



Cyprus Telecommunications Authority

23rd Annual Report 1978



CHRISTODOULIDES

CYPRUS TELECOMMUNICATIONS AUTHORITY

**TWENTYTHIRD ANNUAL REPORT
AND ACCOUNTS**

FOR THE YEAR ENDED

31st December, 1978

[PRICE 50 mlla]

CYPRUS TELECOMMUNICATIONS AUTHORITY

Head Office,
121 Prodromos Str.
Nicosia 116
Post Office Box 4929
Telex 2288, 3288
Telegrams CYTA Nicosia
Telephone 021 - 60200

13th October 1979.

Your Excellency,

In compliance with Section 22 of the Telecommunications Service Law 1954 (Cap. 302), I have the honour and pleasure to submit, on behalf of the Board of the Cyprus Telecommunications Authority, its 23rd Annual Report and Accounts for the year ended the 31st December, 1978, together with a copy of the Auditors' Report.

Apart from the very sad fact that about 25% of the Authority's plant (besides other assets) was, and still is, under the control of the Turkish invaders, the year 1978 was nearly as fruitful as the year 1977; and because of the Authority's continued achievements in 1978, Cyprus is getting nearer to the pursued target of being among the developed telecommunications-wise countries of the World.

Though the main activities and achievements of the Authority during the year 1978 appear in the Report, yet I wish to make here a reference to some of the most important ones, viz:

- (i) A net revenue surplus of C£2,203,236.- resulted from the 1978 operations (against C£2,240,006.- in 1977), which shall be used for development. (In para 3, (e) of the Introduction, page (12) of the Report, an explanation is given why the net revenue surplus of 1978 is lower than that of the year 1977).

- (ii) Cyprus, connected by I.S.D. (Automatic Telephony) with 61 Countries (against 54 in 1977), still holds, according to our information, its fourth position on the list of Countries connected with others by I.S.D., following the United Kingdom (with 83), Australia (with 69) and the U.S.A. (with 64).
- (iii) The award to I.T.T. Space Communications Inc., U.S.A., of the tender for the installation of the Satellite Earth Station, MAKARIOS, which is scheduled to operate by Christmas 1979.
- (iv) The introduction of the Datal Service (by the end of 1978) i.e. the transmission of data over the public telephone network at very high speed, which service is widely in use in developed countries.
- (v) The starting of the operation of the four-year-rural-development plant for the provision of service with rural rentals to all rural areas of Cyprus, as those applied in Towns.
- (vi) The decision for installing a new submarine cable between Cyprus and Greece to be negotiated between OTE of Greece and CY.TA. of Cyprus

Before concluding I would like to emphasise that the Board and myself feel very happy for the excellent relations between the Authority and its staff which were maintained during the year 1978; and I would also like, on behalf of the Board and myself, to pay tribute to the efficiency and dedication of the Executive and the Staff which contributed so much to the Authority's achievements during the year.

Yours faithfully,

N. S. Roussos,
Chairman.

His Excellency,
The Minister of Communications and Works,
Mr. Marios Eliades
Nicosia

CYPRUS TELECOMMUNICATIONS AUTHORITY

Chairman : N. S. Roussos, <sup>Civil Engineer,
Graduate of
Ethnicon Metsovion Polytechnion, Athens</sup>
(Former Minister of Communications and Works)

Vice-Chairman : V. Demetriou, B.Sc. (Eng.)

Members : H. Horomian

P. G. Psaras, <sup>Chemist Engineer, Graduate of the
Ethnicon Metsovion Polytechnion, Athens.</sup>

C. Constantinides, Diploma in Engineering.

L. Tryfon B. Com., B.A.

Pr. Papavassiliou

Legal Adviser : A.C. Hadjioannou <sup>Degree in Law of Athens University
and Barrister-at-Law of Gray's Inn.</sup>

Auditors : Scottis & Polydorides Chartered Accountants.

ADMINISTRATION

General Manager : A. N. Stylianides, B.Sc., M.-A.S.M.E.

Secretary	Chief Engineer	Personnel Officer	Chief Accountant	Telecommunications Officer
S. A. Kokkinides, ACIS, AMBIM, Soc. Science & Admin. Cert. L.S.E. (University of London)	G. C. Papaioannou, B.Sc. (Eng.) C. Eng. F.I.E.E.	N. Markides.	S. Modestou, F.A.I.A. (Assist. Chief Accountant)	A. Ch. Kritiotis Physics and Electronics degree, Athens University (Assist. Telecommuni- cations Officer).

Head Office : Prodromos Avenue 121, Nicosia, P.O. Box 4929.

Telephone : 77111

Telex : 2288, 3288

Branches :

NICOSIA	— Egypt Avenue	Tel.	021-60333
LIMASSOL	— 4, Marcos Botsaris Street	Tel.	051-62500
FAMAGUSTA	— Edison Street	Tel.	031-62500
LARNACA	— 7, Lord Byron Street	Tel.	041-52279
PAPHOS	— 36, Adonis Street	Tel.	061-32148
KYRENIA	— 5A, 28th October Avenue	Tel.	081-52438
MORPHOU	— 18, 25th March Street	Tel.	071-42055
LEFKA	— Lefka	Tel.	078-17-459

CONTENTS

	<i>Page</i>
1. INTRODUCTION	11
2. TECHNICAL SERVICES	13
A. General	13
B. Planning and Development	13
C. Construction	19
D. Maintenance	30
E. General Telecommunications Facilities	31
3. TELEPHONE, DATEL, TELEX AND TELEGRAPH OPERATING SERVICES	35
4. ADMINISTRATION AND STAFF	42
5. COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION (C.T.O.)	48
6. FINANCIAL REPORT	49
7. ACCOUNTS	57

INTRODUCTION

1. The Cyprus Telecommunications Authority is a Public Corporation, established by Law 1954 (Cap 302), as amended by Laws 20/60, 34/62, 25/63 and 57/77 and it is answerable to the Council of Ministers, through the Minister of Communications and Works, whose power over its activities is regulated by the Amended Service Law No. 25 of 1963, Section 3. The Authority's main responsibility is, by virtue of the aforesaid Law, the provision, maintenance and development of a comprehensive telecommunications service, both local and overseas.

2. During the year under review, the Board of the Authority had twenty two meetings, during which decisions were taken for the expansion and improvement of its services in order to meet the continuously growing demand for telecommunications both inland and overseas. It is worth mentioning the following specific matters which were dealt with :-

- (a) The award to ITT Space Communications Inc., USA, of the tender for the installation of the Satellite Earth Station, which is scheduled to operate by Christmas 1979.
- (b) The introduction of the Datel Service by the end of 1978. Datel is the transmission of data over the public telephone network at very high speeds and is widely used in developed countries.
- (c) The starting of the operation of a four year rural development plan (decided in 1977) for the provision of service on normal rentals as in towns, to all rural areas of Cyprus by the provision in the 1978 Estimates of a sum of C£300,000.-.
- (d) The reinstatement of facsimile Radio Picture Service, which was disrupted by the Turkish invasion, after receiving and installing new equipment.
- (e) The decision to extend substantially the Authority's submarine cable system with neighbouring countries, starting with a new submarine cable between Greece and Cyprus (in addition to existing one - APHRODITE) to be negotiated between OTE of Greece and CY.T.A. of Cyprus.

3. As shown by the statistics in this Report, 1978 was a record year in the demand and utilization of all services provided by the Authority. So :-

- (a) 5,649 Direct Exchange telephone lines were installed, bringing the total number of Lines installed in 1978 to 62,288 (Graph "C").
- (b) Seventeen thousand new Exchange telephone lines were installed bringing the total capacity of the zone exchanges to 86,700.
- (c) Seven more countries became available on the International Subscribers Dialling System (automatic) bringing the total number

of countries on ISD to 61. As a result, over 90% of the world's telephones were available to Cyprus subscribers finger tips and in addition Cyprus retained its fourth position of Countries which are connected with others by ISD, following UK, Australia and U.S.A.

