation. Of these, 80 are working satisfactorily and 51 are not working satisfactorily. These relates to all the companies, and not for a single company. Out of 30 plants so far commissioned by Voltas, 26 are working satisfactorily. In the case of Blue Star 8 are not working satisfactorily. In the case of American Refrigeration, out of 29, 17 are working satisfactorily. In the case of Frick India, out of 8, 2 are working satisfactorily. Out of 9 supplied by York India, 5 are working satisfactorily, 4 are not, and so, on. The other 70 orders are being executed by various parties 21 by Blue Star, 5 by Frick India, 2 by York India etc. This would indicate that there is a very large requirement and there is a very large degree of unsatisfactory performance by almost all the companies, and it is on this basis that we are trying to develop a group of people in our department who are going to build up the necessary expertise to be able to deal with this matter so that, the plants are designed properly.

What happens is that, these companies make a design which is just sufficient to take the sort of load that we have because they have to compete with others. Because of the Marginal sort of design that they make, when there are slightly severer weather conditions, it does not last. If there is higher voltage fluctuation, something happens to the compressor.

The second reason is that these require very sophisticated comressors of a very high quality. Though the manufacture of compressors has now been taken up in this country, the evolutionary process of improving their design is still going on, and there is no company in the country today which is producing absolutely satisfactory compressors.

So, both these things are going on, and we hope that with a strict watch in future we will be able to get satisfactory plants, but the position so far is unsatisfactory."

6.54. Asked whether keeping in view the performance of the firm, Frick India Ltd., with regard to the 8 contracts awarded to them, the Government did not consider the question of black-listing this firm, the representative of the Department of Supply (DGS&D) has informed that "the question would be considered as soon as the test on this plant and two more plants was over".

EFFECT OF THE NON-WORKING OF THE AIR-CONDITIONING PLANT ON THE EXCHANGE EQUIPMENT

6.55. Installation of exchange equipment which was commenced in January, 1969 was completed in March, 1973 for all the 3000 lines and the automatic telephone exchange, for the protection and proper functioning of which the air-conditioning plant was installed, was put into service in March, 1973 without air-conditioning.

6.56. The Postmaster General, Bhubaneshwar has stated in May, 1974—

"the crossbar telephone exchange was working without air-conditioning since March, 1973 causing deterioration of life of the equipment. It was difficult to maintain the equipment and the components were getting faulty."

6.57. However, the Director General, Posts and Telegraphs has stated in December, 1975:

"though the provision of proper air-conditioning plant would have provided a better service and reduced faults of the equipment, the fact remains that complaints of unsatisfactory service due to exchange faults are within limit."

6.58. When asked to clarify the position about the two aforesaid contradictory statements, the Secretary, Ministry of Communications has clarified, as follows:

"The performance of an exchange is judged by the number of faults that are there. If the faults are within limits it is all right, and if the air-conditioning plant is working, the faults will be still less and the service will be much better than what could be otherwise. Another factor is that it is a 4,000 line exchange. It has got only 3,100 and odd connections. The loading is not as high as would cause serious congestion and difficulty. If the air-conditioing plant had been working, the performance would have been still better."

6.59. Explaining as to what effect the absence of air-conditioning plan would have on low efficiency and life of the exchange equipment, the Posts and Telegraphs Department have intimated,

> "The effect of absence of air-conditioning plant on the telephone exchange equipment has been examined. Air conditioning aims at maintaining temperature, humidity and dust within specified limits. If these are not maintained within the prescribed limits the probability of faults in the exchange equipment increases. For instance, excessive heat might damage a component. Similarly, excessive humidity might cause low insulation and might also result in corrosion. Excessive dust on the contracts of relays and selectors creates faults during switching operations.
>
> The increase in fault liability in the absence of air-conditioning will necessitate increased maintenance efforts. Such increased fault liability if continued for long periods may also have an effect on the life of the equipment.
>
> It had not been possible to quantify the adverse effects on Telephone Exchange equipment of exposure to environmental conditions beyond the desired limits of temperature, humidity and dust. In view of the various uncertainties involved in arriving at the qantitative analysis it is also not contemplated that such studies should be undertaken in live exchanges."

PERFORMANCE OF THE FIRM ON OTHER PLANTS

6.60. According to the Audit Paragraph, the same firm, M/s Frick India Limited, also failed to commission the plants within the stipulated time in the case of Belgaum and Kellys (Madras) Exchanges.

(i) BELGAUM

6.61. Indent for the procurement of air-conditioning plant was placed by the Posts and Telegraphs Department in July, 1967 and the DGSD placed an order (Rs. 2·90 lakhs) in July, 1968 on M/s Frick India Limited for installation of the plant by January, 1969. Though installation of the plant was stated by the firm to have been completed in October, 1970, power supply was made available by the Department only in April, 1972. The plant failed in tests conducted in June, 1973, February, 1974 and October-1974. With a view to protect the exchange equipment from dust and humidity, 13 window type air-conditioners were purchased for Rs. 0·86 lakh and installed in February, 1974.

6.62. Refuting the claim of the firm that the plant was installed by October 1970 and explaining the position about the performance of the plant at the tests conducted in June, 1973 and October, 1974, the Posts & Telegraphs Department have stated as follows:

> "The statement of the firm that they had completed the erection work by September 1970 cannot be taken to signify satisfactory completion of the installation. The Additional Chief Engineer of P & T after inspection intimated, during April, 1971 that the

ducting and return air boxing work done by the firm in the switch room was not as per the standard specification and requested that the matter may be taken up with the firm to attend the defects/ discrepancies pointed out before offering the plant for test. The matter was accordingly taken up from the P & T Directorate with the firm and the firm intimated on 11-8-1971 that they have advised their Bombay Office/Erection Department to attend to all the points mentioned in the report before offering the plant for final testing. Though the firm had informed that they had completed the work in Sept., 70, the installation was not satisfactory and could not pass the tests conducted in June 1973 and Oct. 1974."

6.63. Asked whether the plant has now been commissioned, the Member (TD), Posts & Telegraphs Board stated during evidence:

"They had not offered the plant for the Summer test and the Monsoon test in 1975 in spite of continuous persuasion. The Winter test on the plant was conducted from 29 to 31 December, 1975. The plant was able to maintain internal conditions, but a number of other defects were pointed out and the firm was asked to rectify these defects before offering the plant for the Summer test. The date for the Summer test was fixed from 31-5-1976 to 2-6-1976 but it could not be done because of the firm's failure to refill the gas. The plant is not working and they cannot offer the plant yet for the test."

6.64. All the three tests conducted till December, 1975 showed that the plant was not giving satisfactory service. However, the date for the summer test was fixed from 31 May 1976 to 2 June 1976. The Committee desired to know the reasons for this delay. The representative of the Department of Supply (DGS&D) has explained:

"Sometime in March, 1976 the P & T Department requested the firm to rectify the defects pointed out after the test held in December, 1975. Then again, on 10-5-1976 the company informed the DGS&D that all the defects had been attended to and that they were in a position to offer the plant for the Summer test—which was the season. So the inspection was held on 2 June, 1976 but, due to the setting in of the monsoons the test was carried out under monsoon conditions and not Summer conditions. It was reported that the plant was not running for want of gas and the firm was asked to attend to the defects and discrepancies noticed within fourteen days. Tentatively, it was decided to take the monsoon test in the middle of July, 1976."

6.65. Noting the helplessness of the Government against the performance of the firms like Frick India Limited, the Committee observed that the position should be remedied very early. The Secretary, Ministry of Communications, has explained:

"There are only two things we have been thinking of internally. One is to build up a group of people so that in future we are able to scru-

tinise all the tenders in a really adequate manner and reject all those which we feel are not competent, though they may be lower. The second is to see how we can get this firm into a situation where they are able to perform well. One aspect is to pay them only 80%. I don't know whether it would be possible but if it is, I am prepared to pay them even less. I think this is something which is required to be done because we can then have a hold on them. If there is some money left with us which they are going to get later, they may perform better."

6.66. The latest position of the plant as *intimated by the Posts & Telegraphs Department is as follows:

"The Monsoon test, on the plant was conducted from 30th August, 1976 to 1st September, 1976 and it is reported that the plant has been found generally to meet the test specifications though some minor deficiencies have been noted. The firm has been asked to attend to these deficiencies. The summer test is yet to be completed and can be done now only in the next summer season."

TIMELY SUPPLY OF POWER

6.67. Though installation of the plant was reported to have been completed in October, 1970, power supply was made available by the Posts and Telegraphs Department only in April, 1972. The Committee desired to know the reasons for not making the power supply available in time. The Secretary, Ministry of Communications, has explained as follows:

"I will try to answer this because this is another matter which is worrying us, that is the power supply. In the airconditioning plant we have to deal with only one firm, in power supply we have to deal with four firms. Most of these take quite a lot of time. A sub-station has to be erected. That sub-station has a transformer. Some cable has to be laid between the sub-station and the main electric supply station and there is an LT gear and HT gear. Now the spares of all these four items are supplied by different people and in several cases, for an order for an air-conditioning plant that we place, the DGS&D has been placing four more orders on four different firms for each one of these equipments. In addition, there is the fifth ingredient. That is the local supply company which should switch on power after the cabling is completed. It is a matter of concern with us that in many places there is no proper co-ordination between the four different organs of implementation. While we are trying to organize the manner of dealing with the air-conditioning plants we are also seriously examining how best to co-ordinate these four different agen-

*Not vetted by Audit.

cies, whether it be the supply of power or whether it be testing of the air-conditioning plant and we are also considering whether we can have some of these items permanently in our inventory in the electrical wing so that we may not have to indent for each air-conditioning plant."

6.68. The Committee asked for the reasons for not taking any concrete remedial measures in this regard so far. The Secretary, Ministry of Communications, has explained:

"I must admit that this was so because we were placing orders for all these on the DGS&D. With regard to air-conditioning plants since September 1974 we are going to process the indenting ourselves. But these four items which are common items and which are required by so many other departments also are still with the DGS&D. We would welcome any step to co-ordinate the procurement of these in a satisfactory manner. I do not think this tight coordination which is necessary has been performed in the same tight manner as it should have been."

(ii) KELLYS (MADRAS)

6.69. Against an indent sent by the Posts & Telegraphs Department in February, 1970, the Director General, Supplies and Disposals placed an order (Rs. 3.24 lakhs) in February, 1971 on M/s. Frick India Limited for installation of an air-conditioning plant by 30 November, 1971. Installation of the exchange equipment was commenced in December, 1972 and completed in 1974, without the commissioning of the Air-conditioning Plant.

6.70. Explaining the reasons for delay in commissioning of the Air-conditioning Plant, the Posts and Telegraphs Department has *apprised as follows:

"The supply and installation order was placed on the firm in February 1971 with a stipulation for completion of work by Nov. 1971. The materials were received at site on 12-4-72 and the firm asked for handing over of the materials to their representative on 18-7-72. The firm's representative, however, did not turn up on the date. It was finally handed over on 15-12-72. Some correspondence regarding the lay-out of the ducts in the switch room, MDF room, etc. was exchanged between the firm and the Madras Telephones. The firm intimated completion of installation and offered it for test on 15th/16th December, 1975.

It also appears from the correspondence exchanged between the Madras Telephones and the firm that the latter initially did not have any office at or near Madras and that many technical matters requiring settlement had to be subjected to long-drawn out correspondence. This also seems to have contributed to the delay in the installation and commissioning of the plant.

*Not vetted by Audit.

Winter test was conducted on 15-12-75. Some defects were pointed out and the firm was asked to rectify them. The plant was taken over provisionally on 27-2-76 subject to satisfactory tests in summer and monsoon."

(b) MADRAS TRUNK AUTOMATIC EXCHANGE

6.71. Orders for the equipment for the 1000 lines trunk automatic exchange at Madras were placed in May, 1964 and an indent for the air-conditioning plant was sent to the Director General, Supplies and Disposals in February, 1965. The Committee desired to know the reasons for not placing the indent for the air-conditioning plant in 1964 when the orders for TAX equipment were placed. In a note, the Posts & Telegraphs Department have *informed:

"The installation of the TAX equipment ordered in May 1964 was expected to commence in early 1966. The air-conditioning plant was indented for in February 1965 allowing for the lead time of 12 months, which was anticipated to be adequate."

