

ANNUAL REPORT

1997-1998



**BANGLADESH TELEGRAPH
&
TELEPHONE BOARD**

ANNUAL REPORT

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BANGLADESH TELEGRAPH & TELEPHONE BOARD

COMPOSITION OF BANGLADESH TELEGRAPH AND TELEPHONE BOARD (BTTB)

A. CHAIRMAN

Mr. M. A. Mannan Chowdhury

B. FULL TIME MEMBERS :

1. MEMBER (ADMINISTRATION)

Mr. K. A. Matin

2. MEMBER (PLANNING & DEVELOPMENT)

Mr. Habibur Rahman

3. MEMBER (MAINTENANCE & OPERATION)

Mr. Aqa Md. Nowser Ali

4. MEMBER (FINANCE)

Mr. M. A. Jalil

C. PART TIME MEMBERS :

1. Mr. A. R. Khan, DG, PM's office - upto 15-04-98

Mr. Md. Sohrab Hossain, DG, PM's office - from 16-04-98

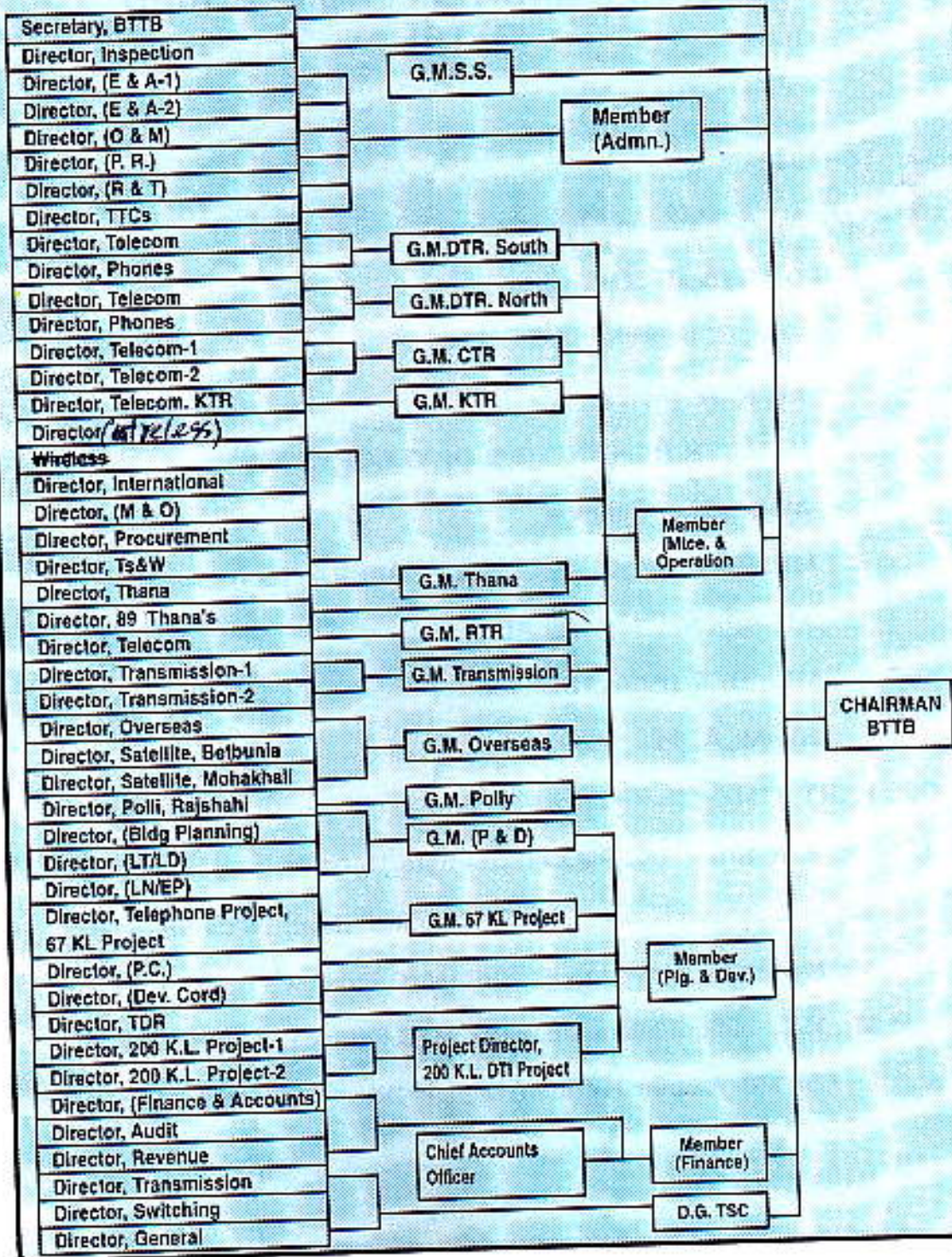
2. Mr. Md. Anwar Hossain, JS, ERD, M/O Finance - upto 31-03-98

Mr. Md. Shafiqul Islam, JS, ERD, M/O Finance - from 01-04-98

3. Lt. Col. Md. Aminur Rahman, Signals Directorate, AHQ

Organogram of Bangladesh Telegraph & Telephone Board (1993-98)

Director Level



PERFORMANCE AT A GLANCE

SERVICE CATEGORY	1996-97	1997-98
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TELEPHONE SERVICES

No. of Telephone Exchanges	625	628
Exchange capacity	4,40,491	4,62,573
Telephone connections	3,68,017	4,12,607
Public Call Office	698	695
Card phones	1,283	1,328

TELEGRAPH AND TELEX SERVICES

Inland Telegraph Office	778	778
International Telegraph Office	1	1
Inland Telegram (Messages)	10,69,358	7,56,293
International Telegraph (Messages)	53,962	36,851
Telex Exchange capacity	8,770	8,770
Connections (Telex)	1,602	2,033
GENTEX Services (Offices)	135	135

OVERSEAS CIRCUITS

Telephone	1580	1841
Telex	182	182
Telegraph	11	12
Leased Circuit	31	27

NATIONAL AUTO TRUNK

NWD Circuits Capacity	27,504	27,504
NWD Circuits Working	19,351	20,695

1. TELECOMMUNICATION ADMINISTRATION IN BANGLADESH

1.1 Historical background of Bangladesh Telegraph and Telephone Board :

The Telegraph branch under the Posts and Telegraph Department was created in 1853 in the then British India and was afterwards regulated under the Telegraph act of 1885. This was then reconstructed in 1962 in the then Pakistan as Pakistan Telegraph and Telephone Department. After the independence of the People's Republic of Bangladesh in 1971, Bangladesh Telegraph and Telephone department was set up under the ministry of Posts and Telecommunications to run the Telecommunication Services in Bangladesh. This was converted into a corporate body named Bangladesh Telegraph and Telephone Board by promulgation of Telegraph and Telephone Board Ordinance, 1975. In Pursuance of Ordinance No. XII of 1979 promulgated on the 24th February, 1979, Bangladesh Telegraph and Telephone Board was converted to a Government Board.