- (d) (i) 203 new most modern telex units were installed during 1978 bringing the total number of units installed to 1241 (against a Telex capacity Exchange of 2048).
- (ii) In telex service, the upward trend experienced during the last few years continued and an increase by 23.2% and 21.9% for the outgoing and incoming traffic respectively was shown.
- (iii) Cyprus is connected by Automatic Telex with 103 countries.
- (e) A net surplus of C£2,203,236 resulted from the year's operation against C£2,240,006 for 1977. It should be noted, however, that special contribution deducted from 1978 net surplus amounts to C£376,165 against C£83,584 of 1977. Had it not been for this difference in the special contribution, the 1978 revenue surplus would have been higher than that of the year 1977 by C£255,811.
- (f) The operating revenue was C£9,648,323 against C£8,482,614 of 1977.
- (g) The net additions to the fixed assets (development) were, C£2,226,988 mainly in the form of Exchanges, Line plant apparatus and Repeater Stations.

4. The Authority's relations with its staff were satisfactory and a new agreement was reached in May 1978, providing for salary and wage increase of 13% (6% or £72.- whichever is the higher as from 1st January 1978 and 7% as from 1st January 1979) and fringe benefits increase of 2% as from 1st January 1978. The staff's welfare, safety and training were very well served through the various joint Management/Staff committees.

The Authority is following closely present and anticipated future telecommunications requirements and is always taking such measures as to provide the public in general with an up-to-date service. That the Authority is successful in this effort, is evidenced by the favourable comments of visitors and the fact that an increasing number of foreign companies establish regional offices in Cyprus attracted mainly by the satisfactory telecommunication services provided in the island.

2. TECHNICAL SERVICES

A. GENERAL

During the year under review, apart from the expansion and improvement of the existing services, new studies and plans were carried out and equipment was placed on order for the provision of additional facilities to meet the growing demand for telecommunication services, inland and overseas.

Among the projects undertaken, are the following :-

- 1) The establishment of the Satellite Earth Station MAKARIOS for communications, through the Atlantic Satellite, which will offer economic and technical advantages for the international communications. It is expected that this station will be operational by the end of December 1979.
- 2) The establishment of a new Repeater Station at Mount Kionia near Macheras Monastery ; this station will be given to service during the last quarter of 1979.
- 3) The implementation of the 4-year rural development plan, started in 1978, which will provide telecommunication service to rural areas and will cater for the introduction of new rural exchanges, increase of existing ones and the expansion of the telephone network, which will make possible the introduction in rural areas of the rates in force in Towns in the installation of telephones.

B. PLANNING AND DEVELOPMENT

During 1978 a number of studies were carried out, plans and specifications were prepared, tenders were invited and equipment was placed on order to provide additional telecommunication facilities and to improve existing services.

The main projects which were planned during 1978 are detailed below :-

I. National Communications Network

(a) *Equipment on order*

(i) *Paphos-Kili 300-channel S.H.F. Radio Link*

This equipment is scheduled for delivery in April 1979, and it will replace the old valve operated U.H.F. radio link now in operation.

(ii) *Chakistra-Mt. Olympus Repeater Station 24-channel U.H.F. radio and Multiplex Equipment*

The radio and multiplex equipment will be used to establish communication with Chakistra and the neighbouring area.

(iii) *12-channel U.H.F. Mobile Radio Link*

This equipment will be used on a standby basis for emergency cases and/or temporary basis.

(iv) *Terrestrial Microwave Radio and Multiplex Equipment*

This equipment which is scheduled for delivery in the second part of 1979 will be used to establish communication between Nicosia, Limassol and Larnaca zone centres through Mt. Kionia Repeater Station.

(v) *Voice Frequency Telegraph Terminals*

These terminals will be used to increase the number of V.F.T. channels between Nicosia-Limassol and Nicosia-Larnaca by 320 channels. It is expected to be delivered, installed and given to service during the second half of 1979.

(vi) *Telex Units*

An order for 300 units was placed in September 1978 for delivery in March 1979.

(b) *Tenders for New Equipment*

(i) *Data Modems*

Specifications have been prepared and tenders will be invited early in 1979, for the supply of data modem units.

II. International Communications Network

(a) *Satellite Earth Station MAKARIOS for communications via Atlantic Satellite*

During 1978, the project for the establishment of a Satellite Earth Station was further advanced. The work which was carried out as part of this project included the finalization of the site for the erection of the Station, following successful radio frequency interference measurements and geological soil tests. Furthermore, during 1978 technical and contractual specifications were prepared for the Satellite Earth Station, leading to the invitation of international tenders and tender submission and evaluation. After intensive technical discussions with the successful tenderer, a turnkey contract was awarded to ITT Space Communications Inc. of U.S.A. for the supply and installation of the Earth Station equipment.

All above work was carried out in close cooperation with the technical consultants of the Authority for the project, France Cables et Radio. Further work for the same project included the design of the Earth Station building complex and access road which were retained under the responsibility of the Authority.

These projects were planned during the year under review in cooperation with the Architects and Civil Engineers of the Authority, Messrs. J. & A. Philippou, and after the appropriate tendering procedures a contract was awarded for the construction of the Earth Station access road of a total length of 1.3 km and another contract is expected to be awarded in January 1979 for the construction of the Earth Station buildings complex.

Microwave and multiplex equipment was also placed on order for the interconnections of the Earth Station with the Nicosia Zone Centre and the Cyprus Broadcasting Corporation, through the new repeater station at Mt. Kionia.

The station is scheduled to be operational by the end of December 1979.

III. Maritime Mobile Services

(a) MF/HF/VHF Equipment

Two 5kw transmitters which are on order are scheduled for delivery and installation in 1979.

Eight H.F. receivers and three VHF/FM transmitting and receiving equipment ordered for the maritime mobile services are also scheduled for delivery and installation during the first quarter of 1980.

IV. Civil Aviation Telecommunication Services

(a) V.H.F./U.H.F. Ground to Air Equipment for Larnaca International Airport

The activation of the receivers of the above equipment, which are planned to be installed at Larnaca International Airport, is not envisaged prior to the second quarter of 1979.

(b) Air Traffic Control Consoles for the Nicosia A.T.C.C.

The equipment is scheduled for delivery and installation in the first quarter of 1979.

(c) Communication Recorder/Non-directional Beacon Transmitter

This equipment is expected to be delivered in March 1979.

V. Local Telephone Exchanges

(a) Zone Main and Satellite Exchanges

During 1978, a number of feasibility studies were carried out, various projects were planned, tenders were invited and equipment was placed on order to meet the need for additional facilities. Plans prepared include the introduction of two new Satellite Exchanges in Nicosia zone, to serve Latsia and Anthoupolis areas, and one in Limassol zone, to serve Amathus area.

Plans were also prepared for the maximum utilization of the equipment already installed in the exchanges or available in the stores and the redeployment of equipment recovered.

The following table shows the planned increase in the capacity of the zone telephone exchanges :-

Exchange	Existing lines in 1978	Under Installation	Additional Lines on order or in stock	Planned Total Line in 1979
Nicosia	50,000	2,400	5,600	58,000
Famagusta	9,000	—	—	9,000
Larnaca	5,900	—	3,000	8,900
Limassol	15,000	4,000	3,200	22,200
Paphos	4,000	—	—	4,000
Morphou	1,400	—	—	1,400
Kyrenia	1,400	—	—	1,400
Total	86,700	6,400	11,800	104,900

(b) Rural Exchanges

A four year plan for the provision of telecommunication services to rural areas has been prepared by the Authority ; the implementation of this plan, which caters for the establishment of new rural exchanges and the increase in the capacity of existing ones started in 1978.

- (i) Orders were placed for two new 600 lines rural exchanges for Dheftera and Ormidhia. It is anticipated that an additional rural exchange of the same capacity will be placed on order in 1979 for the replacement of Kakopetria existing SxS exchange. The recovered equipment will be redeployed at other dependent exchanges.

- (ii) Plans were prepared for the immediate increase of Athienou, Kakopetria, Klirou, Polis and Zygi existing Rural Exchanges by 50 lines.

In addition, plans were finalized for the introduction of Rural Exchanges at Chakistra and Kato Pyrgos, by redeploying existing equipment.