6.72. In September 1965 the Director General Supplies and Disposal placed an order on M/s. American Refrigerator Company, Madras for the supply of the air-conditioning plant by April 1966 and its installation by August 1966. Eighty per cent of the cost of the plant was payable against proof of despatch after inspection at the factory, and the balance after testing, inspection and acceptance of the plant. The plant was also to be guaranteed by the supplier against mechanical and manufacturing defects for a period of twelve months from the date of commissioning. Since the import licence could be issued to the firm only in January, 1966, the Director General, Supplies and Disposals refixed (April 1966) the period of delivery as August 1966 for the supply and December 1966 for the installation. As the firm could not import many of the components in time, the period of delivery was extended to December 1966 for the supply of the plant and to March 1967 for its installation. The firm could not adhere even to this delivery period and at its request, further extension was granted up to July, 1967. The Committee enquired about the steps taken to expedite the import of necessary components from abroad particularly when the firm had been seeking extensions. In a note, the Department of Supply (DGS&D) have informed as follows:

"According to the existing procedure Import Recommendation Certificate has to be issued to the firm for import of the items after issue of the formal contract. The formal contract was issued on 15-9-65 and the Import Recommendation Certificate was issued on 21-9-65. The firm submitted a list of items to be imported for attestation by DGS&D on 23-11-65 for submission to Chief Controller of Import and Export. The list of items duly attetsed was returned back to the firm on 29-11-65. The firm applied for the requisite Import Licence on 13-12-65 and the Licence dated 1-1-66 was sent to them by Chief Controller of Import and Export under his covering letter dated 3-1-66."

6.73. By March 1966, sufficient quantity of equipment was received for commencing the installation. Since, however, the air-conditioning

*Not vetted by Audit.

plant had not been received, and as the sophisticated exchange equipment was to be installed in air-conditioned room to prevent ingress of dust and corrosion from humidity 12 window type air-conditioners were installed in June, 1966 at a cost of Rs. 0.51 lakhs. Installation of the equipment was started in April, 1966. In August 1967, the firm complained that the testing of the plant under installation was hampered as power supply was not made available by the Department. The Posts & Telegraphs Department informed Audit in January 1976 that the electric switchgear required for supplying the power to the air-conditioning plant could be obtained through the Director General, Supplies and Disposals only in April 1968, and the power supply was made available in the same month. The firm completed installation of the air-conditioning plant by July, 1968. Meanwhile, installation of the trunk automatic exchange, for which the air-conditioning plant was required, had been completed in February 1968 and the exchange had started functioning from that month. The Committee enquired of the reasons responsible for delaying the availability of the power supply till April, 1968 and the steps taken for the timely procurement of the electric switch gear. In a note, the Posts & Telegraphs Department have informed* the Committee as under:

> "The indent for electrical switch gear was placed on DGS&D Madras on 28-12-66. After obtaining some clarifications the latter issued an enquiry on 30-6-67 with the last date for receipt of tenders as 19-7-67. An A/T was placed on 23-9-67 with the delivery date 31-12-67. However this was extended (without reference to the indentor) to 12-4-68. After receipt of the last consignment bulk power was made available in April '68. Meanwhile, temporary power supply was made available on 11-8-67 for testing the equipment in parts on 30-1-68, the company admitted that they had tested both the compressors with this temporary power supply."

6.74. The air-conditioning plant was subjected to tests in July 1968 and again in February 1969, when several defects were noticed. After the defects were attended to by the firm the plant was again put to test in June 1969, when again some of the components were found defective. The Department of Supply informed Audit in December 1975 that the major defects noticed in June 1969 were "heavy rusting and development of scales on the steel tubes of the evaporative condenser." The question of galvanising the steel tubes or their replacement by copper tubes remained under protracted correspondence. Ultimately in March 1971, the firm agreed to guarantee the evaporative condensor for four years. The plant was then again tested in December 1971 and accepted by the Department in January 1972.

6.75. The air-conditioning plant developed faults within five months of its commissioning and was shut down in April 1974. In the meantime the Department had to purchase another 13 window type air-conditioner, (cost Rs. 0.85 lakhs) for providing essential protection to the equipment of the exchange which had in the meantime been augmented to provide for increase in the load of traffic.

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*Not Vetted by Audit.

6.76. The Committee desired to know the causes of breakdown of the plant in April 1974. In a note, the Posts & Telegraphs Department informed* as follows:

> "The plant was shut down in April, 1974 because of the leaks in evaporative condensor coil. The firm undertook the repairs to the evaporative condensor and stated to have completed the same by November, 1974. Several leaks, however, were still noticed on 23-12-74 in the condensor coil and the firm was asked to replace the same."

6.77. The Committee asked for the reasons for taking three years to detect the defects in the coil of the evaporative condensor and the present position of the plant. In a note, the Posts & Telegraphs Department have informed.

> "The first joint-test on the plant was conducted during July, 1968. In this test 22 defects were pointed out but there is no mention of any defect in evaporative coil condensor. The plant was again jointly tested during February, 1969. In this test 15 defects were pointed out. No defect in evaporative condensor coil was however, mentioned in this test also. The next test on the plant was conducted during June, 1969. In this test-report it was mentioned that the evaporative condensor coils have been found rusty and scaled and the plant was again rejected. It appears that the defects in the coils developed later.
>
> The final inspection and testing of the plant was done in December 1971. In this test the performance of evaporative condensor was considered satisfactory. The evaporative condensor-coils were replaced by the firm and they have been accepted. The plant has been recommissioned on 31-8-76."

6.78. The Committee learn from Audit that Rs. 21,000 were sanctioned in October, 1974 by the General Manager (Telephones) Madras to meet expenditure on repairs. Since the plant was to be guaranteed by the supplier against mechanical and manufacturing defects for a period of 12 months from the date of commissioning, the Committee, desired to know the duration and date of termination of guarantee period position of the air-conditioning plant on the date of termination of the contracts date on which the defects were noticed and the nature and the cost involved in attending to them after the guarantee period and why these defects were not noticed/attended to within the guarantee period. In a note, the Post and Telegraphs Deparmtent have informed:

> "The guarantee period stipulated in the contract is as below 'The equipment shall be covered by the usual manufacturer's guarantee for any mechanical or manufacturing defects for a period of 12 months from the date of commissioning of the plant'. Since the plant was taken over on 5-1-1972 the guarantee period was from 5-1-1972 to 4-1-1973 for the whole plant. Guarantee period for the evaporative condensor-coils alone was from 5-1-1972 to 4-1-1977."

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On the date of expiry of the one year guarantee period for the main plant, it was working without any apparent defect.

The plant had become faulty and was shut down from 15-2-1974.

Statement of the nature of the defects and the amount spent on rectification of the same after the guarantee period is as given below:—

Item No.	Description	Date	Amount
			Rs.
1.	Leak in evaporative tube condensor due to puncture in the tube (Heavy loss of Gass)	27-6-73	900
2.	Unloader not working properly	4-12-73	200
3.	Abnormal noise in the impeller and heavy vibration of the whole cabinet. Found two of the angles broken and the blower motor got tilted. Cabinet covering sheets completely corroded.	15-2-74	18961 (to be paid)

"The defects noticed during the guarantee period were rectified by the firm. As the above defects occurred after the guarantee period the question of their attention within the guarantee period does not arise."

6.79. The Committee desired to know the action taken against the firm for poor performance/delays. In a note, the Department of Supply (DGS&D) have informed* as follows:

"The plant withstood all the seasoned tests and was taken over finally by the consignee on 5-1-72. After watching its performance for over a year, the Consignee released the final I/Notes on 9-2-73 and final payment released. No damages in respect of defects which came to light subsequently could be recovered."

AGRA TELEPHONE EXCHANGE

6.80. Against an indent placed by the Director General, Posts and Telegraphs in July, 1964, the Director General, Supplies and Disposals placed an order in May 1965 on M/s American Refrigerator Company, New Delhi on a cost of Rs. 1.23 lakhs for supply and installation of a air-conditioning plant in the telephone exchange at Agra. The plant was to be installed by March, 1966. According to the terms of the Supply Order, payment to the extent of 80 per cent was to be made after initial inspection of the plant and proof of despatch, and the balance 20 per cent after erection of the plant at site and final inspection and tests.

*Not vettedby Audit

6.81. Installation of the plant was completed by the firm in September, 1968. The Committee desired to know the reasons for the delay of about 2 years in the installation of the air-conditioning plant. In a note, the Posts and Telegraphs Department have stated as follows.

"The following chronological statement of events will provide a brief analysis of the time taken and the delays involved at each stage:—

17-5-1965	Order placed by DGS&D *vide* A/T No. SE/6/2021/018/A/I/4035 dated 17-5-1965.
2-6-1965	The suppliers M/s American Refrigerator Co., gave and sought certain clarifications to Commercial condition of contract. They sought quota permit for sheets for duct work and for cement.
7-7-1965	D. G. S. & D. replied to suppliers letter dated 2-6-1965.
30-9-1965	Suppliers submitted layout plans for the equipment and duct work to P & T Directorate.
15-10-1965	The drawings were approved and returned to the firm.
31-5-1966	The firm requested D.G.S. & D. for extension of delivery date upto 15-7-1966 and date of installation upto 15-10-1966 as the compressors were expected to be ready only in May, 1966.
10-1-1967	The firm was reminded by Directorate *vide* letter dated 10-1-1967 to intimate the position of installation of Air-conditioning plant.
4-1-1967	The compressors to be supplied by M/s Kirloskar Pneumatic Co. Ltd., Pune were not received by the Firm till January, 1967 as per firm's letter dated 4-1-1967. The firm expected the supply in Delhi any time and requested D.G.S. & D. to extend the D/P upto 15-11-1967.
10-2-1967	Firm asked consignee to vacate plant room.
21-2-1967	The installation work started by the firm during February, 1967 as per firm's letter dated 21-2-1967.
17-5-1967	The firm was reminded again to intimate the position of installation of the Air-conditioning Plant.
13-6-1967	The firm was remided to intimate the progress.
28-7-1967	The firm was again reminded.
27-11-1967	The firm intimated to DGS&D that the installation work was in progress and they wanted the consignee to complete the associated Civil Works and arrange power in the building.
1-3-1968	It was intimated by the consignee that the Civil Works involved for the installation of A/C plant had since been completed and power arrangements existed in the building.
14-3-1968	The firm and DGS&D were requested for early commissioning of the plant as Civil Works already completed.
22-3-1968	The firm intimated that they were testing some of the components of Air-Conditioning Plant and shall advise as soon as the plants ready for final inspection.
10-5-1968	The firm indicated that the plant was under commissioning and they expected the same to be ready by 20th May, 1968.

15-6-1968 . The firm was asked to intimate whether the plant had since been commissioned or not. The firm was also pressed to commission the plant without any further delay so that joint test on the plant could be carried out.

31-7-1968 . The firm was again reminded demi-occiailly to arrange the commissioning of the A/C Plant without any further delay.

5-9-1968 . . The firm was reminded for commissioning again.

10-9-1968 to 13-9-68 First test for Monsoon conditions conducted."

6.82. In August, 1971 the Additional Chief Engineer of the Posts and Telegraphs Department at Jabalpur had informed the Director of Inspection, Supplies and Disposals as follows :

"There have been lots of failures and breakages during the tests and also when the plant was handled by the firm for rectification of defects. Workmanship appears to be below standard. The condition of the plant has deteriorated to such an extent that it cannot be restored by application of maximum skill at the disposal of firm. A decision should be taken to reject the plant as unserviceable."

6.83. Inspite of the aforesaid advice, it was decided in a meeting of the representatives of firm, the Posts and Telegraphs Department and the Director General, Supplies and Disposals held in November 1971 that the firm should continuously run the plant from 1st April 1972 to 30 April, 1972, after carrying out necessary rectifications and replacements, and if the plant performed satisfactorily during this period, it would again be inspected and tested jointly. Accordingly, the plant was inspected and tested jointly by the representatives of the Department and the firm in June 1972.