1.2 Organizational Structure of Bangladesh Telegraph and Telephone Board :

Bangladesh T & T Board is run as a government establishment under the Ministry of Posts and Telecommunications (MOPT). The Board Comprises of 1 (one) Chairman, 4 (four) full time members and 3 (three) part time members, all are appointed by the government of the People's Republic of Bangladesh.

1.3 Privatization & Regulatory structure of Telecommunication Services :

The Telecom sector of the country has been liberalised for private investment. Bangladesh T&T Board provides all types of Telecommunication services in urban and rural areas while the mobile, paging and radio trunking services are offered by private operators. Private operators are also given license to install and operate digital exchanges in rural areas and they will install telephone exchanges in phases. Table-1 shows the list of the private operators in 1997-98.

Table-1
Telecommunication Operators in Bangladesh

SL	Name of the Operators	Function
1	Pacific Bangladesh Telecom. Limited (PBTL)	Cellular Radio Telephone Services.
2	Bangladesh Telecom. (pvt) Limited (BTL)	Paging, Radio trunking & Riverine Telecom services.
3	Bangladesh Rural Telecom. Authority (BRTA)	Establishment, operation & maintainance of Digital telephone Exchanges in 200 Thanas.
4	Saba Telecom. (Pvt.) Ltd.	Rural Telecom. Services in 199 Thanas and Cellular Mobile Radio telephone systems.
5	Telecom Malaysia International (BD) Ltd. (TMIB)	Cellular Mobile Radio telephone systems.
6	Grameen Phone Consortium	Cellular Mobile Radio telephone systems.

2. TELECOMMUNICATION SERVICES PROVIDED BY BTTB

2.1 Telephone Exchange Status Of The BTTB:

At the end of 1997-98 fiscal year Bangladesh T&T Board had 628 telephone exchanges with total capacity of 4,62,573 lines. BTTB started operating digital local exchanges after installation of six NEC-NEAX 61E exchanges in the Dhaka Telecom. Region Network in 1990-91 fiscal year with initial total capacity of 26,000 lines. Upto 1997-98 financial year fifteen (six NEC-NEAX 61E exchanges, seven ALCATEL E-10 exchanges and two Italtel exchanges), twelve (nine ALCATEL E-10 exchanges and three Italtel Exchanges), seven (four ALCATEL E-10 exchanges and three Italtel exchanges) and three (one ALCATEL E-10 exchange and two Italtel exchanges) local digital exchanges were installed in Dhaka, Chittagong, Khulna & Rajshahi Telecom. Regions respectively. Exchange status of BTTB as on June, 1997 and June, 1998 are given in the following Table-2 and Table-3 respectively.

Table-2
BTTB Telephone Exchange Status as on 30 June, 1997

Region	Type	Number	Capacity	Connection	Pending demand
Dhaka	Magneto	71	5,031	4,216	2,108
	C.B	17	3,230	2,484	709
	Auto (Analog)	26	77,900	75,559	44817
	Auto (Digital)	13	1,65,159	1,38,368	28,215
	SUB-TOTAL	127	2,51,320	2,20,627	75,849
Chittagong	Magneto	112	6,426	4,890	2,475
	C.B	36	6,113	5,111	2,275
	Auto (Analog)	32	22,900	21,306	8,062
	Auto (Digital)	12	56,100	39,929	12,159
	SUB-TOTAL	192	91,539	71,236	24,971
Khulna	Magneto	86	4,831	4,166	1,680
	C.B	35	5,812	4,824	2,215
	Auto (Analog)	35	20,800	18,127	7,543
	Auto (Digital)	7	24,500	16,833	4,110
	SUB-TOTAL	163	55,278	43,950	15,548
Rajshahi	Magneto	90	4,206	3,405	1,951
	C.B	29	4,163	3,618	1,430
	Auto (Analog)	21	19,320	17,719	5,132
	Auto (Digital)	3	14,000	7,462	2,557
	SUB-TOTAL	143	30,253	27,176	11,607
Country Total	Magneto	359	20,494	16,677	8,214
	C.B	117	19,318	16,037	6,629
	Auto (Analog)	114	1,40,920	1,32,711	65,554
	Auto (Digital)	35	2,59,759	2,02,592	47,041
GRAND TOTAL		625	4,40,491	3,68,017	1,27,438

Table-3**BTTB Telephone Exchange Status as on 30 June, 1998**

Region	Type	Number	Capacity	Connection	Pending demand
Dhaka	Magneto	68	4,921	4,141	1,702
	C.B	21	3,680	3,048	1,391
	Auto (Analog)	24	73,100	70,720	43,339
	Auto (Digital)	15	173,066	164,183	42,589
	SUB-TOTAL	128	254,767	242,092	89,021
Chittagong	Magneto	108	7,374	4,917	1,275
	C.B	38	6,433	5,580	2,026
	Auto (Analog)	31	19,420	16,364	7,252
	Auto (Digital)	12	72,500	60,155	8,068
	SUB-TOTAL	189	105,727	86,976	18,621
Khulna	Magneto	83	4,929	4,028	1,750
	C.B	41	6,260	5,621	2,611
	Auto (Analog)	36	22,500	20,180	8,705
	Auto (Digital)	7	25,100	19,075	2,878
	SUB-TOTAL	167	58,789	48,904	15,944
Rajshahi	Magneto	84	3,948	3,287	1,908
	C.B	36	5,322	4,161	2,673
	Auto (Analog)	21	20,020	18,363	6,782
	Auto (Digital)	03	14,000	8,924	471
	SUB-TOTAL	144	43,290	34,735	11,834
Country Total	Magneto	343	21,172	16,237	6,635
	C.B	136	21,695	18,370	8,701
	Auto (Analog)	112	135,040	125,627	66,078
	Auto (Digital)	37	284,666	252,337	54,006
GRAND TOTAL		628	462,573	412,607	135,420

Several years back public telephone services used to be provided through coin boxes in the urban areas and land line/wireless public call offices (P.C.O's) in the rural areas. Service quality of these public telephones had been far from satisfactory. To improve the public telephone service, Card Phone systems were introduced in 1992 with program of replacing the old coin boxes and P.C.O's. By June 1998, about 1,328 card phone booths were installed in different parts of the country. All cardphones have access to nation wide dialing while 689 of them have international direct dialling facility. Due to better and easy public accessibility to telephone this cardphone service has become popular in the country. A massive program of installing card phones has been taken to cover all thanas and rural growth centers of the country.

2.3 Telegraph Services.

Telegraph system, the oldest means of telecommunication service, is losing importance gradually due to introduction of more modern telecommunication systems. In the fiscal year 1997-98, the total number of domestic telegram messages were 7,56,293 and that of international telegram was 36,851. Number of Telegraph Offices were 779. A comparison of year wise telegram messages are shown in Table-4.

Table-4
Year wise Telegram Messages.

Year	No. of National Messages	No. of International Messages
1993-94	1,043,788	173,052
1994-95	741,781	156,098
1995-96	739,188	161,836
1996-97	10,69,358	53,962
1997-98	7,56,293	36,851

2.4 Telex Service

The first digital Telex exchange in Bangladesh was established in May 1981. At the end of the fiscal year 1996-97, the total line capacity of the telex exchanges was 8,770 and the number of subscribers was 1,602, while at the end of the fiscal year 1997-98 the total line capacity of the telex exchanges was 8,770 and the number of subscribers was 2,033. Introduction of FAX and other modern systems has rendered the growth of telex service declining.