The following table shows the planned increase of the rural exchanges including mobile exchanges :-

Zone	No. of Ruraxes	Existing Lines in 1978	Under Installation	Additional Lines on order or in stock	Planned Total No. of lines in 1979
Nicosia	7	1,000	600	800	2,400
Famagusta	5	500	—	—	500
Larnaca	6	1,090	50	600	1,740
Limassol	6	1,450	—	—	1,450
Paphos	4	250	—	50	300
Morphou	3	400	—	—	400
Kyrenia	2	350	—	1,200	1,550
Total	33	5,040	650	2,650	8,340

(c) *International Telephone Exchange*

New orders were placed for Incoming, Outgoing and Bothway Trunks to meet the increased traffic with other countries.

Plans have also been prepared for the introduction of new maintenance facilities conforming to the updated international standards and recommendations.

(d) *International Telex Exchange*

An order was placed for the increase in capacity of the Exchange by 512 lines, making a total of 2,048, as well as for the provision of duplicating equipment to minimize possible interruption.

(e) *Subscribers Telephone Apparatus*

Orders were placed for telephone instruments, PMBX's, PABX's and private meters to meet the demand for these services.

All equipment installed by third parties was tested and evaluated prior to its approval for connection on the Authority's telephone network.

VI. Line Plant Development

(a) Urban Development

Plans and estimates were prepared for further expansion of the **under-ground** and overhead network in the towns of **Nicosia**, **Limassol**, **Larnaca** and **Paphos**.

(b) Rural Development

Plans and estimates were prepared for the expansion of the telephone network in various villages, as hereunder :-

(i) Nicosia Zone

Paliometochi, Ayii Trimithias, Kokkinotrimithia, Psomolophou Pano Dheftera, Anayia, Pera.

(ii) Limassol Zone

Moniatis, Saitas, Trimiklini.

(iii) Famagusta Zone

Ayia Napa, Sotira, Liopetri, Phrenaros, Dherynia.

(iv) Larnaca Zone

Ormidhia, Avgorou, Xylophagou, Xylotymbou.

(v) Paphos Zone

Khlorakas, Kissonerga, Emba, Tala, Peyia.

(vi) Morphou Zone

Akaki, Astromeritis.

VII. Government Communities and Industrial Estates

Plans and Estimates were prepared for the provision of telephone service to the following :-

(a) Government Communities

(i) Nicosia Zone

Kokkines and Ayios Mamas extension.

(ii) Limassol Zone

Kapsalos

(iii) Larnaca Zone

Makarios III, Ayii Anargiri II, Ayios Ioannis and Ayios Georgios.

(b) Self-Housing Communities

(i) Famagusta Zone

Paralimni, Dherynia, Sotira, Phrenaros and Liopetri.

(c) Industrial Estates

(i) Nicosia Zone

Extension of Strovolos Industrial Estate.

(ii) Limassol Zone

Extension of Limassol Industrial Estate (Limassol-Paphos Road) and Ayios Athanasios Industrial Estate.

(iii) Larnaca Zone

Free Industrial Zone of Larnaca'.

VIII. Power Plant

(a) New Equipment on order

Specifications were prepared, tenders were invited and orders were placed for the provision of the following :-

(i) Standby Diesel Alternator Sets for the Mt. Kionia Repeater Station, Saranta Spilia Transmitting Station and the Paralimni and Chakistra Rural Exchanges. These are scheduled for delivery in 1979.

(ii) Battery Floating Equipment for Mt. Olympus and Kionia Repeater Stations, scheduled for delivery and installation early in 1979.

(iii) Isolating Transformers

Isolating transformers for the protection of the power plant of Mt. Olympus and Mt. Madhari Repeater Stations were ordered and delivered in 1978.

C. CONSTRUCTION

As in previous years, the Authority continued its policy in entrusting the execution of certain projects to outside contractors. These projects included digging of holes for the erection of telephone poles, the excavation of trenches and laying of ducts and the construction of manholes.

All other works, however, were carried out by the Authority's Construction Personnel. The various projects which were executed during 1978 are detailed below :-

I. Telephone Exchanges

(a) International Telephone Exchange

Additional equipment was installed during 1978 for the increase of incoming and outgoing trunks of existing routes and for the introduction of new routes.

II. Local Exchanges

(a) Nicosia Exchanges

(i) Nicosia 'C' Exchange (Crossbar)

The work which started in the previous year for the installation of an additional 8,000 lines was completed early in 1978. The total number of lines of this exchange was brought up to 31,000.

(ii) Acropolis Satellite Exchange (Step-by-Step)

The installation of the equipment to increase the capacity of this exchange by 1,000 lines, which started late in 1977 was completed in 1978.

Work also started for the installation of an additional 900 lines, which is scheduled for completion in 1979, bringing the total number of lines of this exchange to 6,900.

(iii) Pallouriotissa Satellite Exchange (Step-by-Step)

Work for the installation of an additional 2,400 lines has started. When completed, in early 1979, this exchange will have a capacity of 7,400 lines.

(b) Limassol Exchange (Crossbar)

The installation of the relevant equipment for the expansion of this exchange by 5,000 lines, which started in 1977, was completed in 1978. Work also is in progress for a further expansion of the exchange by 4,000 lines, which is scheduled for completion in 1979, bringing the total number of lines of this exchange to 19,000.

(c) Rural Exchanges

(i) Dhali Exchange (Crossbar)

Work started for the installation of a new 600 lines crossbar exchange and approximately 60% of the work was completed in 1978. It is expected that this new exchange will be operational by May 1979.

(ii) Peristerona Exchange

The installation of equipment to increase the capacity of this exchange from 50 to 100 lines was completed in 1978.

(iii) Kakopetria Exchange

An additional 50 lines were installed in this exchange in 1978, bringing the total to 200.

(iv) Klireu Exchange

The number of lines of this exchange was increased by 50, bringing the total to 100.

(v) *Paralimni Mobile Exchange*

The installation of a new mobile exchange of 600 lines capacity was completed in 1978.

(vi) *Athienou Exchange*

The total capacity of this exchange was increased to 150 lines by installing 50 additional lines.

(vii) *Polis Exchange*

The capacity of this exchange was increased to 150 lines, after the installation of 50 additional lines, in 1978.

(d) *Subscribers Private Exchanges*

During 1978, 63 Private Automatic Branch Exchanges (P.A.B.X's) were installed at various business establishments all over Cyprus.

The capacity in lines of the various main, rural and private exchanges for 1977 and 1978 is shown in the following table :-

Type	1977		1978	
	No.	Capacity	No.	Capacity
Zone Main Automatic Telephone Exchanges	7	69,600	7	73,700
Zone Satellite Exchanges	2	10,000	2	13,000
Rural Exchanges	29	4,230	29	4,440
Mobile Exchanges	1	100	1	600
	39	83,930	39	91,740
Private Automatic Branch Exchanges	257	12,621	320	13,306
Private Manual Branch Exchanges	1,702	22,188	1,794	23,262

III. *Radio Equipment*

(a) The U.H.F. radio system which was linking Paralimni direct to Nicosia has been replaced by a new 120-channel U.H.F. radio system linking Paralimni to Madhari Repeater Station.

(b) A 120-channel U.H.F. system was installed linking Nicosia and Mt. Olympus Repeater Station to provide the necessary circuits to serve the Ground to Air Services and the neighbouring area.

(c) A V.H.F. Ground to Air radio system was installed at Mt. Olympus Repeater Station for the Civil Aviation Services.

- (d) A V.H.F. Ground to Air radio system was installed at Madhari Repeater Station for the Civil Aviation Services.
- (e) A U.H.F. Ground to Air radio system was installed at Nicosia for the Civil Aviation Services.
- (f) Work started for the installation of a 300-channel S.H.F. Radio Link between Limassol and Platres, including a passive reflector associated with this link, which was installed at Mt. Pouziaris, 2 km from Platres. The work is expected to be completed early in 1979.
- (g) An M.F. 1 kw transmitter for morse telegraphy was installed and put into operation in August 1978. This transmitter is used for communication with ships at sea.

IV. Multiplex Equipment

- (a) Multiplex equipment was installed at the zone centres of Nicosia, Limassol and Larnaca to increase the number of channels between them by 252.
- (b) A 24-channel carrier system was installed between Nicosia and Mt. Olympus Repeater Station to provide the necessary circuits for the Ground to Air Services.
- (c) A new 12-channel open wire carrier system was installed between Nicosia and Peristerona to replace the existing old valve operated type.
- (d) Voice Frequency Telegraph Terminals were installed at Nicosia, Limassol and Larnaca Zone centres to provide additional telex channels for the inland and overseas telex services.