6.84. The Posts and Telegraphs Department have informed Audit in January, 1976 as follows:

"the plant was able to maintain summer conditions for which these testing was carried out in June 1972 though a few deficiencies were noted in some items. It was mentioned in the test report that the plant may be accepted and taken over after rectification of the defects."

6.85. Therefore firm agreed in June 1972 to rectify the defects.

6.86 Another meeting was held in the office of the Director General, Supplies and Disposals in November 1972 in which the firm agreed "to give guarantee against the cracks in the refregerent lines due to vibrations for the period April 1973 to September, 1973."

6.87. The Posts & Telegraphs Department have further informed Audit in January, 1976 as follows:

"further discussions were held with the representative of the firm on 28-6-1973 in which it was decided that the plant will be run

by the departmental staff for three days continuously after it was started by the firm's representative and the plant would be taken over immediatley after, if the plant is found satisfactory."

6.88 Accordingly the plant was run continuously for three days from 2 July, 1973 and, except for some vibrations in one of the compressors, the plant was reported to have functioned satisfactorily. In this connection Posts and Telegraphs Department have further informed Audit as follows:

"It was stated by the representative of the firm that such defects are not likely to recur in the plant in the near future. It was also agreed by the representative of the firm that the defects will be removed free of cost by the firm if they recur upto the end of October, 1973."

6.89. Thereafter, the Director General, Posts and Telegraphs instructed the Divisional Engineer, Telephones, Agra to take over the plant also that the firm could get the balance 20 per cent payment. The plant was taken over on 5 July, 1973. The Posts & Telegraphs Department informed Audit in January, 1976 that the plant was not giving satisfactory service after taking over and was lying idle at that time.

6.90. The Committee desired to know whether the views expressed by the Additional Chief Engineer, Jabalpur were taken into account while deciding in June, 1973 to accept the plant after rectification of the defects. In a note, the Department of Supply (DGS&D) has* explained :

"Subsequent to the report of the Additional Chief Engineer of August 1971, Joint tests were carried out on the plant in June 1972 when it was found that plant was able to maintain summer condition although some deficiencies were noted.

Joint Inspection Report of Summer test held in June, 1972 concluded that the plant could be taken over by the consignee subject to rectification of the deficiencies mentioned. Discussions were held in the DGS&D with the representatives of the P & T Department and the firm on 28-11-72 and 3-2-73. During these discussions it was decided that the plant may be taken over subject to the firm holding themselves responsible for a period of 6 months from April, 1973 to September, 1973 for specific defects pertaining to the vibration in the Compressor Unit.

The firm gave this undertaking on which basis the Director of Inspection issued the final Inspection Notes in April, 1973 and the plant was taken over by the consignee on 5/6th July, 1973."

6.91. The Committee asked for the reasons for taking over the plant in July, 1973 despite recurring problems and persistent defects in it. The Committee also desired to know the nature and the dates of recurrence of

*Not Vetted by Audit.

defects on take over. In a note the Posts and Telegraphs Department have stated:

> "The matter regarding defective installation and unsatisfactory test results of the Air-conditioning plant was taken up with the DGS&D in August, 1971 after which a number of meetings were held by the DGS&D. As a result of the discussion it was decided that the plant will be run continuously from 1st April to 30th April, 1972 and if it was found giving satisfactory service during this period, it will be tested and taken over. The Plant was run by the Firm from 7-4-1972 and was tested during, 1972. The plant was able to maintain the prescribed climatic conditions but some vibrations in the refrigerent line were noticed. The plant was taken over by the Department in July, 1973 after obtaining an extra guarantee from the firm against damage due to vibrations, covering upto September, 1973.

The nature and date of recurrence of defects after the take over of the plant by the Department are as given below:

Date	*Nature of defects*
1	2
21-9-1973	1. Comp. I found excessively hot
	2. Comp. I-Oil level very low
	3. Comp. While switching off the solenoid valve only one compressor instead of both was tripping.
7-12-1973	Fault attended to by the firm by replacing Suction Valve rods and Suction Valve springs in Comp. I.
9-3-1974	Blower fan noisy—the joint of one of the fans to shaft was broken. Fan blades were got welded.
25-5-1974	Leakage of gas from seal of compressor 2. Compressor I getting hot tripping.
21-6-1974	The firm's representative opened compressor I on 21-6-74 to replace broken rings. Seal of compressor 2 observed defective requiring replacement.
28-1-1976	The Firm inspected the Blower Fan. It was observed that the fan impellers were out of balance. Fan castings found corroded and out of aligument.
	It was suggested by the firm that we should replace 2 fans alongwith casings and shaft and bearing.
7-6-1976	Shaft and fan of Blower and Seal of compressor 2 replaced by the firm.
7-7-1976	Plant was re-started on 7-7-76. Compressor 2 was tripping; noise and vibrations were observed in both compressors; Capacity-control pipe of Compressor I cracked and leaking.

1	2
12-7-1976	The plant was once again started on 12-7-1976 with both compressors and Pump but after two hours the capacity control pump of compressor I again cracked and the plant was stopped.
26-7-1976	Plant started by the firm after attending to faults (bolt of fly wheel refitted and cracked pipe replaced) Plant started working but vibration continued.
20-8-1976	Shaft of compressor 2 damaged and fly wheel broke into pieces-compressor stopped.
3-9-1976	Shaft seal of compressor I started leaking. Compressor stopped. Plant was shut down again."

6.92. The Committee desired to know the present position of the plant and sought confirmation whether the defective electric motor has since been repaired. In a note, the Posts and Telegraphs Department have informed :

> "The plant was repaired by the Firm on 20-7-1976 and it worked without major trouble upto 19-8-1976. On 20-8-1976, the fly wheel and shaft of one of the compressors broke down. The plant was running with one compressor thereafter upto 3-9-1976. On 3rd September, 1976 the seal of the second compressor also started leaking and the plant has been shut down and the Firm was asked to attend to the defects.
>
> There was some trouble in the starter of the motor which was set right and the motor started working on 12-7-1976."

6.93. The execution of the project for replacement of a 700 lines manual exchange at Bhubaneshwar by an automatic telephone exchange testifies in an eloquent manner the lack of planning and foresight on the part of the P&T authorities. The original scheme sanctioned in 1962 for installation of 1500 lines automatic telephone exchange was revised in 1964. Even when the revised scheme was at the preliminary stage of implementation, another project for expansion of the proposed exchange from 1500 to 2000 lines was sanctioned in September 1965. Again another project was sanctioned for further expansion of the proposed exchange from 2000 to 3000 lines. The Committee take a serious view of the frequent revisions and expansions of the project, a situation which discloses a basic weakness in the planning orgainsation of the P&T Department which seemed to have not taken adequate notice of the unfulfilled registered demand and the demand likely to be generated at the Capital of a State.

6.94. The Committee are surprised to learn from the statment of the P&T Department that the original project provision had to be modified in order to provide for a basement and stronger foundation for future expansion. Since on this account, the project estimate exceeded by more than 10%, a revised project estimate had to be sanctioned in 1964. It is all the more surprising that the P&T Department

had taken the plea that the omission to provide for stronger foundations was due to an oversight on the part of the staff who were new to the work at that time. The Committee consider that responsibility cannot be passed on to a subordinate officer and the technical officer who was concerned with the examination of the project has to bear the full responsibility for the omission. The Committee deprecate the perfunctory manner in which the project was proceeded with. Keeping in view the fact that Bhubneshwar is a State Capital where the demand for telephone facilities from the public is bound to grow, the P&T authorities should have thought of and provided the necessary inbuilt capacity for meeting the requirements.

6.95. The Indian Telephone Industries is also answerable for the delay in the commissioning of the Telephone Exchange at Bhubneshwar. It is a matter of concern that the ITI have taken three long years (from March 1965 to March 1968) in making the supply of equipment for 2000 lines. The Committee have time and again stressed the need for a proper coordination between the P&T Department and the Indian Telephone Industries so that supplies are made according to well-planned time schedule and all bottlenecks and difficulties standing in the way of timely supplies are attended to expeditiously.

6.96. It is a matter of great concern to the Committee that the installation and commissioning of air-conditioning plants which form an important constituent of telephone exchahges and are meant for protecting the sensitive and sophisticated exchange equipment from dust and humidity, have generally been lagging behind, thus affecting the efficiency of the projects. From the numerous cases, the Committee have so far dealt with, it has been observed that the execution of the contracts for air-conditioning have by and large been delayed and not synchronised with the completion of the exchange projects. Even after installation, the plants have in majority of the cases not been able to render satisfactory performance, thus not only affecting the performance of the telephone exchanges but also eventually affecting the life of equipment. In the event of non-commissioning of the air-conditioning plants, the Government have generally been incurring additional expenditure on the installation of window type air-conditioning units to protect to some extent the sophisticated equipment from humidity. In the case of Belgaum telephone exchange, 13 window type units at a cost of Rs. 0.86 lakh were installed in February 1974 due to the non-commissioning of the air-conditioning plant in time. Moreover, in the case of Bhubaneshwar Exchange, the installation of the exchange equipment, commenced in January 1969, was completed in March 1973 without any air-conditioning facility. The Committee are surprised to learn from the P&T Department that is it not possible to quantify the adverse effect on the exchange equipment due to the non-commissioning of the air-conditioning plant. The Committee have already stressed earlier in this Report that such an assessment is essential so that the amount of loss thus sustained can be taken note of while eciding the course of action against the firm.

6·97. The Committee are surprised that despite persistent lapses the Department concerned have hardly taken action against the unscrupulous firms for transgression of the terms of the contract. The representatives of the Government have time and again been expressing their helplessness before the Committee in taking remedial measures to improve the said situation. The Committee cannot accept this plea and would strongly urge upon the Department to have a closer look at this problem and devise elaborate measures to ensure that air-conditioning package units are installed, tested and pressed into service to synchronise with the commissioning of the sophisticated telephone exchange equipment.

6.98. In this connection, the Committee would like to draw the attention of the Ministry to one basic defect in the system of indenting and accepting the consignments tendered by the firms against the Supply Orders. According to the terms of the Supply Orders, payments are made to the extent of 80 per cent after the initial inspection of the plant and proof of despatch, and the balance 20 per cent after erection of the plant at site and final inspection and tests. The Committee have not been informed about the nature of inspection conducted at the premises of the firm as also the level at which the inspections were conducted. It is imperative that experienced engineers well qualified in air-conditioning and refrigeration in the P& T Department and DGS&D should undertake joint inspections at the premises of firms before the supplies are accepted against the Supply Orders. In view of the fact that under the present procedure, the suppliers get 80% of the contracted price on delivery of goods at site, they may not be evincing the requisite interest in the rectification of the defects that come to light after the delivery of the goods. The Department and the DGS&D should jointly review the position and suitably modify the terms of the contracts to be given in future so that the supplying firms feel the urgency of commissioning and running satisfactorily the plants to synchronise with the installation of sensitive telephone exchange equipment. The Committee would like to be informed in detail of the remedial measures taken in pursuance of this recommendation.

6·99. The Committee regret to note the initial delay in placing the indent for procurement of air-conditioning plant for Bhubaneshwar exchange in September 1967, particularly when the indent for exchange equipment was released in March 1965 and the building was ready in April, 1967. According to the Department, the initial indent placed in April 1967 was not in the proper form and had to be resubmitted in the prescribed form in September 1967. The Committee fail to understand as to how this primary and essential aspect of placing the indent in the proper form which led to a further delay of 5 months was lost sight of. This needs to be explained and the responsibility therefor fixed.

6.100. The Committee note with concern that still another avoidable omission of furnishing the requisite drawings wth the indent has been responsible for delay in finalisation of theiindent by GSD&D for about a year. According to the Department the requisite drawings were enclode with the initial indent placed in April

1967 and as such were not enclosed with the indent placed subsequently in September 1967. These drawings were not traceable in the office of DGS&D , which led to further correspondence between the Posts and Telegraphs Department and DGS&D delaying the finalisation of the indent. This avoidable delay of several months needs to be investigated with a view to fixing responsibility and taking remedial measures to eliminate the chances of recurrence of such lapses.