2.5 GENTEX and Bureau Fax Service

GENTEX service was introduced in 1989 and later on Bureau fax service was introduced. The number of offices providing GENTEX services are 135. Through this service the telegraph offices are inter linked.

2.6 Nation Wide Dialling (NWD) Services.

In Bangladesh Nation-wide long distance telephone dialling system was first introduced in 1983 employing NEAX 61K version of NEC exchange to link all the major cities of the country. Before hand there were Subscribers Trunk Dialling (STD) services based on Analog EMD toll switching system to link few cities of the country. By June 1998, 100 stations including all 64 district headquarters and 36 thanas were brought under direct dialling system. In all 20,695 NWD circuits were installed by June, 1998. Details about the circuits are given in table-5.

Table-5

Capacity & Working Circuits in the Trunk Automatic Exchanges (TAX's)
as on June 30, 1998

Name of TAX	Capacity		Working Circuits		Total	
	NEC	Alcatel	NEC	Alcatel	Capacity	Working Circuits
Dhaka	9361	6000	6656	5200	15361	11856
Chittagong	1603	3000	1111	3000	4609	4111
Khulna	2509	3120	1532	1898	5629	3430
Bogra	1911	-	1298	-	1911	1298
GRAND TOTAL	15,384	12,120	10,597	10,098	27,504	20,695

2.7 Manual National Trunk Service :

Direct Manual Trunk Circuits working with Dhaka are shown in the Table-6.

Table - 6
Direct Trunk Circuits Working with Dhaka

Region	Circuits in June 1997	Circuits in June 1998
Dhaka	37	30
Chittagong	39	27
Khulna	37	30
Rajshahi	28	25
Total	141	112

2.8 Operators Trunk Dialling (OTD) Service :

This service has been introduced recently in all the thanas to get access to the thanas by direct dialling to the OTD numbers connected in thanas where there is no automatic telephone exchange. In this system one or two telephone numbers of district automatic telephone exchange are extended up to thana level through UHF radio links. The telephone operators of the manual telephone exchanges can, through these numbers, connect subscriber of the thana with any subscribers of other auto exchanges of the country by dialling respective NWD codes.

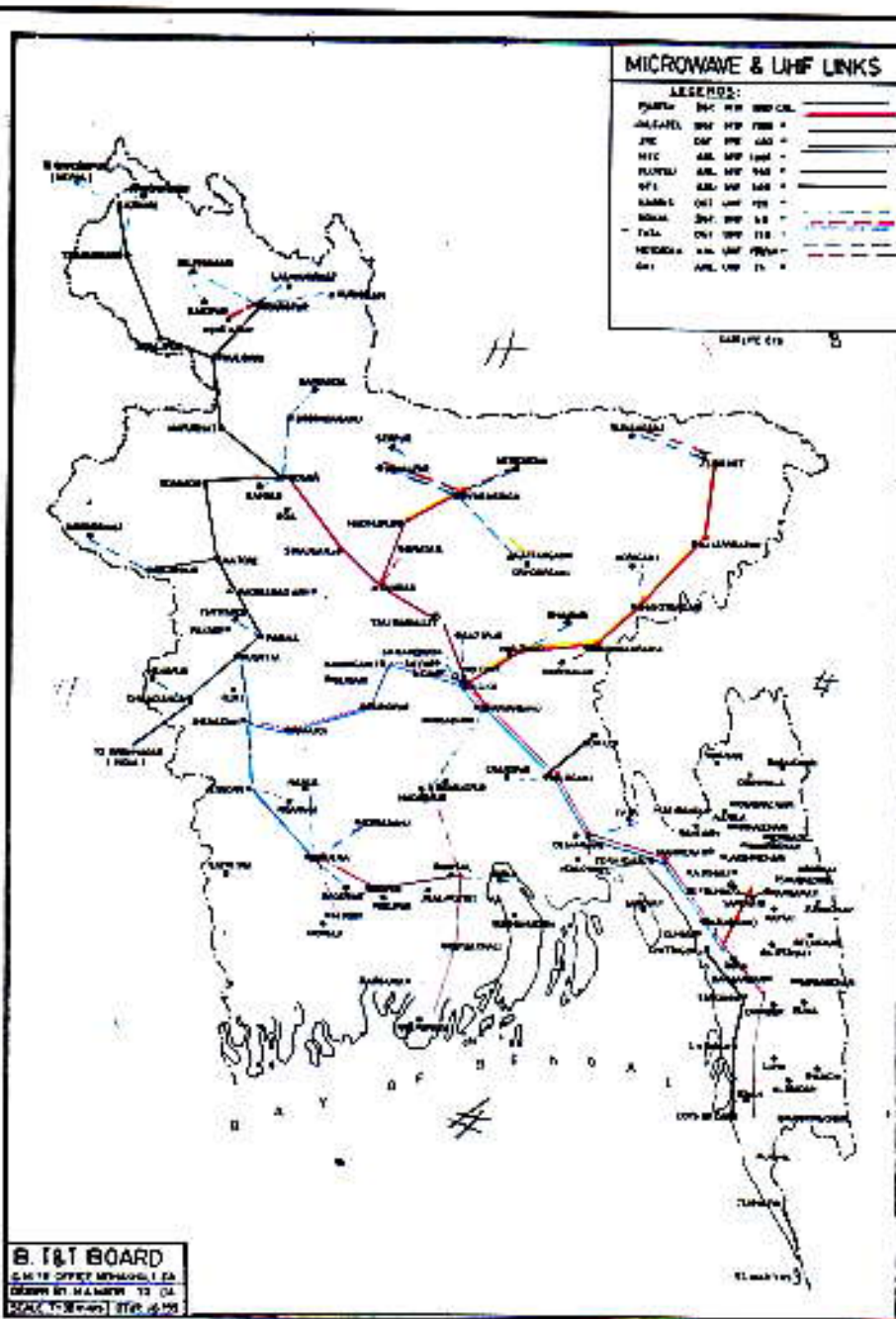
2.9 Transmission System in Bangladesh :

Bangladesh is a riverine country. As such the country's long distance transmission systems are mainly composed of microwave, UHF and VHF radio links. The use of optical fibre is still limited within some city areas for interconnecting local exchanges and Remote Switching units (RSU) in Multi Exchange Networks and also for interconnections between switching exchanges and microwave stations. BTTB major microwave radio links, as listed in Table-7, are shown in figure. 1.