V. Line Plant

During 1978 a number of manholes were built and ducts were laid for the expansion of the underground cable network. Pole routes were also constructed for the overhead wire network.

The tables below show the work done.

Table 1

Item	Unit	1975	1976	1977	1978
Manholes constructed	No.	65	48	189	135
Duct lines laid ..	Miles	28.15	17.31	58.80	69.73
Cable laid/drawn ..	Miles	67.48	72.31	73.40	90.77
Above cable in single wire	Miles	20,027	21,329	24,012	43,597

Table 2

Item	Unit	1975	1976	1977	1978
Pole routes installed	Miles	13	16	59	42
Single wire installed	Miles	122	234	416	300
Pole routes overhauled	Miles	77	136	59	134
Single wire overhauled	Miles	1,848	3,886	940	940

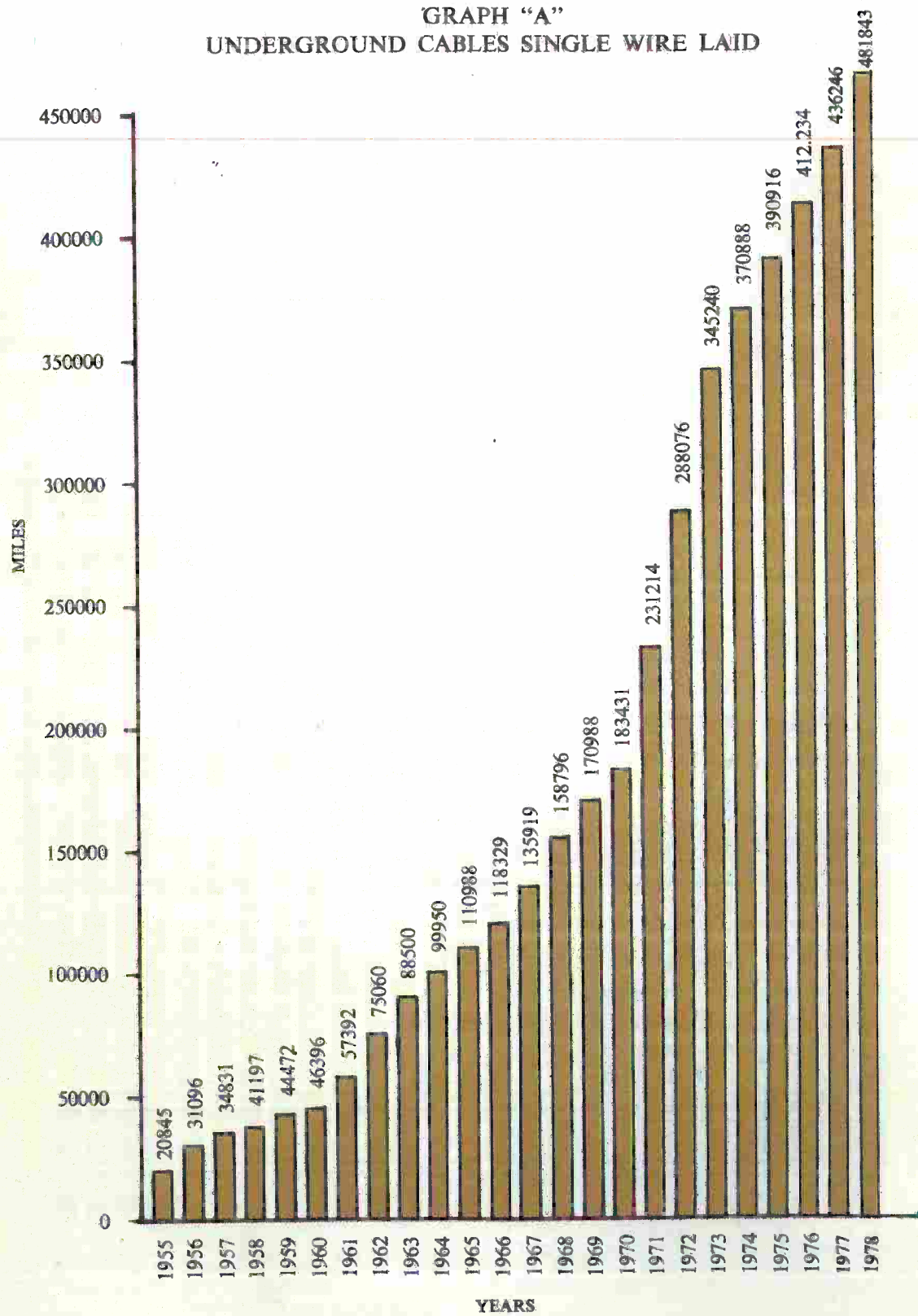
Graphs 'A' and 'B' show the growth of underground and overhead wires run since 1955.

VI. Communal Installations

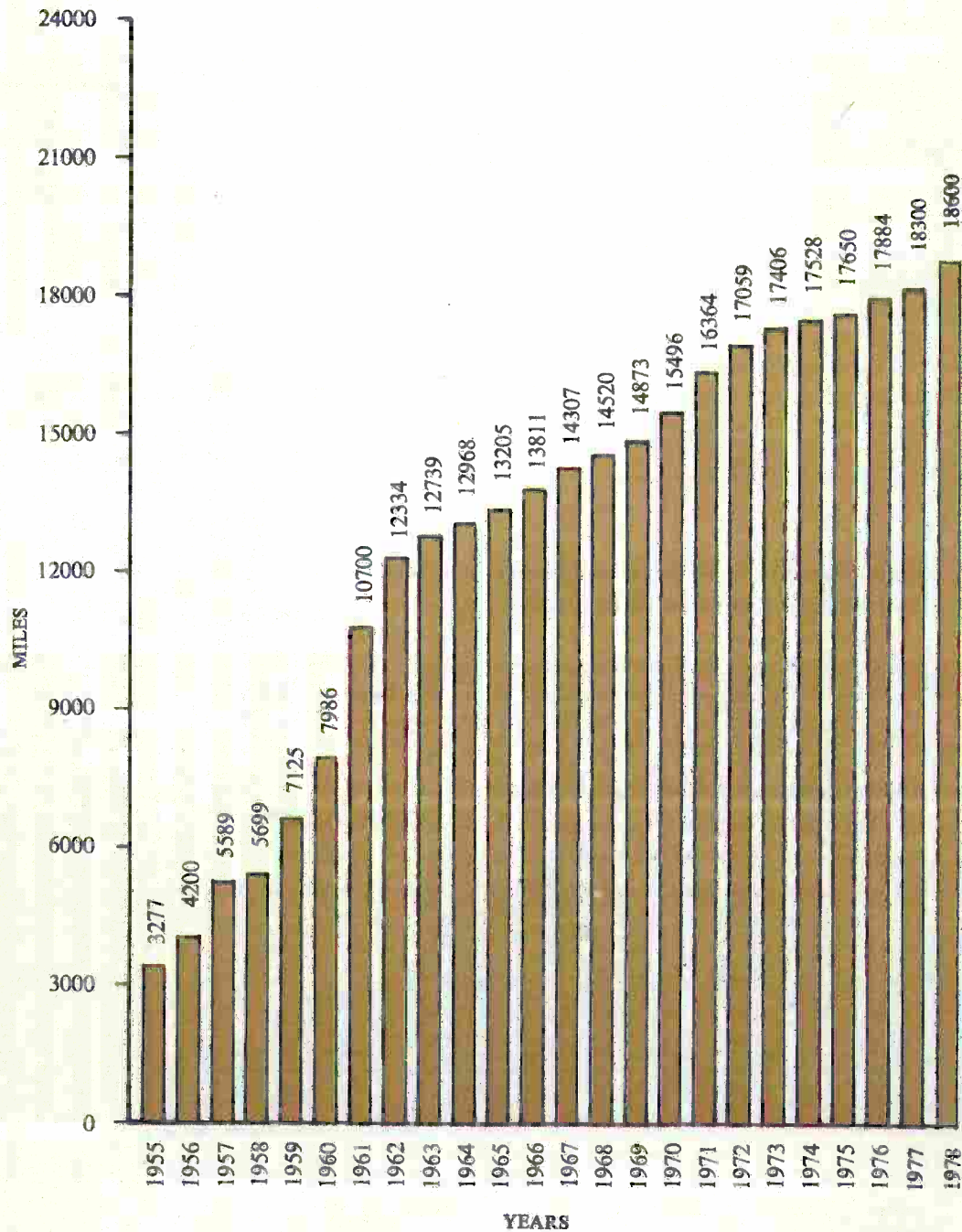
During 1978, the following communal call offices were completed and connected to the telephone network :-