6·101. Another instance of lack of planning and foresight on the part of the Department is in regard to the provision of basic and primary facility like power required for the testing and commissioning of the plant. According to the orginal supply order the installation of the plant was to be completed by 30 November, 1968 but the power for running the plant could actually be made available in March 1972. No serious attempt appears to have been made by the Department for making this facility available in time. This is confirmed by the fact that the preliminary indent for HT sub-station equipment was placed with DGS & D in February 1970, whereas the indent for air-conditioning plant had gone in April 1967. The Committee are not satisfied with the casual explanation advanced by the Department that different departmental agencies are involved in making different provisions. Similar lack of planning with regard to the provision of power is in evidence in the case of Belgaum exchange where though the installation of the plant was started in October 1970, power supply was made available by the Department only in April 1972. In the case of Madras Trunk Automatic Exchange as well, the timely provision of power was not made. The Department cannot escape the responsibility for effecting complete coordination in the whole project irrespective of the fact whether three or four agencies are in the filed and responsible for supply of different products. The Committee have been informed during evidence that the question of streamlining the process of making timely availability of facilities like power etc. is under review. The Committee urge that this matter should be finalised urgently and they should be informed of the institutional arrange, ments made to obviate recurrence.

6·102. Another disquieting feature which has concerned the Committee is that the airconditioning plant supplied by the Frick India Limited, which was required to be installed by November 1968 was put to monsoon, winter and summer tests as late as in August 1972, January 1973 and June 1973 when a number of defects were noticed. Surprisingly enough, the supplier took more than 2½ years to rectify the defects. Though the plant was offered for joint test during August 1975 which was conducted from 25 to 28 September 1975, it was still not found fit for taking over. The Committee are perturbed to note that the plant could not pass the final test till it was taken over on 26 August 1976 notwithstanding certain defects still persisting. The Committee would like to have a detailed report within six months on the performance of the plant from the date of its take over.

6.103. The story of poor performance by the same firm, *viz*. Frick India Ltd, has been repeated in their contracts for the air-conditioning plants in the case of Belgaum and Kellys (Madras) Exchanges. The installation of the plant for Belgaum Exchange was completed in October 1970 but it failed in the tests conducted in June 1973, February 1974 and October 1974. The Committee are concerned to note that even till September 1976 the plant was not able to pass all the tests satisfactorily. As regards the Kellys (Madras) Exchange, the air-conditioning plant, which was to be installed by November 1971, was subjected to winter test only in December 1975 when some defects were noticed in it. The plant was, however, taken over provisionally on 27 February 1976 subject to the satisfactory summer and monsoon tests.

6·104. The statement of the Secretary of the Ministry of Communications at the time of evidence that out of a total of 8 air-conditioning package units installed by M/s. Frick India Ltd. only 2 are working satisfactorily has come as a revelation. Judging from the poor performance of the firm in the present three cases *vis-a-vis* their overall performance in the other contracts, as also the indifference displayed by them in the matter of rectification of defects,the Committee feel convinced that a serious view (including their black-listing) should be taken about this firm in the matter of farming out of contracts to them.

6. 105. The committee are concerned to note that out of 131 existing contracts for the supply of air-conditioning plants to the Posts and Telegraphs Department by different firms, as many as 51 are not working satisfactorily as per the reports of the different tests conducted. This indeed is a lamentable state of affairs. The Committee are concerned to note that despite such a situation, no positive and effective steps appear to have been taken by the Departments concerned to improve the position. The Committee learn that in order to meet the situation to some extent the Posts and Telegraphs Department are trying to develop a group of departmental persons equipped with necessary expertise so that the plants are designed properly. In the meanwhile the Committee would like the Department to prepare a list of the defects which have been generally noticed during and after installation of the various air-conditioning plants so that the group of experts may take proper notice of these while designing plants. The Committee would also watch with interest the positive contribution of the proposed 'group'.

6·106. The Committee are further concerned to note the very poor performance of another air-conditioning contract concerning Madras Trunk Automatic Exchange awarded to M/s. American Refrigerator Company, Madras. The plant which was required to be installed by August 1966, was actually installed only in July 1968 after three extensions had been granted because the firm could not arrange import of the components in time.

6·107. The Committee regret to note that due to the non-installation of the plant as per schedule, the Department had to incur an additional expenditure of Rs. 0·51 lakh in June 1966 for the installation of 12 window type air-conditioners. The Committee feel that while granting extension of time, this aspect of additional expenditure should have been taken due note of.

6·108. The Committee are constrained to note that after installation of the plant in July 1968, it remained under testing till December 1971, when several defects were noticed each time and reportedly rectified by the firm, and the plant was accepted by the Department in January 1972. The Committee are surprised to note that the plant develop faults within five months of its commissioning and was shut down in April 1974 due to the leaks in evaporative condensor coils, which were guaranteed for five years. The plant was recommissioned only on 31 August, 1976 on replacement of the defective coils but it is still not rendering satisfactory service. The Committee regret that due to the continuous poor performance by the firm and lack of supervision on the part of the departmental officials, the Department had to incur another expenditure of Rs. 0·85 lakh for purchase of another 13 window type air-conditioners for providing essential protection to the exchange equipment which had in the meantime been augmented to provide for increase in the load of traffic. They had further to incur another expenditure of about Rs. 20,000 to carry out repairs to the plant between 22 June, 1973 to 15 Fegruary, 1974. What passes comprehension is the almost total failure of the Department to take any action against the firm whose performance has been anything but satisfactory. This lacuna should be taken note of by the DGS& D for suitable remedial action.

6·109. M/s. American Refrigerator Company, New Delhi is concerned in yet another case of supply of air-conditioner for the Agra Telephone Exchange. This plant was installed in this Exchange in September 1968 as against the stipulated period of March 1966. No action was taken against the firm for the initial delay of about 2 1/2 years. The five tests conducted on the plant during September 1968 to June 1971 revealed numerous defects. In spite of the fact that the Additional Chief Engineer of the Posts and Telegraphs Departmet had intimated as early as August 1971 that the plant was beyond repair, the Department persisted with further trials and took overthe plant on 5 July, 1973 on instructions from the Director Generl, Posts and Telegraphs. The Committee have been informed that the plant failed to give satisfactory service after take over and had to remain idle.

6·110. The Committee desire that the entire question of take-over of the defective plant in spite of the persistent defects and despite the adverse report of the Additional Chief Engineer, Posts and Telegraphs, Jabalpur, should be thoroughly investigated with a view to fixing responsibility. The Committee would also like the Department to examine and inform what action has been taken against the firm for the breach of contract.

6·111. It is also suggested that a continuous evaluation of the performance of all the suppliers of sophisticated air-conditioning equipments should be made with a view to taking appropriate action at least in placing future orders. Government may also consider the feasibility of setting up a public sector undertaking to manufacture air-conditioning plants for P&T and other Departments in view of the poor performance of the private firms as pointed out in the preceding paragraphs.

New Delhi;
September 26, 1977
Asvina 4, 1899 (S)

C. M. STEPHEN
CHAIRMAN
PUBLIC ACCOUNTS COMMITTEE

APPENDIX

Conclusions/Recommendations

Sl. No.	Page No. of the Report	Ministry concerned	Conclusions/Recommendations
1	2	3	4
1 3.5	1.71 5	Ministry of Communications (P&T Department)	In the execution of the project for the installation of a 6000-lines automaitc telephone exchange at Ludhiana, the P&T Department have displayed an indefensible lack of planning and coordination resulting not only in enormous delay in execution but also escalation of costs on the project itself. That a project conceived in April 1961 should have been commissioned almost twelve years later in February 1973 be speaks of the inept handling by the project authorities right from the start in utter disregard of the elementary economic considerations and administrative accountability. The Committee strongly deprecate the unconscionable delay of long 12 years in the commissioning of the Exchange.
2	1.72	Do.	The Committee need hardly point out that Ludhiana for the last two decades has been in the vanguard of industrial development of the country particularly in the small-scale sector. This town has a distinction of executing very large export orders for hoisery goods as also for manufacturing intricate components and tools for the internal and external markets. Since it is Government's avowed policy to provide infrastructure facilities in the interest of accelerating industrial and economic development, the Committee can see hardly any valid reason for the indifference displayed by the P&T authorities in expanding and improving the inadequate tele-communication facilities. This is all

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			the more reprehensible when the Secretary, Communications has candidly admitted during evidence that the period of 12 years taken in the execution of the project was "very very long period and there was no basic defence for such a long period having been taken", as according to the Ministry's own calculation the project should have been completed in not more than six years. In fact, the Committee feel that even this period of six years is much too excessive as the Tele-communication authorities with all their vast experience in the field should be able to complete the initial works in less than two years and the work of construction and installation should be so phased and synchronised as to be completed at the earliest, say, within 2 to 2½ years instead of the margin of four years taken. The Committee desire that a thorough study should be made of the manner in which the entire project was planned and executed so as to fix responsibility and take action within six months against those who have been derelict in the performance of duties and derive lessons to ensure that such indefensible delays do not recur and that the work is so planned and executed as to be completed in the least possible. time.
3	1.73	Ministry of Communications (P&T Department)	The glaring deficiencies noted during execution of the project at various stages required to be highlighted. It is a matter of considerable concern that the basic requirement, namely preparation of a time-schedule to watch the execution of such a big project, was lost sight of in this case. The Ministry have, in a written note, conceded that the detailed time-schedule of various activities was not drawn up at that time. The Committee would like the Ministry to investigate how the fulfilment of such an essential pre-requisite, *viz.* preparation of a time-schedule in the case of an exchange of this magnitude was overlooked. This

			lapse has proved costly and the responsibility therefor should be fixed.
4	1.74		The Committee note that in pursuance of their earlier recommendation *vide* para 1.316 of 145th Report (5th Lok Sabha) (1974-75), the P&T Department have now introduced the system of PERT (Progress Evaluation Programme and Review Technique) for monitoring the progress of projects and ensuring better coordination than what hitherto existed among different agencies entrusted with the execution of various components of the projects. While the Committee would watch with interest the impact of this system, they would also like to be apprised in categorical terms that the system is being assiduously followed in respect of all the major projects under execution. The Committee need hardly emphasise that continuous improvement should be effected in pre-paration of PERT chartse tc. and in monitoring the progress in the interest of adhering strictly to prescribed time schedules for projects.
5	1.75	D).	It has been admitted by the Ministry that the purchase of plot, which is another basic requirements, for the setting up of the exchange, was made without examining its suitability from the engineering point of view. This is evident fro m the fact that the Architect, who was entrusted with the task of preparation of Plans, had expressed the view that the plot was not suitable for the exchange as it was triangular and was in low-lying area. The mere fact that the P & T Civil Wing was not set up at that time does not absolve the Department of the reponsibility of not issuing proper guidelines in this regard. In fact, prudence required that an expert of the P & T Department should have visited the site and given his report about the suitability or otherwise of the plot before purchase. Settling of the disputed points in relation to the suitability of the land for the Exchange Building delayed the preparation of plans and it took about 14 months to draw up the final