Table-7
Major Backbone Microwave Links (as on June 1998)

Link	Type	Radio Channel Capacity	Make
Dhaka - Chittagong	Analog	1800	NEC
Dhaka - Magura - Khulna	Digital	1920	Fujitsu
Dhaka - Magura - Kustia	Digital	1920	Fujitsu
Dhaka - Sylhet	Digital	1920	Alcatel
Dhaka - Tangail - Mymenshingh	Digital	1920	Alcatel
Dhaka - Tangail - Bogra	Digital	1920	Alcatel
Bogra - Nator - Rajshahi	Analog	960	Fujitsu
Rajshahi - Natore - Chuadanga	Analog	960	Fujitsu
Bogra - Phulbari - Thakurgaon	Analog	960	Fujitsu
Bogra - Phulbari - Rangpur	Analog	960	Fujitsu
Khulna - Barisal	Digital	480	JRC
Chittagong - Cox'sbazar	Analogue	960	GTE
Chittagong - Cox'sbazar	Digital	480	JRC
Chittagong - Bctbunia - Rangamati	Analog	300	GTE

All Thana headquarters (the smallest administrative units) are connected with their respective district headquarters through UHF links most of which are now digital radio systems. Also some of the district headquarters are interconnected through digital UHF links.



2.10 International Telecommunication

To meet the existing & future demand of overseas traffic, BTTB endeavours continuously to increase number of international circuits with other countries. By June, 1998 BTTB, through four Satellite Earth Stations in Bethunia, Talibabad, Mohakhali & Sylhet (Table-11), established 1841 international direct circuits with 29 operators of 24 countries and transit circuits with 181 countries as shown in table 8 & 9.

Table-8
Overseas circuits of Bangladesh T&T Board as on June 30, 1998.

SI	Country	Voice Circuits						Tlx/Data Circuits			
		BTB E/S	TBD E/S	MKH E/S	SYL	MW	TOTAL	TX	TG	TGP	DATA
01	Australia	-	-	58 IDR	-	-	58	-	-	-	1
02	Bahrain	-	5SCPC	-	-	-	05	-	-	-	-
03	Canada	-	-	30 IDR	-	-	30	-	-	-	-
04	China	-	-	8 IDR	-	-	08	-	-	-	-
05	France	-	-	30 IDR	-	-	30	6	-	-	-
06	Germany	-	-	30 IDR	-	-	30	9	-	-	-
07	Hongkong	20FDM	-	29 IDR	-	-	49	19	1	10	8
08	India (Call)	-	-	58 IDR	-	54	112	21	2	3	3
09	Indonesia	-	-	8 IDR	-	-	08	-	-	-	-
10	Italy	-	-	30 IDR	-	-	30	6	1	-	-
11	Japan (KDD)	11FDM	-	140 IDR	-	-	151	9	1	8	-
	Japan (ITJ)	48 IDR	-	-	-	-	48	-	-	-	-
	Japan (IDC)	30IDR	-	-	-	-	30	-	-	-	-
12	Korea (KT)	-	-	30 IDR	-	-	30	5	-	-	-
	Korea (Dacom)	-	-	16 IDR	-	-	16	-	-	-	-
13	Malaysia	-	-	30 IDR	-	-	30	-	-	-	1
14	Nepal	-	-	-	-	12	12	-	-	-	-
15	Netherland	-	-	14 IDR	-	-	14	-	-	-	-
16	Pakistan	16FDM	-	-	-	-	16	7	1	-	-
17	Qatar	7FDM	-	-	-	-	7	-	-	-	-
18	Singapore	90IDR	-	30 IDR	-	-	120	16	1	1	3
19	S. Arabia	45FDM	-	90 IDR	-	-	135	-	-	-	-
20	Srilanka	-	3SCPC	-	-	-	3	3	-	-	-
21	Thailand	-	-	16 IDR	-	-	16	6	1	1	-
22	UAE	38 FDM	-	60 IDR	-	-	98	10	1	1	-
23	UK	-	180IDR	-	120IDR	-	300	27	1	3	-
24	USA (MCI)	-	35IDR	180IDR	-	-	215	-	2	-	1
	USA (AT&T)	-	180IDR	-	-	180	38	38	-	-	-
	USA (Sprint)	-	-	60IDR	-	-	60	-	-	-	-
	Total	305	403	947	120	66	1841	182	12	27	17

TX: Telex Service, TG : Telegram Service, TGP: Private leased Telegraph;
Data: Data Communication over Voice Circuit.

Table-9
Growth of International Voice Circuits

Year	Circuit
1993-94	566
1994-95	954
1995-96	1267
1996-97	1609
1997-98	1841

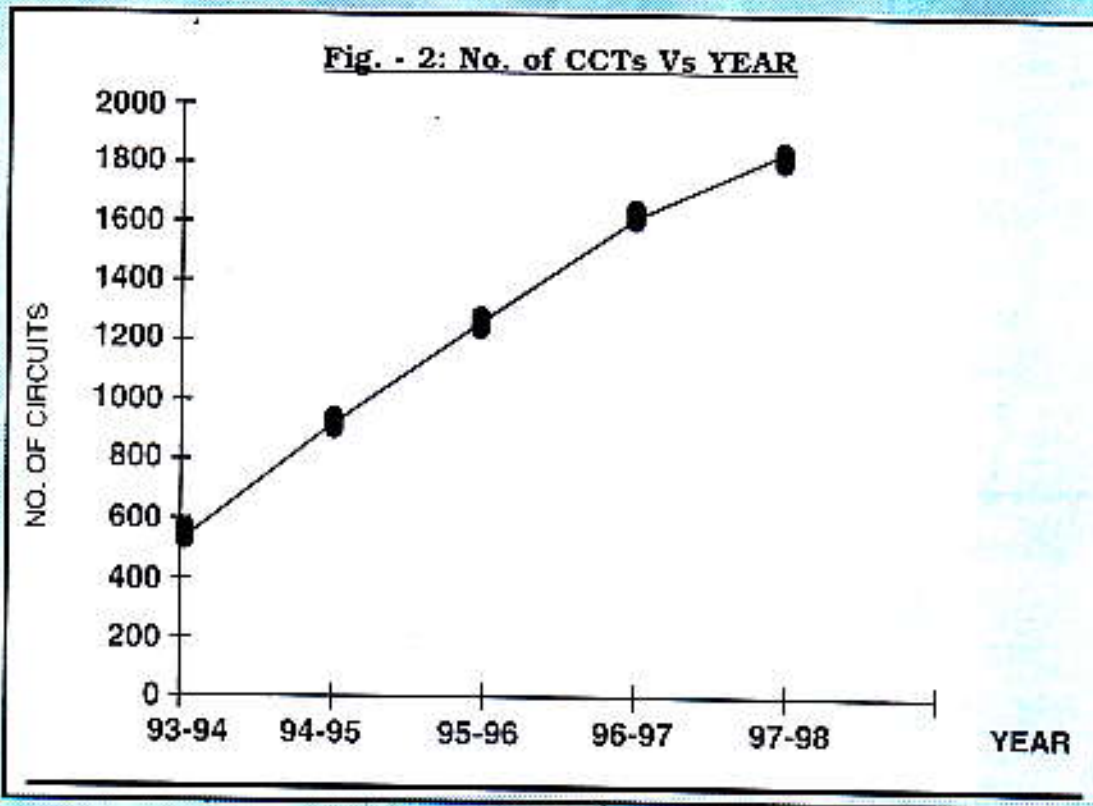
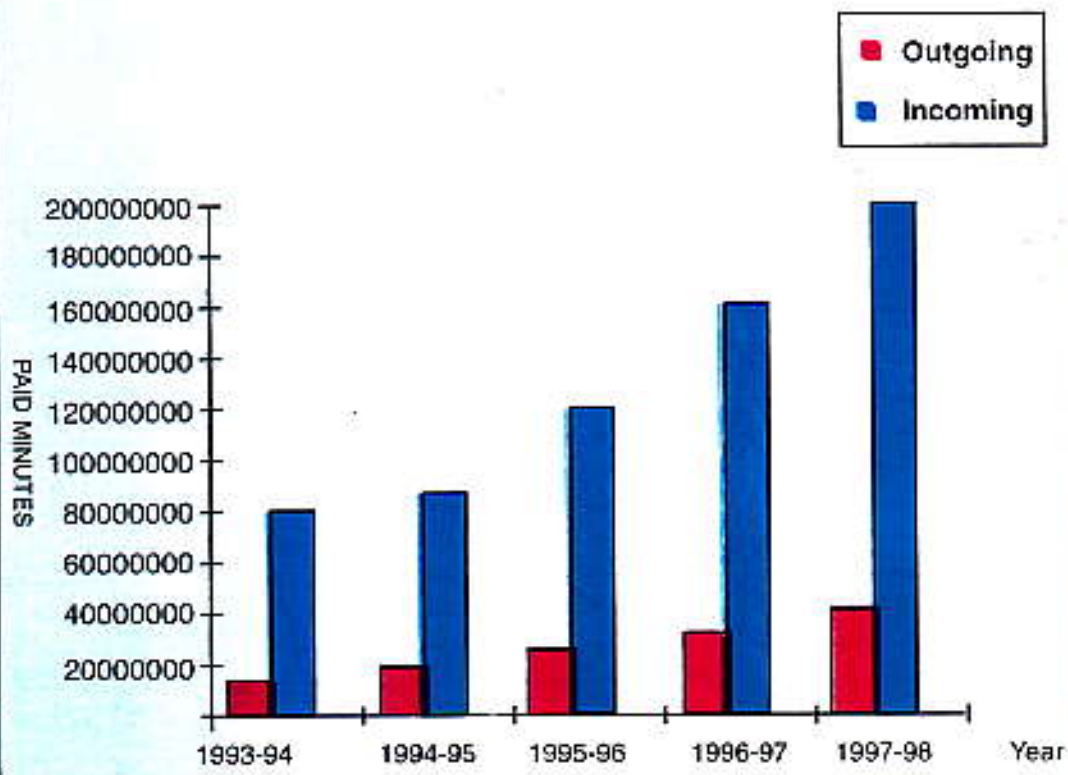