Village	Zone	Exchange
Margi	Nicosia	Dhali
Moutayiaka	Limassol	Limassol
Armenokhori	Limassol	Limassol
Kissousa	Limassol	Platres
Cherkez-Chiflik	Limassol	Limassol
Klonari	Limassol	Moni
Vikla	Limassol	Moni
Kivisil	Larnaca	Larnaca
Lapithiou	Paphos	Stroumbi
Ay. Georgios	Paphos	Timi
Pelathousa	Paphos	Polis
Koloni	Paphos	Paphos
Kithasi	Paphos	Platres
Phasoula	Paphos	Timi
Ay. Theodoros (Soleas)	Morphou	Kakopetria
Ay. Georgios (Kafkallou)	Morphou	Peristerona

GRAPH "A"
UNDERGROUND CABLES SINGLE WIRE LAID



GRAPH "B"
OVERHEAD SINGLE WIRE MILEAGE INSTALLED



The following seven communal call offices were reconnected :-

Village	Zone	Exchange
Ay. Thomas	Limassol	Paramali
Plataniskia	Limassol	Paramali
Magounda	Paphos	Polis
Oxylou	Paphos	Timi
Terra	Paphos	Polis
Androlikou	Paphos	Polis
Kato Koutraphas	Morphou	Peristerona

In addition, one public call office was installed at the Ammunition Depot Refugee Camp, Dhekelia.

VII. Subscribers Telephone Installations

In spite of efforts by the Authority to satisfy all applications received, there were cases where, due to technical reasons, some applications had to be put on the waiting list.

An indication of the applications received and applicants on the waiting list is given in the following table :-

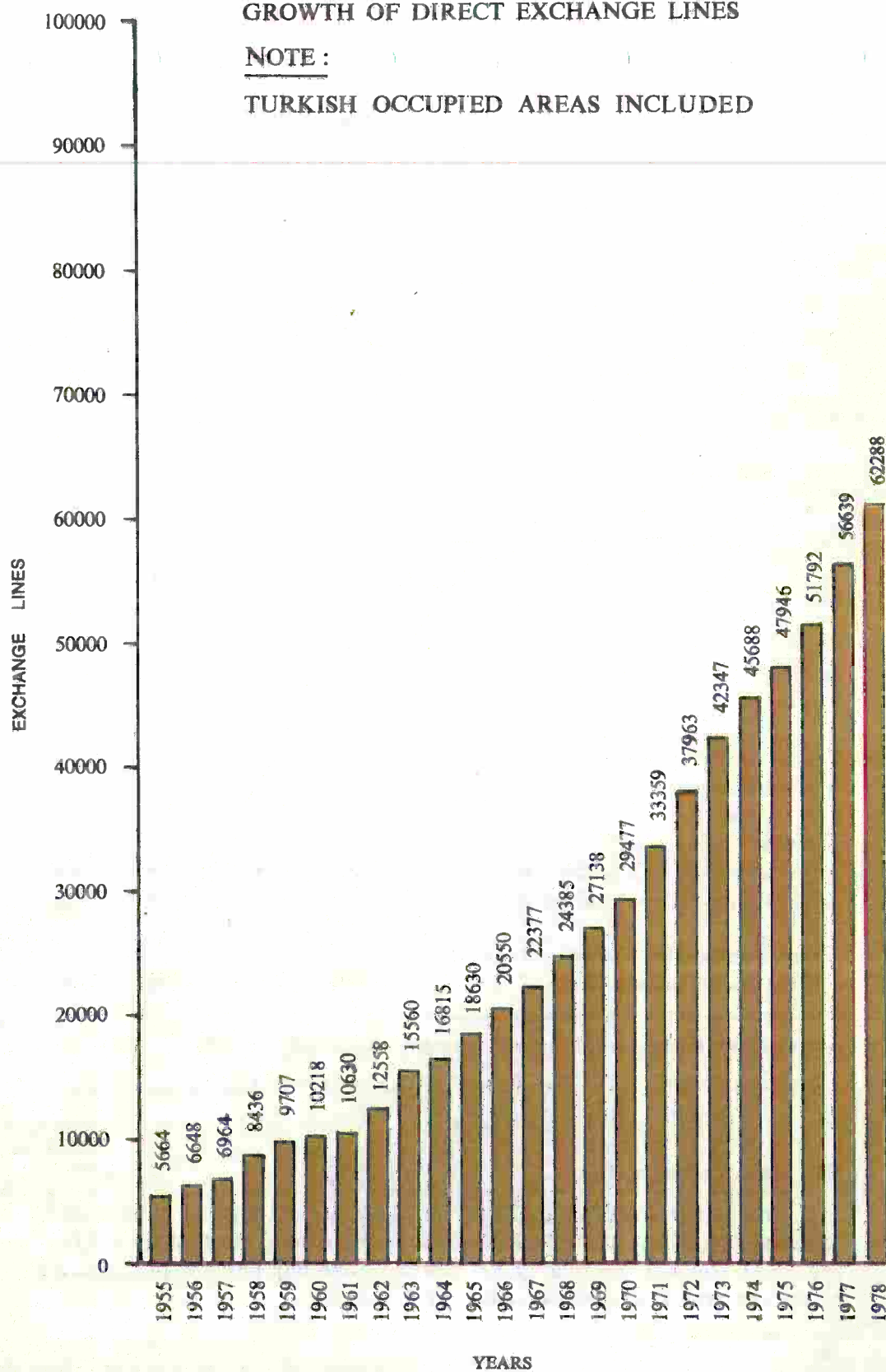
	1975	1976	1977	1978
Applications in hand as at 1st January	4,364	2,004	2,571	4,271
New Applications received during the year	5,005	8,254	8,821	11,712
Applications for new Direct Exchange Lines released during the year ..	5,189	6,379	6,333	7,126
Applications cancelled during the year	2,176	1,308	788	822
Applications on the Waiting List as at the end of the year	2,004	2,571	4,271	8,035

Note : Figures for the occupied areas are not included in the above table
The growth in Direct Exchange Lines is shown in Graph 'C'.

GRAPH "C"
GROWTH OF DIRECT EXCHANGE LINES

NOTE :

TURKISH OCCUPIED AREAS INCLUDED



* WITHDRAWALS ARE DEDUCTED

The following table shows the number of Works Orders executed at various zones for the telephone installations and associated works :-

	1974	1975	1976	1977	1978
Nicosia (Including Kyrenia & Morphou)	8,992	9,964	7,547	8,138	8,616
Limassol (Including Paphos and Platres)	2,993	4,211	4,420	4,547	5,368
Larnaca (Including Famagusta)	2,233	1,741	1,981	1,626	2,115
Total	14,218	15,916	13,948	14,311	16,099

As in previous years, the Authority continued to provide an efficient service to the Government, the National Guard, the United Nations Force in Cyprus and the British Sovereign Base Areas.

VIII. Subscribers Telex Installations

By the end of 1978, there were 1,241 subscribers connected on the Telex Exchange (77 in the Turkish occupied areas).

The table below gives an indication of the applications received and applicants on the Waiting List :-

	1975	1976	1977	1978
Applications in hand as at 1st January	24	—	130	3
New Applications received during the year	107	329	246	297
Applications released during the year	131	187	315	263
Applications cancelled during the year	—	12	58	26
Applications on the Waiting List as at the end of the year	—	130	3	27

Graph 'D' shows the growth of telex subscribers.