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			blue-prints, an exercise which, according to the Ministry, should not have taken more than 4 months. The Committee have been assured that in order to avoid recurrence of sutuations like this, instructions are being issued to the Circles/Districts that the suitability of any land proposed for purchase/acquisition should be got examined not only by the Civil Engineering Officers but also by the Architects. The Committee desire that comprehensive instructions and guidelines should be issued in the matter so as to ensure that all the concerned authorities, namely, engineers, architectes, technical experts etc. are fully associated and consulted before acquiring land for setting up telephone exchanges and other buildings of technical nature and complexity.
6	1.76	Ministry of Communications (P&T Department)	As the requirements of telephones are bound to increase perceptibly years to come, it is essential to design and construct buildings for housing telephone exchanges in such a manner that these can be suitably expanded for housing the additional equipment. In this context, the Committee commend the concept of modular construction which could be put to effective use to design most economic buildings for housing telephone exchanges and equipments.
7	1.77	Ministry of Communications (P&T Department)	After the purchase of the plot, the Department failed to exercise due caution and care which they should have as an owner of a landed property. The result of this lapse was that there was an encroachment by the Municipality/Improvement Trust, which came to the notice of the Department only when the field unit started preparation of the surveyed site plan asked for by the Architect. This contributed to further delay because the matter had to be sorted out with the State Government who were persuaded to give additional land to compensate for the encroachment. This lapse is deplorable. The Committee have been

			assured that Government would issue necessary instructions in this regard to all the units.
8	1.78	Do.	Apart from issuing instructions, the Committee stress that there should be a close follow-up and implementation thereof for they feel that if ordinary precautions and care had been exercised by the Department they would have become aware much earlier about the possible encroachment of their land and taken remedial measures in time.
9	1.79	Ministry of Communications (P&T Department and Indian Telephone Industries)	Another feature of the delay is in the planning, manufacture and supply of the equipment by the Indian Telephone Industries, which took 59 months from August 1967 to July 1972. It took 20 months for the installation of the equipment from June 1971 to February 1973. The construction of the building was completed in August—September 1969 but the installation of the equipment could commence only in June 1971. According to original anticipations, supply of the equipment was expected to be completed in 1967-68 itself. But actually, these supplies were spread over the period from December 1968 to June 1971. Further, the stores were not supplied in sequence as the supply of major iron frames on which the whole equipment is mounted was commenced by the Indian Telephone Industries in February 1969 and by July 1970 only 60 per cent of the frames were supplied, resulting in delay in commencing the installation work which was taken in hand with effect from June 1971 only. The Secretary, Ministry of Communications has conceded during evidence that if there had been proper coordination with the Indian Telephone Industries and there were no delays in the pre-construction works, better results would have been achieved. According to the Chairman of Indian Telephone Indusrries, the main reason for the delay in supply of the equipment was that there had been slippages on the part of their foreign collaborators. During 1965—68, Indian Telephone Industries had to supply 1,67,000 lines of equipment to the P&T Department. Against this, the actual supply was only 54,800

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			lines, resulting in a slippage of 1 lakh lines over that period. Consequently, the supply of equipment from the Indian Telephone Industries was coming in such a way that if for any exchange the first pack came on a certain date, the last pack came after about 4 years. The Committee deprecate this lack of coordination between the telephone project authorities and the Indian Telephone Industries, a public undertaking working under the same Ministry of Communications. The responsibility for not taking due care in planning, coordination, manufacture, delivery, installation, which resulted in the unconscionable delay of four years and more should be thoroughly investigated and responsibility fixed on the erring officials so as to act as a deterrent to others for such indifferent attitude in discharging public responsibility.
10	1·80	Ministry of Communications (P&T Department & Indian Telephone Industries)	The Committee are somewhat assured to find that the representatives of the Ministry during the course of evidence had categorically stated that the telephone project authorities and the Indian Telephone Industries have now reached a stage of complete coordination and laid down time-frame and sequence for supply of equipment. The Committee would like a watch to be kept at the higher level to see that the time schedule and sequence for supplies are honoured scrupulously in the field so as to obviate recurrence of cases of the nature dealt with in this Audit paragraph.
11	1·81	Ministry of Communications (P&T Department)	According to the Department's own forecasts, the Exchange was expected to be commissioned in August 1971 whereas it was actually commissioned in February 1973, resulting in a delay of about 1½ years. As per the Project Report estimate the net annual profit expected from the exchange was Rs. 4·88 lakhs. However, according to the P&T Department, if

			the exchange had been commissioned as per schedule instead of February 1973, about Rs. 21 lakhs of additional revenue could have been earned if all possible connections had been provided. It is, therefore, apparent that due to the failure of the Department to ensure effective coordination and dovetail the various components of the Project as per a fixed time-schedule, there has been a significant loss of potential revenue during this period of 1½ years. This potential loss of revenue would be manifold if calculated keeping in view the optimum period of six years for the completion of the project.
12	1·82	Ministry of Communications (P&T Department)	In this connection, the Committee would like to invite the attention of the Ministry to the following recommendations contained in paras 1.314 and 1.316 of their 145th Report (5th Lok Sabha): "As a result of the delay in the execution of the projects, there has been invariably an escalation of the project estimates, non-utilisation of the facilities available and the consequent loss of revenue which was due to the Government. ** ** ** ** The Committee would, therefore, like the Department to issue suitable instructions to the effect that persons entrusted with the execution of the projects would be held responsible for any loss of revenue to the Government as a result of delay in the execution of the projects. The Committee hope that the PERT chart which the Department propose to introduce will take care that there is proper synchronisation of the different components of the project from the very beginning and that there is proper supervision in regard to the estimation of requirements, placement of indents and the utilisation of stocks."

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13	1·83	Ministry of Communications (P&T Department) Department of Supply (DGS&D)	Another major contributory factor for the delay in execution of the project was the long time taken in the commissioning of the air-conditioning plant which was indented for in April 1970 for protecting the delicate and sophisticated exchange equipment from dust and humidity. Defects noticed at various stages of the functioning of the plant were attended to perfunctorily by the firm and that too after continuous follow-up action by the Department. The position as on 23 August 1976 was that the firm was yet to conduct the monsoon test. The Committee are surprised that despite persistent lapses the Department concerned took no action whatsoever against the firm for transgression of the terms of the contract. All that has been done is that against the contract value of Rs. 4,38,885—, the firm's payment to the extent of Rs. 63,385 was held up. The Committee do not appreciate the logic of the Department of Supply (DGS&D) that "action would be taken to recover the damages/loss in consultation with the indentor after the plant was taken over by the consignee." The Committee would like to know whether the plant has since been taken over and the action taken to recover the loss.
14	1·84	Department of Supply (DGS&D)	It is a matter of serious concern that the air-conditioning plant supplied and installed in September 1973 after a delay of about 1½ years as per the supply order, started giving troubles soon after installation. At the time of the first winter test conducted immediately on installation, its performance was far from satisfactory as its blower was getting excessively heated. The Committee regret to note that the supplier took one year to rectify the defects and the plant passed winter test in February 1974 and summer test in May 1974. The plant was offered for monsoon

			test in August 1974 but the test had to be abandoned due to burning of a cable. The Committee are distressed to note that the plant could not pass the final test till August 1976 due to one defect or the other. As the plant was not ready, the Department had to incur an additional expenditure of Rs. 98,000 for obtaining 18 window-type air-conditioners between June 1971 and March 1973. The Committee need hardly point out that had the air-conditioning plant been commissioned in time, the additional expenditure of Rs. 98,000 on the window type units could have been saved. The Committee recommend that a serious view should be taken about the performance of the firm by the DGS&D with a view to taking appropriate action against the firm for the breaches committed.
15	1·85	Ministry of Communications (P&T Department)	The Committee note that the window type units are not able to control the humidity. This not only affects the performance of the exchange but in course of time it may affect the life of the equipment. It is surprising that the Department have not been able to assess the ultimate damage caused to the equipment in terms of money. The Committee feel that such a study is very essential so that the amount of loss thus sustained can be taken note of while deciding the course of action against the firm.
16	1·86	Minitry of Communications (P & T Department) Department of Supply (DGS&D)	The Committee have come across some instances earlier, where in similar circumstances, window type air-conditioing units had to be per force put in Telephone Exchanges instead of the package air-conditioing unit. The Committee would like the Department to have a closer look at this problem and ensure that the air-conditioning package units are installed, tested and pressed into service to synchronise with the commissioning of sophisticated telephone exchange equipment. The Committee would like to be informed of the action taken in this behalf.

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17	1·87	Ministry of Communications (P & T Department)	The Committee note that as against 11,250 estimated mazdoor days for the installation of the equipment, 21,839 mazdoor days were actually spent involving an additional expenditure of Rs. 0·64 lakh in wages. As there was no uniform formula in this regard, the P&T Department constituted a Special Group to go into the matter and lay down broad guidelines. The Committee have been informed that the Special Group have since submitted their Report and the same is under consideration. The Committee would like to be informed of the conclusive action taken in this behalf.
18	1·88	Ministry of Communications (P & T. Department.)	The Committee have noted that according to the instructions issued by the P & T Department in September 1970, ninety per cent of the exchange capacity should be utilised soon after its expansion and ninety-four per cent about six months before the due date of commissioning of the next expansion. In the case of Ludhiana Exchange, however, the percentage of loading has not been done in accordance with these instructions and has fluctuated between 72·3 per cent to 93·7 per cent of the existing capacity. As per the calculations made by Audit, the Department lost a potential revenue of about Rs. 13·40 lakhs upto September 1975 on this account. The Committee are not convinced with the argument advanced by the Ministry that in the case of cross bar exchanges these instructions could not be applied as they could not take load to the extent of 90 per cent. But the fact is that in March 1974 and January 1975, the exchange had actually been able to take a load of 93·7 per cent and 90·4 per cent of the capacity, respectively. The Committee would like the Government to examine this aspect *de novo* with a view to laying down some specific and realistic guidelines and norms with regard to the percentage of loading in respect of cross bar exchanges also. The

			Committee need hardly stress that the norm should be kept high so as to enjoin on all concerned to make concerted efforts to achieve a higher level of efficiency and performance in the interest of public service and earning larger revenues on public assets.
19	1·89	Ministry of Communications (P & T Department)	The Committee are concerned to note that an important commercial and industrial centre like Ludhiana does not have Subscribers Trunk Dialling facility with other important places like Delhi and Chandigarh. The Committee have been informed that due to non-completion of the project in time, the sapre capacity available on the co-axial cable laid on this route by the end of 1965 had to be utilised for providing STD to Srinagar, Jammu, Jullundur and Amritsar. The Committee need only point out that the least that the Department could have done was to have foreseen this eventuality and initiated action well in time to ensure that the supplementary additional facilities as required were provided so that these could be pressed into service along with the new telephone exchange keeping in view the commercial and industrial importance of Ludhiana.
20	1·90	Ministry of Communications (P & T Department)	The Committee have further been informed that estimates for providing an additional medium on the route have already been sanctioned and the additional medium is expected to be available by 1978-79. The Committee hope that keeping in view the commercial importance of Ludhiana, STD facility would be made available to this place on priority basis.
21	1·91	Do.	STD facility being a revenue yielding medium, the Committee are convinced that the Department has been put to a considerable financial loss by the non-provision of the faclity in a 10,000 lines exchange like Ludhiana. The Committee recommend that Government should issue specific instructions for extension of this facility to commercial and other places of importance.