Table-10
Paid minutes of International circuits

	1993-94	1994-95	1995-96	1996-97	1997-98
Outgoing	14,862,827	19,407,557	23,202,777	37,739,477	44,425,515
Incoming	81,933,840	89,285,579	115,021,620	159,495,408	197,423,078
Total	96,796,667	108,963,136	138,224,397	197,234,885	241,847,593

Fig. - 3
Year-Wise Incoming And Outgoing
Call Paid Minutes



International Leased Circuits.

International Leased Circuits directly link BTTB customers to a designated overseas location around the globe. A fixed monthly rate makes this service particularly cost effective for customers.

International Telephone call facilities of BTTB.

1) International Direct dialling (IDD)

Subscribers can dial overseas directly without operator assistance. Rates are calculated in 30 seconds units. BTTB also offers economy rate (25% discount) for late night & Govt. holidays besides its normal rate (Normal rate from 08.01 to 23.00 hrs & Economy rate from 23.01 to 08.00 hrs).

2) International Operator Assisted Call.

i) Person to Person Call : For an operator assisted service, in case of calls to a specific person, charges do not begin accruing until the desired party is reached and the caller is not billed if the party does not answer. BTTB's standard rate applies for the first three minutes and additional two minute charges for P.P. facilities.

ii) **Calls to a particular telephone** : In the case of operator assisted service for calls to a specific telephone number, the minimum charge is on three minutes only.

Table - 11

Satellite Earth Station under BTTB

Name of E/S	Intelsat standard	Carrier type	Intelsat satellite
Barbunia	A	IDR (Digital)	60°E, IOR
Talababad	B	IDR (Digital)	60°E, IOR
Mohakhali	A	IDR (Digital)	64°E, IOR
Sylhet	F3	IDR (Digital)	62°E, IOR

International Switching Centre.

At present BTTB has three international switching centres (ISC) of which two are located at Moghbazar & one at Mohakhali in Dhaka city. ISCs of Moghbazar are of types NEAX-61K & NEAX-61E while ISC at Mohakhali is of NEAX-61E type.

International maritime Satellite Communication :

Intelsat Satellites link fixed Earth Stations for overseas communication while INMARSAT (International maritime Satellite Communication) provides mobile communication services for ships and aircrafts. Recent development of portable terminal has made it possible for customers to take advantage of INMARSAT service from remote locations also. BTTB had procured five INMARSAT-A Terminals operating through various LES (Land Earth Stations) located in the Indian Ocean region.

International VSAT service :

VERY SMALL APERTURE TERMINAL (VSAT)-A small earth station having a dish antenna of typically 0.6 to 2.4 meters in diameter is designed to handle voice, data and private line video communication. A terminal is located at each end and communication is established through geostationary satellites (in this region ASIASAT). As a satellite based communication system, VSATs are small and easy to install. A VSAT network can be expanded or modified as the users business needs change and grow. Banks, insurance companies, news bureaux, educational institutions etc can be linked across continents.

TO facilitate high speed point to point data communication throughout the world for the subscribers, BTTB took necessary steps in 1996 to install VSAT in Bangladesh for the first time. For this, BTTB made agreement with 5 (five) companies to install and operate VSAT in Bangladesh on 5 year BOT (Built Operate & Transfer) basis. Under this agreement these companies will supply, install, operate & maintain VSAT in Bangladesh on behalf of BTTB.

PLANNING AND DEVELOPMENT OF TELECOMMUNICATION SERVICES.