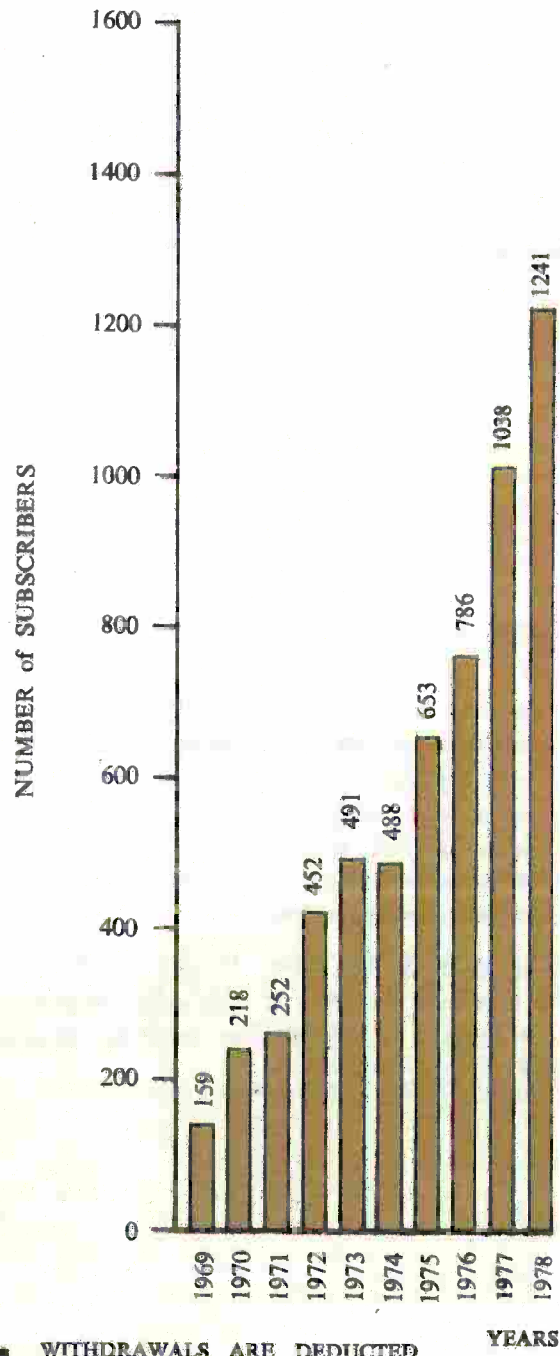
Note : 73 telex units which are installed in the Turkish occupied areas are not operational.

IX. Coin Collecting Boxes

During 1978 work continued for replacing the old type of public coin collecting box by the new fully automatic electronic one, which offers S.T.D. and I.S.D. facilities. A total of 573 old coin collecting boxes were replaced by the new type as at 31st December, 1978.

GRAPH "D"
GROWTH OF TELEX SUBSCRIBERS.

NOTE : 77 IN TURKISH OCCUPIED AREAS
(INCLUDED)



X. Civil Engineering Works and Buildings.

Work started for the construction of Mt. Kionia Repeater Station and is scheduled for completion late 1979. Work also started for the construction of the road leading to the MAKARIOS Satellite Earth Station site ; its completion is scheduled for January 1979.

D. MAINTENANCE

I. General Maintenance

The inland and overseas telecommunication services were kept to a very good standard of maintenance due to the efforts of the staff of the Authority for the provision of an efficient and reliable service to the public.

II. Preventive Maintenance

For the maintenance of the Strowger Exchanges the recommendations of the B.P.O. are adopted whereas for the Crossbar Exchanges those of the Japanese Post Office (N.T.T.P.C.).

For the rest of the equipment the recommendations of the manufacturers are followed.

Routine maintenance was carried out systematically throughout 1978.

III. Workshops

The Authority continued to maintain its Engineering Workshops for the repair of switchboards, teleprinters, telephone instruments, etc.

The Workshops also carried out satisfactorily the maintenance of the standby diesel alternator sets and air conditioning units, which are installed in all main and rural exchanges and repeater stations of the Authority. The Electronics Workshop continued to operate most successfully. Testing and maintenance of the electronic coin collecting boxes, electronic teleprinters, maintenance of push button telephones as well as other complicated electronic equipment are amongst its many functions.

A tape perforating machine has been designed and developed in the Electronic Laboratory to satisfy the need of telex subscribers for such a Unit. It is hoped that the production of this machine and its eventual installation will commence in 1979.

IV. Transport

The Authority maintains its own fleet of 161 vehicles. Statistical data in respect of the Authority's fleet is shown in the following table :-

	1975	1976	1977	1978
Miles run	963,000	1,026,000	1,031,000	1,104,000
Fuel Consumption (Imp. Gallons)	57,724	58,669	62,545	61,043
Oil Consumption (kg)	4,336	3,697	3,822	3,846

The Authority runs its own garage repair service. Repairs and routine maintenance work on motor vehicles are carried out by experienced mechanics.

E. GENERAL TELECOMMUNICATIONS FACILITIES

I. Broadcasts (Local)

The Authority's services and plant were made available to the Broadcasting Corporation for effecting outside local broadcasts (live programmes) from any point in Cyprus. Such broadcasts include church services, theatrical performances, fairs, Christmas celebrations, football matches, public speeches, voicecasts, etc.

During 1978, 89 outside broadcasts were effected by using the Authority's network.

II. Overseas Voicecasts

The demand for overseas voicecast was lower than in the previous year, as the following table of comparative figures shows :-

	1975	1976	1977	1978
Number of Voicecasts ..	320	177	483	253
Number of Minutes ..	13,867	10,173	44,336	11,919

III. Facsimile (Radio Pictures)

With the acquisition of the necessary equipment, the service of radio picture reception which was interrupted in 1974 after the Turkish invasion was resumed towards the end of 1978.

The following table shows comparative figures of pictures handled over the past four years.

	1975	1976	1977	1978
Transmitted	208	266	167	137
Received	—	—	—	6

IV. Communication with ships at sea (Maritime Mobile Services)

A satisfactory service was maintained throughout the year in spite of the fact that both the Transmitting and Receiving Stations continued to function from temporary locations. Both the radiotelephone and Radiotelegraph traffic handled increased in 1978.

The following tables show comparative figures of traffic handled over the last four years :-

Telephony	1975	1976	1977	1978
Calls	30,597	73,164	73,933	86,878
Minutes	124,694	315,532	310,181	357,648

Telegraphy	1975	1976	1977	1978
Telegrams	5,031	8,577	9,641	11,481
Words	85,864	201,512	185,978	225,192

Graph 'E' shows the ship/shore RT/WT traffic since 1970.