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22	2·26	Ministry of Communications (P & T Department)	The Committee note that no realistic estimation of the demand for telephone in Sanathnagar locality of Hyderabad was made as is evident from the fact that in December 1963, the District Manager, Hyderabad sought approval for a 2000-line main exchange on the justification that Sanathnagar was fast developing into an industrial locality and that the demand of telephones in the area was expected to be 1311 in 1967, 2208 in 1972, 2933 in 1977 and 3528 in 1982. Although it was stated to be a perspective plan, no action whatsoever was taken by the authorities to re-assess the demand while sanctioning the purchase of land for the main telephone exchange in 1966. No cognisance was taken also of the fact that during the same period 262 lines were working on the satellite exchange, which was already set up in a rented building in the locality w.e.f. August 1964, as a temporary measure.
23	2·27	Do.	In March 1971, when the new building which provided for a 5000-lines exchange was almost ready, are vised project estimate for 1200-lines was submitted in replacement of the satellite exchange which was then working with 551 connections and a waiting list of 89. In December 1971, the P & T Directorate, however, finally agreed to provide equipment for a 900-lines main exchange. At that time the likely demand for telephones indicated in justification for the project estimate was 3751 in 1972, 6692 in 1977 and 11038 in 1982. Surprisingly enough, the actual demand on 30 September 1976 against these estimates stood at 1513 telephones only.
24	2·28	Do.	The Committee are unable to appreciate the *raison d'etre* of the inflated forecasts made in December 1971, particularly when the growth of demand from the time the proposal for the exchange was mooted in 1963 was stagnant. It appears to the Committee that no attempts were

			made to study the atual growth of demand before the acquisition of land, construction of building and deciding the size of the project. It is distressing to note that it took the authorities about 9 years to decide the size of the Exchange.
25	2·29	Do.	The Committee stress that suitable steps should be taken to improve the process and procedure for estimation of demands while drawing up any long-term plan for expansion. At the same time, appropriate administrative action should be taken to reduce the time-lag between the acquisition of land, construction of building and placement of equipment orders.
26	2·30	Do.	The Committee are constrained to note that the work of the telephone exchange building at Sanathnagar though sanctioned in 1967 was completed in February 1974, over a period of about 6½ years. The inordinate delay of 28 months in the construction of the building alone, beyond its stipulated period of July 1971 is inexcusable. The Committee also note that after the building was put up, another 8 months were taken to provide water and electricity which became available by December 1974 only. The contributory factors for the delay like cement shortage etc. could have been tackled as these were foreseeable and had not arisen abruptly. As regards subsequent changes in the structure, the need, nature and extent of changes brought about are open to question. The Committee would like the P&T Directorate to examine in depth the reasons which were responsible for the delay in the construction of the building with a view to taking suitable remedial measures for future. The Committee would like to be informed of the action taken in pursuance of this recommendation.
27	2·31	Do.	The Committee note that a decision was taken by P&T Directorate that wherever the demands for telephones would justify and initial installation of 1500 lines of exchange equipment, a building suitable for 5000 lines

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			and capable of further expansion to accommodate another 5000 lines would be constructed. Keeping this decision in view, the original proposal of 2000 lines exchange, a main exchange building in Sanathnagar, with a capacity of 19,700 sq. ft. was constructed to accommodate a 5000 lines exchange initially. The Committee further note that on completion of the installation of equipment in March 1975 in the main telephone exchange building, a 900 lines exchange was actually commissioned in it. By then the 800-lines capacity satellite exchange had 760 working connections with a waiting list of about 150 applicants. As a result of this 5600 sq. ft. of accommodation in the new building remained unutilised.
28	2·32	Ministry of Communication (P&T Department)	The Committee are unable to understand why only 900 lines exchange was commissioned in the new building when a rented building is being used separately as a satellite exchange with a capacity of 800 telephone lines, whereas, as already stated, an accommodation to the extent of 5600 sq. ft. in the new building is lying unutilised. The Committee would like the P & T Department to review the matter so as to locate the satellite exchange in the departmental building. The Committee would like to be informed of the action taken in the matter.
29	3.40	Do.	The Committee note that though the question of installing a Trunk Automatic Exchange (TAX) at Ambala for extending STD to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi has been under consideration since 1965, a project estimate (Rs. 57 lakhs) for installation of a crossbar type 2000 lines TAX at Ambala by 1969-70 was sanctioned only in November 1967. The object was to link the local telephone exchange

			at Ambala, Chandigarh, Simla, Ludhiana, Jullunder, Amritsar, Jammu, Panipat and Karnal in due course to the TAX at Ambala for the pupose of introducing subscribers' trunk dialling (STD) among these stations and to extend STD to other stations in the country by interconnecting the TAX at Ambala with the main TAX at New Delhi (commissioned in April 1969). On completion of all these services, the annual revenue expected was about Rs. 62 lakhs from STD receipts. The work was started in September 1968 and still the project is not fully commissined in all respects. Though the building was completed in March 1970 there was long delay in the completion of other components of the project *viz.* air-conditioning, installation of equipment etc. This delay was evidently due to lack of advance planning and proper synchronisation at various stages. The Committee are unable to agree with the Department of Communications that delays occurred because no PERT chart, as is done now, was introduced indicating the exact time schedule and inter-dependence of various activities connected with the completion of the project, as other ways and means could have been adopted to watch closely the progress and coordinante the execution at various stages.
30	3·41	Do	The Committee are distressed to note that by the time the construction of the building was completed in March 1970, even the specifications for air-conditioning plant were not finalised by Director General, Posts and Telegraphs, though the plant was to be installed in the building before commencement of installation of equipment. An indent was sent to DGS&D in April 1971 for purchase and installation of the air-conditioning plant when the supply of equipment for the Exchange from the Indian Telephone Industries had already commenced in January 1971. The Committee are constrained to note that another 8 months were taken in placing the order on the firm in January 1972. Of these 8 months, approximately two months were lost in tracing out a letter issued by P&T Department to DGS&D on technical clarifications

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			sought by DGS&D and another 2 1/2 months were taken by P&T Department to comment on the tenders received for the installation of the plant. The delay due to this protracted correspondence and routine work is most reprehensible. Had the P&T Department taken appropriate and timely measures to facilitate the placing of the order for the plant before completion of the construction of the building in March 1970, the inordinate delay of 22 months that occurred between March 1970 and January 1972 could have been avoided.
31	3.42	Ministry of Communication (P&T Department)	Another factor which has also contributed to the delay in installation of the airconditioning plant is the fact that the P&T Department took almost one year after placing the order on 31st January 1972, in approving the drawing for A/C Plant room layout and location of the cooling tower. The result of these delays was that the installation of the plant was completed in May 1973 instead of September 1972 and that too could not be commissioned and put up for summer test for want of masonary job for ducting by the consignee.
32	3.43	Ministry of Communication (P&T Department) Department of Supply (DGS&D)	Though the Plant was put into operation on 11-6-1976 after summer and winter tests, it is still to undergo the monsoon test, which could not to be carried out earlier due to non-availability of adequate internal heat load as stipulated in the contract. It is distressing that even 3-1/2 years after the installation of the plant in May 1973, the plant has still to carry out the monsoon test successfully. The Committee need hardly emphasise that the precise reasons for delay in the installation and commissioning may be in identified with a view to fixing responsibility and to take remedial measures for future. The Committee may be informed of the action taken in this matter.

33	3.44	Ministry of Communications (P&T Department & Indian Telephone Industries)	The Committee note that though the indent for supply of equipment for the exchange was placed on the Indian Telephone Industries in March 1967, the manufacturing programme was deferred till 1971 when the production of TAX equipment was stabilised in ITI. Consequently, the supply of equipment, which cost Rs. 120.12 lakhs against the provision of Rs. 43.74 lakhs in the sanctioned estimate commenced in January 1971 and was completed in March 1975. As it was found that the size of the switch room available could accommodate only 1700 lines of equipment as against 2000 lines originally planned, the equipment for only 1700 lines was obtained afterwards. The Committee are not convinced by the reply of the Posts and Telegraphs Department that because of inadequate experience of the installation of TAX available with P&T and ITI, they could not estimate the size and capacity of the accommodation required, as in that case they should have been more cautious. The Committee also find out that beside taking about 4 years initially in stabilisation of the TAX circuits, it took more than 4 years to instal the equipment in the Project after the work was commenced in January 1971, as against the stipulated period of one year.
34	3.45	Ministry of Communications (P&T Department)	The Committee find that that thogh 50% of the capacity viz. about 850 lines was commissioned on 10 March, 1976 and subsequently stations like Ambala, Chandigarh, Amritsar, Simla and Jullundur had been connected till date, difficulty cropped up in connecting both ways Chandigarh, Simla, Jullundur which continued till November 1976. The Committee would like to know whether this difficulty which was to be overcome on the commissioning of inter-TAX working between Ambala TAX and Delhi TAX in November 1976, has since been removed. The Committee hope that concerted efforts would now be made to expedite the balance equipment so that the project is upgraded to provide the rated capacity of 1700 lines without loss of further time. The Committee would like to be apprised of the further progress made in this regard.

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35	3·46	Ministry of Communications (P&T Department)	The Committee are further concerned to note that the actual expenditure of Rs. 131.81 lakhs on the project upto January 1975, has exceeded the sanctioned estimate of Rs. 51.85 lakhs by over 154 per cent and was likely to go up further due to the proposed modifications. It is seen from the reply of the P&T Department that the annual revenue, expenditure and profit anticipated in the project estimate were Rs. 20,73,600 Rs. 10,49,100 and Rs. 10,24,500 respectively. The revenue forgone is thus Rs. 71,00,000 on account of delay in commissioning the project as it was expected that the TAX would be completed in March 1969 according to the schedule adopted in the Project Estimate. The Committee are convinced that the heavy capital expenditure beyond the sanctioned estimates could have been reduced to a great extent and more revenue earned thereby, if the authorities concerned had made concerted and coordinated efforts to keep to the time schedule to complete the project. The Committee regret that due to these lapses in handling the project the country had to pay heavily.
36	4·66	Ministry of Communications (P&T Department)	For meeting the requirements of the users in an industrial and commercial city like Calcutta, a project for the expansion of Exchange No. 24 by 3300 lines was sanctioned in April 1965 for Rs. 59.48 lakhs of which Rs. 29.45 lakhs was for equipment and Rs. 30.03 lakhs for lines and cables. From the picture that emerged after the perusal of the material furnished by the Department and the oral evidence of the representatives of the concerned Ministries, the Committee have noted with considerable consternation that not only has the actual expenditure on the project exceeded the original estimate by more than 50% but all the calculations of the Department for the early completion of the project were turned awry on account of the failure of the different agencies

			concerned with the execution of the project. The upshot was that the project for the expansion of the Exchange '24' was delayed by more than five years.
37	4·67	Ministry of Communications (P&T Department and Indian Telephone Industries)	The Indian Telephone Industries was responsible for the supply of equipment for the project. The indent for the supply of equipment was placed on them in May 1965 and the supply was completed in 1968-69, i.e., after a lag of three years. To suit their convenience, the Indian Telephone Industries shifted their schedule for supply of equipment from 1965-66 to 1966-67. The reason advanced by them that "the shifting of the schedule was due to the fact that against the programme of 73,500 lines of new exchanges in 1965-66, the capacity earmarked for such exchange was only 40,000" does not appear to be convincing. The I.T.I. should have planned their supplies in concert with the P&T Department well in advance.
38	4·68	Ministry of Communications (Indian Telephone Industries)	The Committee have earlier been told that the optimum period now planned by the Indian Telephone Industries for effecting supplies has been reduced to 18 months. On this basis, the period of three years taken in effecting supplies for the Telephone Exchange at Calcutta seems to be very much on the high side. The Committee are led to think that the I.T.I. have not yet geared up their machinery for ensuring the observance of the time-schedules for the completion of indents received from the P&T Department. The Committee consider it imperative that the I.T.I. also should work on the basis of the time-bound programmes and also to devise an in-built mechanism for fixing the responsibility for delays in effecting supplies for the execution of urgent projects.
39	4·69	Ministry of Communications (P&T Department)	The position in regard to laying of cables was no better. As a result of the delay in sanctioning estimates—there has been a wide gap of

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			about 4 1/2 years even in the sanctioning of two estimates of junction cables—the commissioning of the Telephone Exchange was held up. The justification given by the Department that "within the project provisions detailed estimates are sanctioned according to the requirements, details of which are worked out as the main work progresses" is hardly convincing. The Department should have viewed the entire project as one of urgency and no administrative delays whatsoever should have been allowed to occur at any stage.
40	4·70	Ministry of Communications (P&T Department)	Equally unaccountable is the delay in the completion of the work relating to the laying of the junction cables. The work against the first estimate was expected to be completed within six months of the receipt of stores at site. The work commenced in June 1967 and was completed in March 1974. The work relating to the second estimate was started in December 1971 and completed in September 1974. It has taken nearly seven years to complete the work against the first estimate and almost three years against the second estimate. The argument of the P&T Department that most of the cables were received in 1969 and also physically laid by May 1970 is not correct. The explanation offered by the Department, namely, that "most of the cables were received by 1969, and it is reported by the General Manager, Telephones that they were also physically laid by May 1970. The completion indicated as March '74 apparently pertains to the completion of payments, closing of accounts, etc." appears to be a laboured one. Assuming that the work of laying of cables was completed in May 1970, the Committee would like to know what prevented the completion of the payments, closing of accounts, etc. till May 1974.