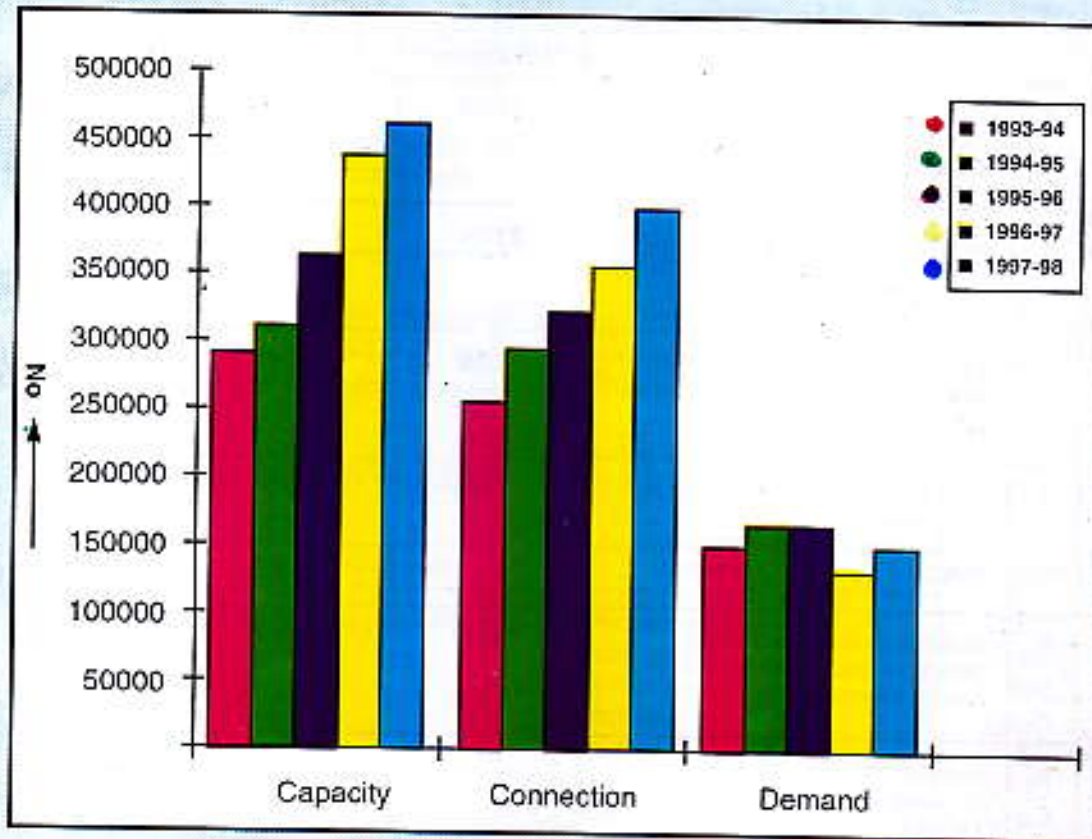
3.1 Growth of Telephone in Bangladesh.

The growth of telephone exchange capacity in Bangladesh in the last five years was on average only 33,320 lines per year. The recorded pending demand of telephone has been increasing at a faster rate than the telephone expansion. Table-12 & Fig. - 4 show the past trend of telephone growth in Bangladesh from 1993-94 to 1997-98 financial years.

Table - 12
Telephone Growth in Bangladesh

Year	Type of Exchange	Number of Exchanges	Exchange Capacity	Telephone Connection	Pending Demand
1993-94	Manual	481	32,237	26,537	9,587
	Auto (Analog)	130	213,237	194,719	96,908
	Auto (Digital)	6	50,235	41,018	30,888
	Total	617	295,982	262,274	137,383
1994-95	Manual	476	32,879	26,963	12,242
	Auto (Analog)	133	209,150	197,482	104,495
	Auto (Digital)	12	72,951	62,160	37,300
	Total	621	314,980	286,605	154,037
1995-96	Manual	479	36,664	29,765	8,242
	Auto (Analog)	129	1,79,890	1,61,463	57,720
	Auto (Digital)	21	1,71,215	1,24,853	80,892
	Total	629	3,68,769	3,16,081	1,45,854
1996-97	Manual	476	39,812	32,714	14,943
	Auto (Analog)	114	1,40,920	1,32,711	65,554
	Auto (Digital)	35	2,59,759	2,02,592	47,041
	Total	625	4,40,491	3,68,017	1,27,438
1997-98	Manual	479	42,867	34,607	15,336
	Auto (Analog)	112	135,040	125,627	66,078
	Auto (Digital)	37	284,666	252,337	54,006
	Total	628	462,573	412,607	135,420

FIGURE - 4



TELEPHONE GROWTH IN BANGLADESH

3.2 Programme for installation of digital telephone lines under BTTB

Bangladesh Telegraph and Telephone Board has plans to raise its telephone exchange capacity to at least 1,000,000 by the year 2000. Because of resource and other constraints BTTB has taken some programmes in phases to install new digital telephone exchanges both for expansion of exchange capacity and for replacing some of the old analog exchanges. Some programmes which were undertaken by the BTTB upto June, 1998 are given in Table - 13.

Table - 13
Programme for Installation of Digital Telephone Exchanges by BTTB

Sl.	Name of the programme	Telephone Exchange Capacity		
		Replacement	Expansion	Total
1	2,00,000 Lines digital telephone project (Self finance, Alcatel E-10B Exchange)	66,000	1,34,000	2,00,000
2	Greater Dhaka (Phase-II) Telephone Project (Japan OECF Fund, Ericsson AXE-10 Model Exchange)	21,500	46,000	67,500
3	Expansion with surplus fund of Greater Dhaka (Phase-II) telephone project (Japan, OECF Fund).	30,000	41,000	71,000
4	Installation of digital exchange at Chapalnawabgonj, Naogaon & Thakurgaon (including Santahar RSU).	1,820	1,430	3,250
5	Installation and expansion of Telephone exchanges at different district Head quarters.	53,520	1,35,480	1,89,000
6	Installation of TAX cum Local exchange at Barisal, Kushtia & Comilla.		2,700	2,700
	Total	1,72,840	3,60,610	5,33,450

3.3 Expansion of Trunk Automatic Exchange (TAX) :

BTTB has taken steps for installation and expansion of Trunk Automatic Exchanges (TAX) at different locations of Bangladesh to meet the additional need of inter city NWD traffic. A list of new TAX's being installed by BTTB are shown in Table - 14.

Table - 14.
Installation of New Trunk Automatic Exchange (TAX).

SL	Name of Project	Location	Circuit Capacity
1	Installation of TAX cum Local exchanges at Barisal, Kushtia & Comilla.	Barisal Kushtia Comilla	1,080 840 720
2	Greater Dhaka (Phase-II) Telephone Project (Japan OECF Fund).	Central Exchange, Dhaka	7,350
		Total	9,990

BTTB has also planned some new projects in which Trunk Automatic Exchanges (TAX) will be installed. Those projects and the TAX capacity are enumerated as shown in Table - 15.

Table - 15
New Project for Installation of TAX Exchanges.

Name of Project	Location	Circuit Capacity
Installation of exchanges at different district headquarters.	Mymensingh	5,400
	Rangamati	980
	Noakhali	2,300
	Faridpur	2,750
	Jessore	2,950
	Dinajpur	2,000
	Rangpur	3,700
	Pabna	1,500
	Total	21,500

3.4 Programme for Expansion of Transmission System in Bangladesh.

BTTB has undertaken some projects and programmes to improve the quality and quantity of the long distance transmission network. Major backbone transmission links in Bangladesh are presently using star formation network structure. Some of the proposed transmission routes will introduce mesh formation in some areas of the backbone transmission networks. This will ensure better system reliability within the respective mesh interlink. Introduction of SDH multiplexing principle in place of present PDH arrangement is also under active consideration before implementation of future plans for expansion & rehabilitation of backbone transmission systems. A project has also been undertaken for installation of optical fibre system between Dhaka and Chittagong with some spur transmission links in the nearby upgraded districts and important places.

3.5 Introduction of Data Communication through PSPDN.

Bangladesh Telegraph and Telephone Board has implemented a project for installation and commissioning of a Packet Switched Public Data Network (PSPDN). This PSPDN using X.25 and X.28 protocols have 8 (eight) nodes at Dhaka, Chittagong, Khulna, Rajshahi, Sylhet, Barisal, Bogra and Mymensingh. In addition to the PSPDN, BTTB has introduced Internet Services for the subscribers.