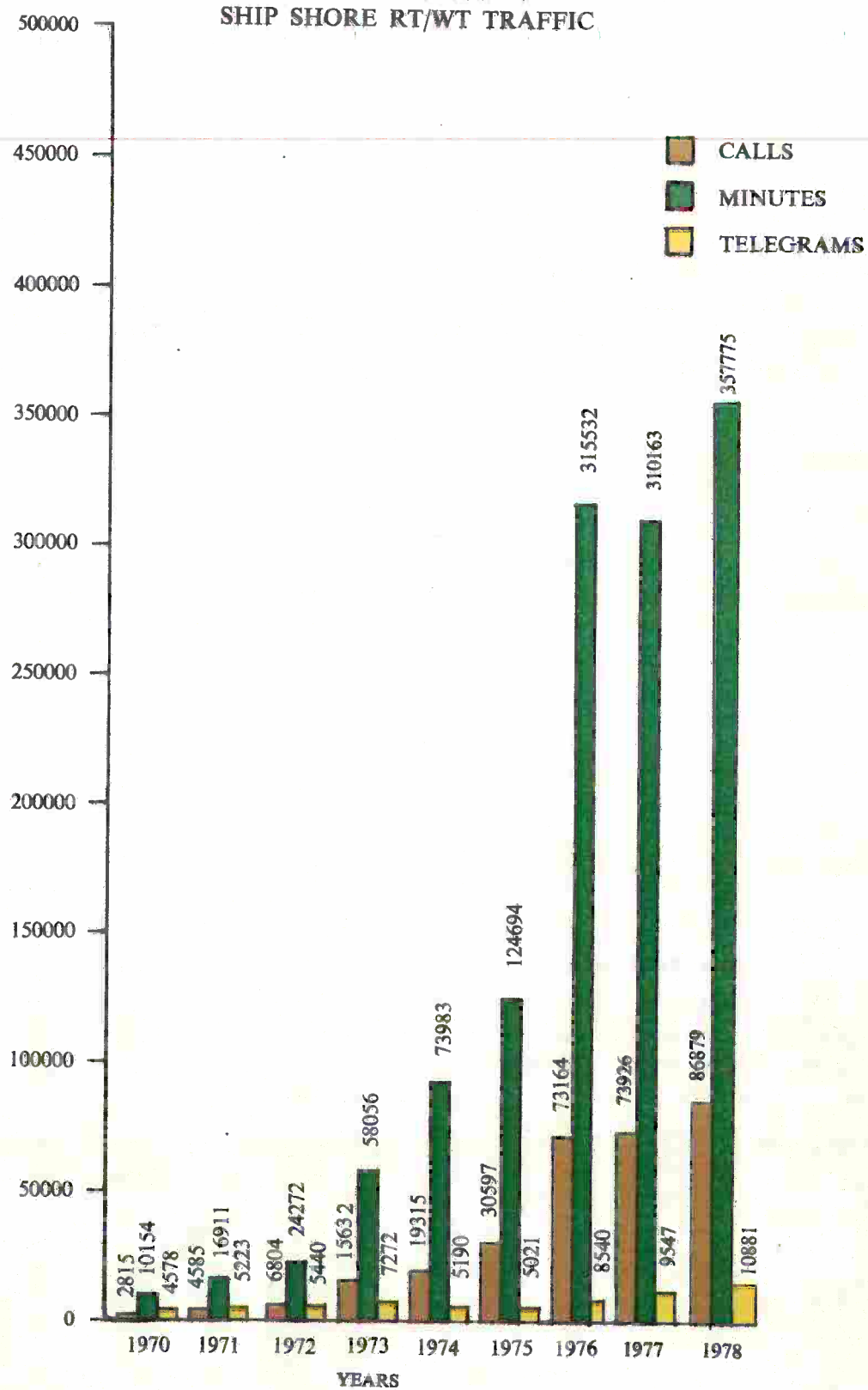
V. Civil Aviation Telecommunication Services.

All Civil Aviation Telecommunication Services are provided by the Authority on behalf of the Ministry of Communications and Works, in accordance with the procedures and recommendations laid down by the International Civil Aviation Organization (I.C.A.O.).

The services rendered during 1978 were the following :-

- (a) Radiotelephone communication with aircraft in flight within the Cyprus Flight Information Region, as well as with International Airports of Athens, Beirut, Tel-Aviv and Cairo.
- (b) Telegraph communications within the Aeonautical Fixed Telecommunications Network (AFTN) to the Airports of Athens (3 channels), Tel-Aviv (1 channel) and Beirut (2 channels).

GRAPH "E"
SHIP SHORE RT/WT TRAFFIC



The operation of the service is fully automated using the Automatic Message Switching Centre (AMSC) which was re-activated in September 1977.

The traffic volume for this service for 1978 shows an increase of 30% over that of the previous year, as the following comparable figures of the aggregate of received and transmitted messages show :-

	1975	1976	1977	1978
Number of Messages	342,935	746,290	1,639,218	2,119,642

Apart from the above overseas circuits, six additional local telegraph circuits were also provided through the AMSC for communication with :-

Larnaca Airport Civil Operations
Nicosia Area Control Centre
Akrotiri Airport
Larnaca Airport Control Tower
Nicosia Civil Aviation Department Offices
Larnaca Airport Meteorological Office.

- (c) Approach and landing radio facilities between aircraft and the Control Tower.
- (d) Radio Air Navigational Aids for the use by civil aircraft in the form of a V.H.F. Omni Range System (V.O.R.), Distance Measuring Equipment (D.M.E.), V.H.F. Direction Finder and two non-directional Radio Beacons located at Dhekelia and Pervolia Village.
- (e) VOLMET service in the form of recording equipment and VHF transmitter for automatic transmission of weather reports to aircraft in flight.

VI. Meteorological Service

A reliable and continuous Mufax (reception of weather charts) service and four teleprinter circuits for the reception of meteorological bulletins were provided by the Authority for the Ministry of Agriculture and Natural Resources.

3. TELEPHONE, DATEL, TELEX AND TELEGRAPH OPERATING SERVICES.

I. GENERAL

Both, the national and international networks operated satisfactorily with their utilization much improved during the year under review.

Every effort was made to develop further the automatic mode of operation for all telecommunication services, so as to provide better quality and improved grade of service to subscribers.

In addition, recognizing the requirements of certain subscribers with computer communication needs, a new service called DATEL (Data transmission over the public telephone network) was officially introduced towards the end of the same year.

New international routes were also introduced, in order to facilitate and secure smooth flow of the traffic with the rest of the world.

Details on each service are given as hereunder :-

II. TELEPHONE

The familiarization of subscribers with the International Subscriber Dialling (ISD) contributed to the improvement of the utilization of the service. As a result, about 93 per cent of the outgoing international traffic was dialled directly by the subscribers. The interference of Telephone Operators was kept to a minimum, only in cases where ISD was not available and where special facilities such as Personal Calls, Collect Calls and Credit Card Calls were required.

In 1978, seven more countries became available on ISD service which brought the total number of countries connected on ISD to 61. Thus, 90% of the World's telephones were available to Cyprus subscribers' finger tips ; on the other hand, telephone subscribers in Cyprus could be reached through ISD from 27 countries as compared with only 15 in 1977. Cyprus was directly connected with three additional countries, namely Australia, Austria and Sweden, bringing the direct telephone relations from nine in 1977 to twelve by the end of 1978.

All the above improvements in the network, together with the economic development, account for most of the growth in the volume of traffic which reached 24 per cent for the outgoing and 18 per cent for the incoming direction.

Data showing Traffic, International Telephone circuits and Cyprus position on the Global Telephone Network for the last three years is summarized in the tables herebelow.

(a) *Traffic*

SERVICE	1976	1977	1978	1978/1977 Growth %
INTERNATIONAL (Outgoing)				
ISD Calls (minutes)	4,711,932	6,036,190	7,803,418	29.28
Through Operator (minutes)	730,823	739,601	598,313	-19.10
INLAND				
Dialled Calls (Units)	170,505,000	195,761,874	238,214,942	21.69
Through Operator (Calls)	510,392	348,444	142,166	-59.20

(b) *Direct International Telephone Circuits*

COUNTRY	1976	1977	1978
AUSTRALIA	—	—	2
AUSTRIA	—	—	9
CANADA	4	4	4
FRANCE	8	12	14
GERMANY F.R.	10	11	15
GREECE	104	104	112
ISRAEL	8	8	12
ITALY	8	10	10
LEBANON	8	28	28
SWEDEN	—	—	6
U.K.	55	77	88
U.S.A.	4	4	8
TOTAL	209	258	308

(c) *Cyprus on the Global Telephone Network*

SERVICE	NUMBER OF COUNTRIES					
	OUTGOING			INCOMING		
	1976	1977	1978	1976	1977	1978
ISD	39	54	61	10	15	27
Semi-Automatic	13	11	9	17	28	16
Manual	78	76	72	103	98	99
TOTAL	130	141	142	130	141	142

III. DATEL SERVICE

The continuous increase of the use of computers in Cyprus and the pressing need to exchange data information, impelled the introduction of the DATEL service which had been widely used in the developed countries. The Government approved the introduction of this service on the 10th November 1978 and it was scheduled for operation early in 1979.

DATEL service is the transmission of data over the public telephone network at speeds up to 2400 bits per second, much faster as compared with the speed of 50 bits per second of TELEX service. This high speed is essential for computer communication.

DATEL service, like any other service, could be used for both, National and International communications.

According to the Regulations in force, the network, as well as the MODEMS (interface of terminal equipment with the telephone network) must be provided by the Authority on a rental basis, while the subscriber must provide the terminal equipment.

The introduction of DATEL service could be considered as another important step contributing to the preservation of Cyprus among the developed countries in the field of Telecommunications.

IV. TELEX

The upward trend experienced during the last few years continued in the year under review, for both, traffic and circuits.

Direct TELEX service was established with 2 more countries, Netherlands, and Belgium, bringing the total number of countries directly connected with Cyprus to 13, by the end of this year.