41	4·71	—Do—	The delay in the laying of subscribers' cables, the estimate for which was sanctioned in January 1969, is also indefensible. The work should have been completed in 300 days but by March 1974 only 98% of the work had been completed. Assuming that there were disturbed conditions in Calcutta and also thefts of underground cables in that area from February 1970 to March 1973, the Committee fail to understand why the P&T Department could not complete the work of laying of the subscribers' cables when 86 per cent of the cables were received by March 1970. Obviously the requirements of the particular Exchange were not given the importance that it deserved.
42	4·72	—Do—	The Hindustan Cables Limited, which is the sole supplier of cables to P&T Department, has also failed to come up to expectations in the matter of supply of cables for this Exchange. During the years 1969 to 1974 the performance of the undertaking has been anything but satisfactory. During the years 1971-72 to 1973-74, against the orders for 6096 km., 4040 km. and 4640 km., the actual supplies effected were only 1640 km., 1938 km. and 2489 km. respectively. Considering the ever-widening gap between the demand and supply of cables, the Committee had in paragraph 1.92 of their 204th Report (5th Lok Sabha—1975-76), recommended to the Government "to give a serious thought to this problem and take measures to bridge the gap by stepping up the indigenous production of cables, so as to ensure a fuller utilisation of the capacity of the telephone exchanges and to meet the long pending demands from subscribers for fresh telephone connections." The Department had assured the Committee in their Action Taken Note that special efforts were now being made to procure quantities of cables to match the supply of exchange equipment. During the years 1974-75 and 1975-76 the supplies made were to the extent of 88 per cent and 92 per cent of the orders placed. The Committee had stressed the need for concerted and sustained efforts for ensuring execution of the annual supply order

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			for cables in entirety. It is perplexing that despite the recommendations of the Committee in their 204th Report (5th Lok Sabha—1975-76) that the Hindustan Cables should be placed under the administrative control of the Ministry of Communications, the Government have decided that this undertaking should continue under the administrative control of the Ministry of Indsutrial Development.
43	4.73	Ministry of Communications (P&T Department)	Keeping in view the fact that a potential loss was suffered by the P&T Department due to the abnormal delay in the completion of the cable laying part of telephone project for want of timely supply of cables and also the fact that the Ministry of Communications was the principal consumer of the cables produced by Hindustan Cables Ltd., the Committee once again stress that the question of transfer of control of this company to the Ministry of Communications should be reconsidered in all its ramifications and finalised expeditiously.
44		Do.	The Committee have noted that there have been a large number of cases of thefts of underground cables in and around Calcutta during February 1970 to March 1973. Since the cases of such thefts are on the increase, the question of collusion of the offenders with the staff of the P&T Department cannot altogether be ruled out. The Committee desire that this aspect of the matter should be gone into thoroughly with a view to taking suitable remedial measures.
45		Do.	The Committee note with concern that the departmental instructions of utilising ninety per cent of the capacity by release of new telephone connections soon after expansion or, in any case, not later than six months of such expansion have not been followed on the commissioning

		of the expanded capacity for 3300 lines in January 1970. As pointed out by Audit, this was due to the reason that the subscribers' cables were not ready, when expanded capacity became availble. However, according to the Department, the exchange on expansion could not be loaded to a prescribed limit due to the low handling capacity of the Exchange. As against the actual traffic of 0.071 Traffic Units measures in June 1970 the Exchange was designed to carry originating traffic of 0.0628 Traffic Units. The loading was increased subsequently on the installation of some additional equipments and junctions and the full loading was possible only with effect from July 1974, on adding necessary traffic relief equipment. Even if the argument put forward by the Department is accepted, the Committee fail to understand why the traffic relief equipment was not planned along with the expansion of the exchange. Had this equipment been planned initially, the exchange might have been loaded according to the existing instructions. The Committee are unhappy to note that due to not loading the exchange according to existing departmental instructions, the Department lost a potential revenue of about Rs. 31 lakhs till March 1975 as worked out by Audit.
46	Do.	Considering the fact that delays in the commissioning of this project are responsible not only for the escalation of costs but alos loss of potential revenues, the Committee recommend that a departmental probe should be conducted to fix responsibility for the glaring lapses that have occurred at every stage of the execution of the project. The deficiencies noted should lead to an awareness in the minds of the project authorities as to the need for an effective planning and coordination with various authorities right from the very beginning. The Committee have already stressed this point in paragraph 1.80 of this Report.
47	Do.	The Committee note that in April-May 1976, there was large-scale collapse of telephones in Calcutta, when a number of cables in various

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			parts of the city broke-down affecting the telephone services to about 8 per cent subscribers. According to the statement made in this behalf by the Minister of Communications in the Lok Sabha on 27 May, 1976 there has been extensive digging of roads and footpaths taken up from time to time by various utility services and agencies like Calcutta Metropolitan Development Authority, Calcutta Electricity Supply Corporation, Calcutta Corporation etc. The extent of damage came to be known only when Calcutta experienced heavy showers during early April and thereafter. The Committee regret to note the lack of coordination among the various service agencies despite the existence of a cell for achieving such coordination. The Committee cannot too strongly recommend the over-riding need for maintaining effective functional coordination among the various service agencies functioning in Calcutta.
48	4.78	Ministry of Communications (P & T Department)	The Minister of Communications had also informed the Lok Sabha on 27 May, 1976, that various remedial measures were taken in the recent past for improvement of telephone services including those in the Calcutta Telephone System. This included the division of Calcutta Telephone District into six areas each under the direct charge of an Area Manager and the posting of an Additional General Manager to look after the operational aspect of the Telephone System including the maintenance of underground cable network. Further, under a crash programme for improving the efficiency of the Calcutta Telephone System, separate teams were set up to systematically analyse deficiencies in the working of exchange equipment as well as external plants and remedial actions have also been taken in respect of most of the deficiencies noticed.

49	4.79	Do.	The Committee also note that with a view to detect damages to the cables before they developed into electrical failures, technique of gas pressurisation of underground cables has been adopted as a part of maintenance policy for large telephone networks. The first phase of this project was to bring under gas pressure all junction cables on critical routes in Calcutta by March 1977 and thereafter the primary cables were also to be gas pressurised. Work on the approved programme for introduction of cabinets and pillars for underground cable network was also stated to be under progress. The Committee would like to know the concrete progress made on these projects so far together with details of the other remedial steps taken for eliminating the chances of break-down of telephone system in Calcutta as occurred in April-May 1976.
50	4.80	Do.	During the course of his statement the Minister had also informed the House that five new exchanges with total equipped capacity of 11,700 lines were commissioned during 1975-76 and another 16,000 lines were planned for commissioning during 1976-77. Similarly, the total number of new connections provided during 1975-76 was about 8,000 and the target of new connections for 1976-77 was 15,000. The Committee would like to know the actual achievements in respect of commissioning of lines and the provision made of new connections in Calcutta during 1976-77. It will be appreciated that Calcutta is not only a premier metropolitan city but one of the most important industrial and commercial centres in the country with a long history and a well-knit industrial base around it. As such it was evidently all the more important that the Department should have identified the deficiencies in the telephone exchange system in Calcutta well in advance and taken concerted and well coordinated measures to ensure that the tele-communication facilities were improved as per a time-bound programme and the capacity increased and commissioned to meet the outstanding requirements. It is regrettable that the facts narrated in the foregoing paragraphs clearly bring out that the

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			department neither realised the urgency of the matter nor did it take adequate measures to see that the much sought for facilities were expanded and commissioned at the earliest.
51	5·18	Ministry of Communications (P & T Department)	For meeting the growing demand for telex connections in Calcutta a project estimate for the expansion of Calcutta Telex Exchange from 1000 to 2500 lines was sanctioned in December 1967 at an estimated cost of Rs. 193·55 lakhs. The supply of equipment (including the Power Plant) for which an order was placed on Indian Telephone Industries in February 1968, started in March 1969 and was completed in 1974-75. It has been submitted to the Committee that as the equipment (without power plant) was received in phases, its installation was also phased and completed in March 1973 (1972-73). The Committee fail to understand how the installation of equipment could be said to have been completed in March 1973, when the supply of the equipment was spread over beyond 1972-73 to 1974-75 and equipment worth Rs. 1 lakh was still to be received during 1973-74 and 1974-75. The Committee would like to be informed about the correct position in this respect.
52	5.19	Do.	The Committee are distressed to note that the power plant which was a part of the whole expansion programme sanctioned in December 1967, was received in June 1974, i.e., 15 months after the completion of the installation of the equipment in March 1973 and was commissioned as late as August 1975, only after rectifying the defects which were noticed after its installation. At that time (30 September 1975) the Telex Exchange had utilised 68·4 per cent of its capacity (2500 lines) with 211 waiting applicants (on 1 September 1975). The main reason, as it

			appears to the Committee, for the Exchange not working to full capacity by September 1975 was that by that time only 483 teleprinter machines had been received as against total estimated requirement of 1200 machines.
53	5·20	Do.	What has distressed the Committtee more is the fact that no firm time- schedule was laid down for completion of the project. The date of completion of installation was fixed vaguely as one year after the receipt of the equipment from Indian Telephone Industries. The ITI itself instead of supplying the equipment according to its manufacturing capacity, spread the supplies over a number of years. As submitted by the Ministry, the ITI needed 4 years to supply the equipment, after receiving the order in February 1968. As such, the requisite supply of the equipment should have been completed by February 1972 instead of 1974-75. The Committee regret to observe that it was 7 years after placing the order for the power plant that the project could be commissioned in August 1975, free from any defects. The Committee feel that the fact that power plant was ordered for the first time on indigenous suppliers should not be taken as an excuse for taking 6 long years to manufacture it from the date of placing the order in February 1968. The Committee would like the Ministry of Communications to investigate the precise reasons for the late supply of the power plant with a view to taking remedial measures for future.
54	5·21	Do.	The Committee note that only 483 teleprinter machines were supplied by the Hindustan Teleprinter Ltd. to the Calcutta Telex Exchange during the period from October 1973 to September 1975 as against an allotment of 1050 (650 in 1971 and 400 in 1973) teleprinter machines made by the Director General, Posts and Telegraphs. The Committee have been informed that the shortfall in the supply of teleprinter machines was due to severe cut in the electric power supply to the Hindustan Teleprinter Ltd. As the general position regarding supply of electric power has improved in the country, the Committee hope that concerted efforts would be made

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			to clear the present backlog of machines. The Committee feel that had the requisite number of teleprinter machines been supplied in time and the power plant worked as scheduled, the Calcutta Telex Exchange would have worked to larger capacity and earned the additional potential revenue of Rs. 31·79 lakhs per annum.
55	6.93	Ministry of Communications (P. & T. Department)	The execution of the project for replacement of a 700 lines manual exchange at Bhubaneshwar by an automatic telephone exchange testifies in an eloquent manner the lack of planning and foresight on the part of the P & T authorities. The original scheme sanctioned in 1962 for installation of 1500 lines automatic telephone exchange was revised in 1964. Even when the revised scheme was at the preliminary stage of implementation , another project for expansion of the proposed exchange from 1500 to 2000 lines was sanctioned in September 1965. Again another project was sanctioned for further expansion of the proposed exchange from 2000 to 3000 lines. The Committee take a serious view of the frequent revisions and expansions of the project, a situation which discloses a basic weakness in the planning organisation of the P & T Department which seemed to have not taken adequate notice of the unfulfilled registered demand and the demand likely to be generated at the Capital of a State.
56	6.94	Do.	The Committee are surprised to learn from the statement of the P & T Department that the original project provision had to be modified in order to provide for a basement and stronger foundation for future expansion. Since on this account, the project estimate exceeded by more than 10 %, a revised project estimate had to be sanctioned in 1964. It is all the more surprising that the P & T Department had taken the plea that the omission to provide for stronger foundations was due to an oversight on the part of the staff who were new to the work at that time. The Committee

			consider that responsibility cannot be passed on to a subordinate officer and the technical officer who was concerned with the examination of the project has to bear the full responsibility for the omission. The Committee deprecate the perfunctory manner in which the project was proceeded with. Keeping in view the fact that Bhubaneshwar is a State Capital where the demand for telephone facilities from the public is bound to grow, the P & T authorities should have thought of and provided the necessary inbuilt capacity for meeting the requirements.
57	6.95	Ministry of Communications (P & T Department & Indian Telephone Industries)	The Indian Telephone Industries is also answerable for the delay in the commissioning of the Telephone Exchange at Bhubaneshwar. It is a matter of concern that the ITI have taken three long years (from March 1965 to March 1968) in making the supply of equipment for 2000 lines. The Committee have time and again stressed the need for a proper coordination between the P & T Department and the Indian Telephone Industries so that supplies are made according to well-planned time schedule and all bottlenecks and difficulties standing in the way of timely supplies are attended to expeditiously.
58	6.96	Ministry of Communications (P & T Department)	It is a matter of great concern to the Committee that the installation and commissioning of air-conditioning plants which form an important constituent of telephone exchanges and are meant for protecting the sensitive and sophisticated exchange equipment from dust and humidity, have generally been lagging behind, thus affecting the efficiency of the projects. From the numerous cases, the Committee have so far dealt with it has been observed that the execution of the contracts for air conditioning have by and large been delayed and not synchronised with the completion of the exchange projects. Even after installation, the plants have in majority of the cases not been able to render satisfactory performance, thus not only affecting the performance of the telephone exchanges but also eventually affecting the life of equipment. In the