4. FINANCIAL STATEMENT OF BTTB.

4.1 Revenue income during 1997-98.

Actual revenue collection during the financial year 1997-98 was Tk. 12,451.84 million against the budgeted revenue of Tk. 14,751.50 million. There was a shortage of Tk. 2,299.96 million from the budgeted amount. This revenue was 16.10% more than the revenue collected during 1996-97 financial year.

A comparison of revenue collection, expenditure & surplus for the period from 1993-94 to 1997-98 is shown in Table-16 & Fig. - 5.

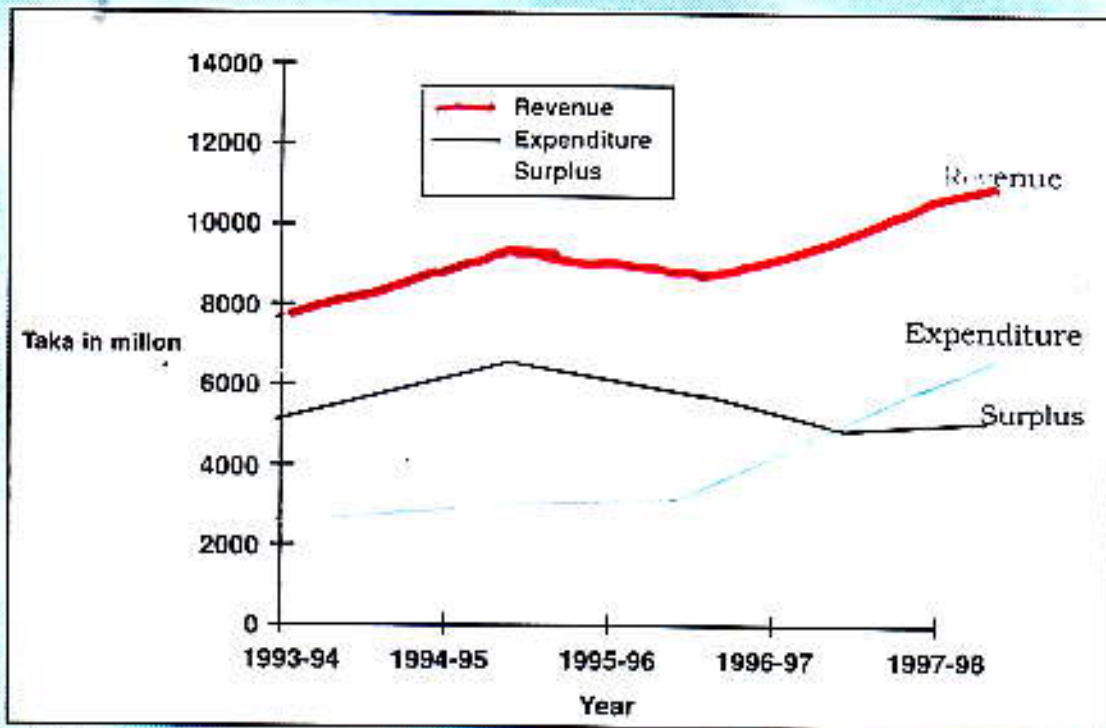
Table - 16

A Comparison of Revenue Collection, Revenue Expenditure and Surplus

Year	Revenue collection	Expenditure	Surplus
1993-94	7722.94	2647.76	5074.28
1994-95	8911.07	2810.08	6100.99
1995-96	8373.18	2904.13	5469.05
1996-97	10724.85	5738.10	4986.75
1997-98	12451.84	7201.71*	5250.13

1 US Dollar = Taka 46.18.

* This amount includes repayment of Bond valued Taka 3350 million.

FIGURE - 5

4.2 Revenue Collection.

A statement on billed amount, revenue collection and receivable figures for the year 1996-97 and 1997-98 are shown in Table-17. Table - 18 shows the service wise revenue collection for the year 1996-97 and 1997-98. Service wise distribution of actual revenue collection along with rate of yearly increase/decrease of such collections for the periods from 1993-94 to 1997-98 are shown in the Tables-19 & Fig. - 6.

Table - 17

Revenue Collection and Revenue Receivable :

Description	Taka in Million	
	1996-97	1997-98
Receivable amount as on opening day of fiscal year	2,840.80	3,574.53
Bills issued during the fiscal year	11,458.58	12,648.26
Total Receivable amount during the year	14,299.38	16,222.79
Actual Receipt in the year	10,724.85	12,451.84
Receivable amount carried over to the opening day of next fiscal year.	3,574.53	3,770.95

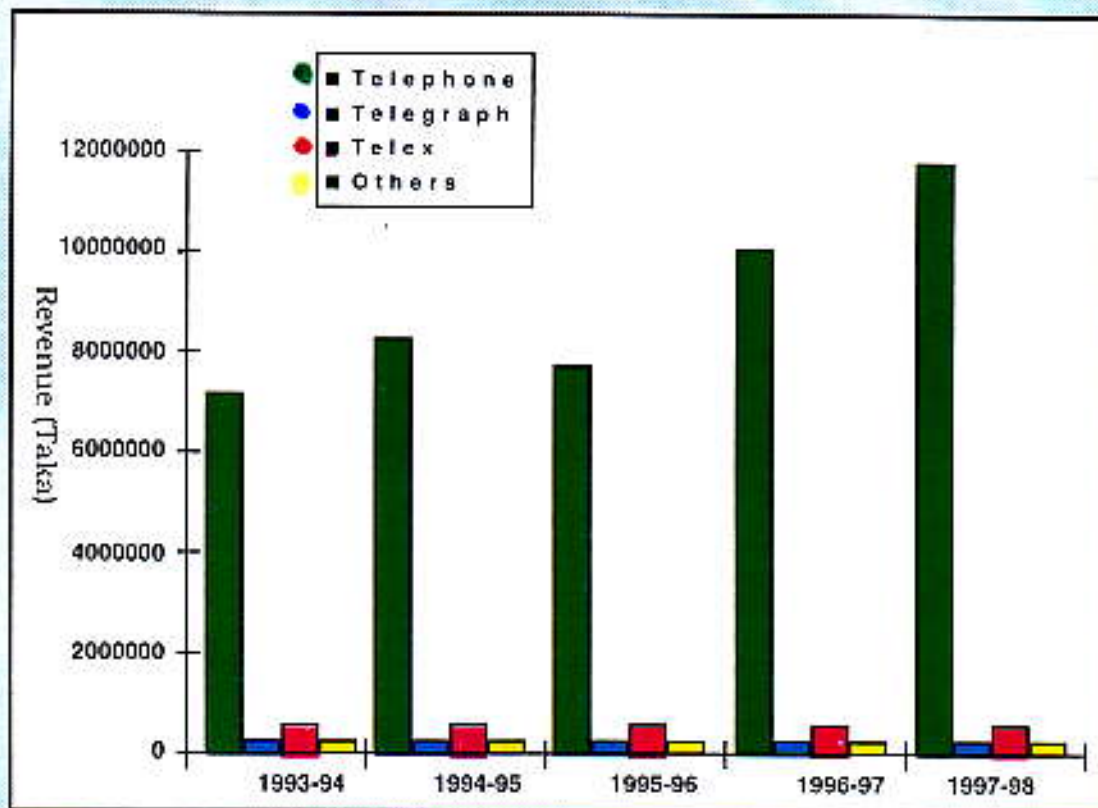
Table - 18
Service wise Distribution of Revenue Collection in
1996-97 and 1997-98

Name of Service	1996-97		1997-98	
	Taka in Million	Percentage of Total	Taka in Million	Percentage of Total
Telegraph	17.50	0.16%	15.00	0.12%
Telephone	9955.40	92.83%	11,874.81	95.37%
Telax	290.40	2.71%	198.34	1.59%
Others -	461.50	4.30%	363.69	2.92%
TOTAL	10724.80	100.00%	12,451.84	100%

Table - 19
Rate of Change of Year wise Revenue Collection Against Different
Service

Service	Item	1993-94	1994-95	1995-96	1996-97	1997-98
Telegraph	Revenue	25.82	20.64	18.75	17.50	15.00
	Change Rate	(-) 5%	(-) 20%	(-) 9.15%	(-) 6.66%	(-) 14.28%
Telephone	Revenue	7198.25	8509.16	7878.45	9955.40	11,874.81
	Change Rate	(+) 24%	(+) 18%	(-) .41%	(+) 26.36%	(+) 19.28%
Telax	Revenue	299.98	243.82	215.68	290.40	198.34
	Change Rate	(-) 18%	(-) 19%	(-) 11.54%	(+) 34.64%	(-) 31.70%
Others	Revenue	198.98	137.45	260.30	461.50	363.69
	Change Rate	(-) 33%	(-) 31%	(+) 89.38%	(+) 77.30%	(-) 21.19%
Total	Revenue	7723.03	8911.07	8373.18	10724.80	12,451.84
	Change Rate	(+) 19%	(+) 15%	(-) 6.04%	(+) 16%	(+) 16.10%

FIGURE - 6
Year wise Revenue Collection Against Different Service



4.3 Annual Development Program (ADP) for Capital Investment.

Every year capital is invested through national Annual Development Programme (ADP) of the government for the projects which accrue fixed assets. A statement of such total investment in BTTB for the year 1997-98 against 8 development projects is given in the table - 20.

Table - 20

BTTB Investment in 1997-98 through ADP on 8 (Eight) projects.

Item	Local Currency	Foreign Exchange	Total
Allotment	1584.80	1307.80	2892.60
Expenditure	458.56	1160.68	1619.24
Surplus	1126.24	147.12	1273.36

5. HUMAN RESOURCES DEVELOPMENT (HRD) & SOCIAL WELFARE ACTIVITIES

5.1 Number of Posts in BTTB.

There are 19,317 regular posts (working positions) under different categories in BTTB which are classified into following four service classes.

Class I Service	: 681 Posts
Class II Service	: 30 Posts
Class III Service	: 14,633 Posts
Class IV Service	: 3,973 Posts

Total : 19,317 Posts

5.2 HRD activities in BTTB.

As a basic operator for telephony, overseas carrier and transmission network BTTB has enormous responsibility to keep pace with the tremendous development and globalisation of telecommunication and information technology. Human Resource Development (HRD) is very essential for this purpose.

Special emphasis is given to the in-service training programmes in order to enhance the efficiency and quality of services of Bangladesh Telegraph and Telephone Board, to update the technical knowledge and skill of personnel and to introduce new technology in the Telecom sector. In-service training for newly recruited engineers and refresher training of other officers are carried out in Telecom. Staff College (TSC), Gazipur. Training for the employees are usually carried out in three Telecom. Training centres (TTCs) located at Dhaka, Bogra and Khulna and in five sub-centres located at Dhaka, Chittagong, Rajshahi, Barisal and Jessore.

The Telecom. Staff College (TSC) at Gazipur (near Dhaka), established in 1987 with ITU & UNDP assistance, has already put its marks as one of the leading institutes for telecom training in this region. It has all the infrastructural facilities and equipment including resource personnel to establish itself as a regional training centre.

5.2.1. Courses conducted in TSC, Gazipur during 1997-98

Category/Name of course	No. Courses	Total No. of	Man-month Participants
Regular Course :			
ADE (Probationary)	08	22	93.50
Refresher Course :			
TOT	01	16	4.00
dBase-iv	01	05	2.50
DLT	01	06	3.00

FDT	01	07	3.50
Microprocessor	01	06	3.00
PCM	01	06	3.00
Top level management	01	15	7.50
COT	01	05	2.50
PSPDN (ITU)	01	17	8.50
Alcatel Exchange	01	19	9.50
TOTAL	18	124	140.50

5.2.2. Training in TTCs :

A Summary on the training activities of Telecom. Training Centres at Dhaka, Khulna, Bogra and five Sub-centres of BTTB for the year 1997-98 are as follows :-

Category of Course	No. of Courses	No. of Participants	Man-month
Regular Course	15	468	1311.00
Refresher Course	57	605	197.47
Total	72	1073	1508.47

5.2.3. Local Training in BTTB Trg. institutes for Other agencies :

Name of Course	Name of Agency	No. of Participants	Man-month
Telecom. Course for Bangladesh Police	Bangladesh Police	4	80.00
Cable Plant for Bangladesh Air Force	Bangladesh Air Force	10	25.00
Telecom attachment for Polytechnic students	Polytechnic Institute	44	88.00

5.2.4 Foreign Training :

50 Officers of Bangladesh T&T Board received foreign training in different Telecom. Courses during 1997-98 in Canada, China, France, India, Japan, Malaysia, USA, Philipinnes, Finland, Italy, South Korea, Sweden, Thailand and UK.

5.2.5 Participation in foreign factory testing/seminar/workshop/meeting :

47 Officers of Bangladesh T&T Board participated in different types of factory testing/seminar/workshop/meeting abroad during 1997-98.

5.3 Social welfare activities in Bangladesh T&T Board.

Bangladesh Telegraph and Telephone Board, with its limited resources provides different facilities to the members of its staff. A list showing sanctions from the welfare fund on different grounds to the employees is furnished below.

Sanctions made to meet expenditure on welfare activities in Bangladesh Telegraph and Telephone Board during the 1997-98 fiscal year.

Sl. No.	Head of Expenditures	Allocation/ Expenditure
1.	Sanction of benevolent fund to the employees of Bangladesh T&T Board.	Tk. 15,35,400.00
2.	Sanction of education grant for the dependents of Bangladesh T&T Board employees.	Tk. 11,00,000.00
3.	Sanction of grant to about 36 institutions including schools, colleges, mosques, madrasahs linked with Bangladesh T&T Board to meet up partial need of their yearly budget.	Tk. 30,77,600.00
4.	Sanction of grant to the different Clubs, associations recreation/cultural shows etc for the recreation of officers/employees of Bangladesh T&T Board.	Tk. 1,09,000.00
5.	Sanction of grants for central sports including games like Volley ball, Cricket, Kabadi and some indoor games.	Tk. 4,00,000.00
6.	Sanction of grant for purchase of medicine at Telejogajog Bhaban dispensary.	Tk. 1,68,936.00

End