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			event of non-commissioning of the air-conditioning plants, the Government have generally been incurring additional expenditure on the installation of window type air-conditioning units to protect to some extent the sophisticated equipment from humidity. In the case of Belgaum telephone Exchange, 13 window type units at a cost of Rs. 0.86 lakh were installed in February 1974 due to the non-commissioning of the air-conditioning plant in time. Moreover, in the case of Bhubaneshwar Exchange, the installation of the exchange equipment, commenced in January 1969, was completed in March 1973 without any air-conditioning facility. The Committee are surprised to learn from the P & T Department that it is not possible to quantify the adverse effect on the exchange equipment due to the non-commissioning of the air-conditioning plant. The Committee have already stressed earlier in this Report that such an assessment is essential so that the amount of loss thus sustained can be taken note of while deciding the course of action against the firm.
59	6·97	Ministry of Communications (P & T Department)	The Committee are surprised that despite persistent lapses the Department concerned have hardly taken action against the unscrupulous firms for transgression of the terms of the contract. The representatives of the Government have time and again been expressing their helplessness before the Committee in taking remedial measures to improve the said situation. The Committee cannot accept this plea and would strongly urge upon the Department to have a closer look at this problem and devise elaborate measures to ensure that air-conditioning package units are installed, tested and pressed into service to synchronise with the commissioning of the sophisticated telephone exchange equipment.

60	6.98	—Do—	In this connection, the Committee would like to draw the attention of the Ministry to one basic defect in the system of indenting and accepting the consignments tendered by the firms against the Supply Orders. According to the terms of the Supply Orders, payments are made to the extent of 80 per cent after the initial inspection of the plant and proof of despatch, and the balance 20 per cent after erection of the plant at site and final inspection and tests. The Committee have not been informed about the nature of inspection conducted at the premises of the firm as also the level at which the inspections were conducted. It is imperative that experienced engineers well qualified in air-conditioning and refrigeration in the P & T, Department and the D G S & D should undertake joint inspections at the premises of firms before the supplies are accepted against the Supply Orders. In view of the fact that under the present procedure, the suppliers get 80% of the contracted price on delivery of goods at site, they may not be evincing the requisite interest in the rectification of the defects that come to light after the delivery of the goods. The Department and the DGS&D should jointly review the position and suitably modify the terms of the contracts to be given in future, so that the supplying firms feel the urgency of Commissioning and running satisfactorily the plants to synchronise with the installation of sansitive telephone exchange equipment. The Committee would like to be informed in detail of the remedial measures taken in pursuance of this recommendation.
61	6·99	—Do—	The Committee regret to note the initial delay in placing the indent for procurements of air-conditioning plant for Bhubaneshwar exchange in September 1967, particularly when the indent for exchange equipment was released in March 1965 and the building was ready in April 1967 According to the Department, the initial indent placed in April 1967 was not in the proper form and had to be resubmitted in the prescribed form in September 1967. The Committee fail to understand as to how this

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			primary and essential aspect of placing the indent in the proper form which led to a further delay of 5 months was lost sight of. This needs to be explained and the responsibility therefor fixed.
62	6·100	Ministry of Communications (P & T Department) Department of Supply (D G S & D)	The Committee note with concerned that still another avoidable omission of furnishing the requisite drawing with the indent has been responsible for delay in finalisation of the indent by D G S & D for about a year. According to the Department the requisite drawings were enclosed with the initial indent placed in April 1967 and as such were not enclosed with the indent placed subsequently in September 1967. These drawings were not traceable in the office of DGS&D, which led to further correspondence between the Posts and Telegraphs Department and DGS &D delaying the finalisation of the indent. This avoidable delay of several months needs to be investigated with a view to fixing responsibility and taking remedial measures to eliminate the chances of recurrence of such lapses.
63	6·101	Ministry of Communications (P & T. Department)	Another instance of lack of planning and foresight on the part of the Department is in regard to the provision of basic and primary facility like power required for the testing and commissioning of the plant. According to the original supply order the installation of the plant was to be completed by 30 November 1968 but the power for running the plant could actually be made available in March 1972. No serious attempt appears to have been made by the Department for making this facility available in time. This is confirmed by the fact that the preliminary indent for H T sub-station equipment was placed with DGS&D in February 1970, whereas the indent for air-conditioning plant had gone in April 1967.

			The Committee are not satisfied with the casual explanation advanced by the Department that different departmental agencies are involved in making different provisions. Similar lack of planning with regard to the provision of power is in evidence in the case of Belgaum exchange where though the installation of the plant was started in October 1970, power supply was made available by the Department only in April 1972. In the case of Madras Trunk Automatic Exchange as well. the timely provision of power was not made. The Department cannot escape the responsibility for effecting complete coordination in the whole project irrespective of the fact whether three or four agencies are in the field and responsible for supply of different products. The Committee have been informed during evidence that the question of streamlining the process of making timely availablity of facilities like power etc. is under review. The Committee urge that this matter should be finalised urgently and they should be informed of the institutional arrangements made to obviate recurrence.
64	6·102	—Do—	Another disquieting feature which has concerned the Committee is that the air-conditioning plant supplied by Frick India Limited, which was required to be installed by November 1968, was put to monsoon, winter and summer tests as late as in August 1972, January 1973 and June 1973 when a number of defects were noticed. Surprisingly enough, the supplier took more than 2 1/2 years to rectify the defects. Though the plant was offered for joint test during August 1975 which was conducted from 25 to 28 September 1975, it was still not found fit for taking over. The Committee are perturbed to note that the plant could not pass the final test till it was taken over on 26 August 1976 notwithstanding certain defects still persisting. The Committee would like to have a detailed report within six months on the performance of the plant from the date of its take over.

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65	6·103	Ministry of Communications (P & T Department)	The story of poor performance by the same firm, viz. Frick India Ltd., has been repeated in their contracts for the air-conditioning plants in the case of Belgaum and Kellys (Madras) Exchanges. The installation of the plant for Belgaum Exchange was completed in October 1970 but it failed in the tests conducted in June 1973, February 1974 and October 1974. The Committee are concerned to note that even till September 1976 the plant was not able to pass all the tests satisfactorily. As regards the Kellys (Madras) Exchange, the air-conditioning plant, which was to be installed by November 1971, was subjected to Winter test only in December 1975 when some defects were noticed in it. The plant was, however, taken over provisionally on 27 February 1976 subject to the satisfactory summer and monsoon tests.
66	6·104	Ministry of Communications (P & T Department) Department of Supply (DGS&D)	The statement of the Secretary of the Ministry of Communications at the time of evidence that out of a total of 8 air-conditioning package units installed by M/s. Frick India Ltd. only 2 are working satisfactorily has come as a revelation. Judging from the poor performance of the firm in the present there cases *vis-a-vis* their overall performance in the other contracts, as also the indifference displayed by them in the matter of rectification of defects, the Committee feel convinced that a serious view (including their black-listing) should be taken about this firm in the matter of farming out of contracts to them.
67	6.105	Ministry of Communications (P & T Department)	The Committee are concerned to note that out of 131 existing contracts for the supply of air-conditioning plants to the Posts and Telegraphs Department by different firms, as many as 51 are not working satisfactorily as per the reports of the different tests conducted. This indeed is a lamentable state of affairs. The Committee are concerned to note

			that despite such a situation, no positive and effective steps appear to have been taken by the Departments concerned to improve the position. The Committee learn that in order to meet the situation to some extent, the Posts and Telegraphs Department are trying to develop a group of departmental persons equipped with necessary expertise so that the plants are designed properly. In the meanwhile the Committee would like the Department to prepare a list of the defects which have been generally noticed during and after installation of the various air-conditioning plants so that the group of experts may take proper notice of these while designing plants. The Committee would also watch with interest the positive contribution of the proposed 'group'.
68	6.106	Ministry of Communications (P & T Department) --- Department of Supply (DGS&D)	The Committee are further concerned to note the very poor performance of another air-conditioning contract concerning Madras Trunk Automatic Exchange awarded to M/s. American Refrigerator Company Madras. The plant which was required to be installed by August 1966 was actually installed only in July 1968 after three extensions had been granted because the firm could not arrange import of the components in time.
69	6·107	Ministry of Communications (P&T Department)/Department of Supply (DGS&D)	The Committee regret to note that due to the non-installation of the plant as per schedule, the Department had to incur an additional expenditure of Rs. 0.51 lakh in June 1966 for the installation of 12 window type air-conditioners. The Committee feel that while granting extension of time, this aspect of additional expenditure should have been taken due note of.
70	6·108	Do.	The Committee are constrained to note that after installation of the plant in July 1968, it remained under testing till December 1971, when several defects were noticed each time and reportedly rectified by the firm, and the plant was accepted by the Department in January 1972. The Committee are surprised to note that the plant developed faults within five months of its commissioning and was shut down in April 1974 due to the leaks in evaporative condensor coils, which were guaranteed

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			for five years. The plant was recommissioned only on 31 August 1976 on replacement of the defective coils but it is still not rendering satisfactory service. The Committee regret that due to the continous poor performance by the firm and lack of supervision on the part of the departmental officials, the Department had to incur another expenditure of Rs. 0.85 lakh for purchase of another 13 window type of air-conditioners for providing essential protection to the exchange equipment which had in the mean time been augmented to provide for increase in the load of traffic. They had further to incur another expenditure of about Rs. 20,000 to carry out repairs to the plant between 22 June 1973 to 15 February 1974. What passes comprehension is the almost total failure of the Department to take any action against the firm whose performance has been anything but satisfactory. This lacuna should be taken note of by the DGS&D for suitable remedial action.
71	6.109	Ministry of Communications (P&T Department)	M/s. American Refrigerator Company, New Delhi is concerned in yet another case of supply of air-conditioner for the Agra Telephone Exchange. This plant was installed in this Exchange in September 1968 as against the stipulated period of March 1966. No action was taken against the firm for the initial delay of about 2½ years. The five tests conducted on the plant during September 1968 to June 1971 revealed numerous defect. In spite of the fact that the Additional Chief Engineer of the Posts and Telegraphs Department had intimated as early as August 1971 that the plant was beyond repair, the Department persisted with further trials and took over the plant on 5 July 1973 on instructions from the Director General, Posts and Telegraphs. The Committee have been informed that the plant failed to give satisfactory service after take over and had to remain idle.

72	6·110	Ministry of Communications (P&T Department) ——————— Department of Supply (DGS&D)	The Committee desire that the entire question of take-over of the defective plant in spite of the persistent defects and despite the adverse report of the Additional Chief Engineer, Posts and Telegraphs, Jabalpur, should be thoroughly investigated with a view to fixing responsibility. The Committee would also like the Department to examine and inform what action has been taken against the firms for the breach of contract.
73	6·111	Ministry of Communications (P&T Department)	It is also suggested that a continous evaluation of the performance of all the suppliers of sophisticated air-conditioning equipments should be made with a view to taking appropriate action at least in placing future orders. Government may also consider the feasibility of seting up a public sector undertaking to manufacture air-conditioning plants for P&T and other Departments in view of the poor performance of the private firms as pointed out in the proceeding paragraphs.

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