Automatic TELEX service was provided to 103 countries and manual service to the rest of the world, via the 13 direct telex routes connected on the Nicosia computerized automatic international TELEX exchange.

Data showing Traffic and International TELEX circuits for the last three years is shown in the tables herebelow :

(a) Traffic

SERVICE	1976	1977	1978	1978/1977 Growth %
INTERNATIONAL (Outgoing)				
Calls	421,040	518,844	639,237	23.2
Minutes	1,338,037	1,577,411	1,970,572	24.9
INLAND				
Calls	153,035	181,918	221,856	21.9
Minutes	384,446	435,037	540,037	24.2

(b) *International Telex Circuits*

COUNTRY	1976	1977	1978
AUSTRIA	2	5	7
BELGIUM	—	—	6
FRANCE	8	11	13
GERMANY F.R.	10	11	11
GREECE	23	25	25
ISRAEL	6	6	8
ITALY	12	12	13
LEBANON	4	7	7
NETHERLANDS	—	—	6
SWEDEN	4	3	3
SWITZERLAND	8	12	12
U.K.	33	43	43
USA (ITT)	3	4	4
USA (RCA)	2	4	4
USA (WUI)	3	5	6
TOTAL	118	148	168

V. TELEGRAPH

International telegram service was available to all parts of the world.

The service continued to be provided via the direct telegraph routes connected on the Automatic Message Switching Centre (AMSC) which was re-activated in 1977 after repair of serious damages made during the Turkish invasion of Cyprus in 1974. The AMSC functioned quite satisfactorily and handled automatically terminal and transit telegram traffic for Public and Civil Aviation (ICAO) services.

Nine international direct telegraph routes linked Cyprus with the following countries :

- Canada
- France
- Germany F.R.
- Greece
- Israel
- Italy
- Lebanon
- Sweden
- United Kingdom

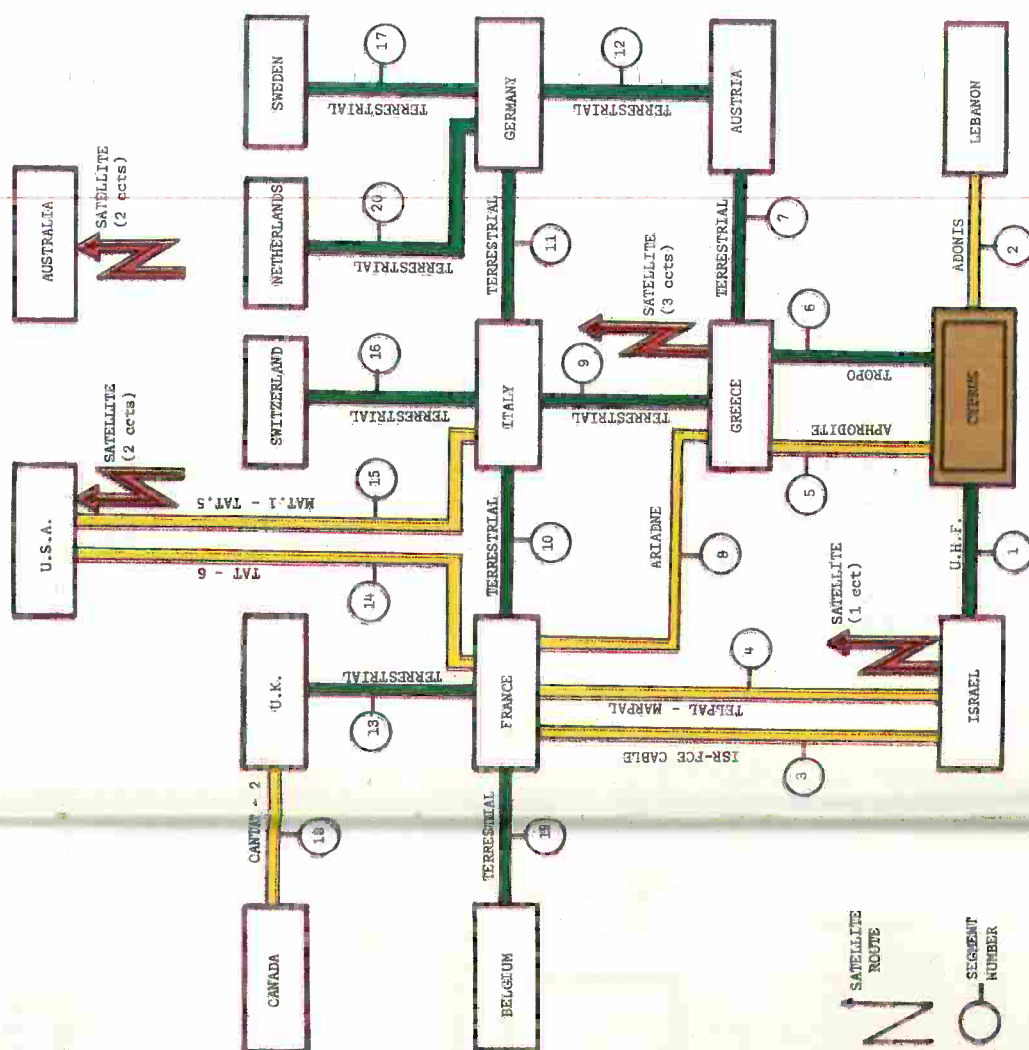
The telegram traffic continued to be adversely affected by the automation and improvement of the international telephone and TELEX services as indicated in the table herebelow :

SERVICE	1976	1977	1978	1978/1977 Growth %
INTERNATIONAL				
(Outgoing)				
Telegrams	90,624	77,450	70,864	-8.5
Words	2,308,963	1,966,661	1,863,147	-5.3
INLAND				
Telegrams ..	47,745	74,848	73,743	-1.5
Words ..	828,333	1,326,350	1,348,463	+1.7

CYRUS TELECOMMUNICATIONS AUTHORITY
TELECOMMUNICATIONS DEPARTMENT
CIRCUIT CONTROL

DIRECT CIRCUITS PER COUNTRY										
COUNTRY	TELEPHONE			V			TELEX		TG	
	AUTO	SEMI	M	F	F	AUTO	B/V			
	O/G I/C P/W	O/G I/C P/W		T	T	O/G I/C B/V				
AUSTRALIA	6	3	2					3	3	7
AUSTRIA										
BELGIUM			4							
CANADA							1	6	7	1
FRANCE	6	8		6	1		1	5	6	1
GERMANY	8									
GREECE	4	53	6	7	3	3	3	11	14	1
IRELAND										
ISRAEL	5	6					1	4	4	1
ITALY	5	3				2	1	8	5	1
JAPAN	8	8	3	3	6	1	4	3	3	1
NETHERL.								3	3	1
NORWAY			2							
SWEDEN	4			2			1	6	6	
SWITZERL.										
U.K.	34	54					2	25	18	1
U.S.A.	2	6					1			14

TOTAL CIRCUITS PER SEGMENT									
SEGMENT NUMBER	TELEPHONE						V	TELEX	T5
	AUTO		SEMI		CH	T			
	O/G	I/C	B/W	O/G						I/C	B/W
1	6	7	1				1	4	1
2	3	8	1	3	3	5	1	4	1
3			1						
4		10							
5	102	112	11	5	13	3	10	57	4
6	8	10		1		3			
7	12	5				2			7
8	22	12	7				4	34	2
9	33	52	1	4	3		3	22	2
10	22	39					1	3	1
11	6			4	1		1	3	1
12	8	2				2			1
13	34	54	4				2	25	1
14	2		3				1	14	
15			1				1	5	5
16									
17			4			2			3
18									1
19								3	3
20								3	3



4. ADMINISTRATION AND STAFF

I. TRADE UNIONS-STAFF RELATIONS AND JOINT COMMITTEES

The industrial peace within the Authority during 1978 resulted in satisfactory Management/Staff relations and good cooperation which led to successful implementation of the Authority's development plans for wider and better service to the public.

Negotiations on Union claims, which by the end of the year 1977 were still in progress, resulted in an agreement in May 1978, providing for Salary and Wage increases of 13%, (6% or £72. – whichever is the higher as from 1st January 1978 and 7% as from 1st January, 1979) and fringe benefits increases of 2% as from 1st January, 1978.

II. JOINT CONSULTATIONS

The Authority's lively interest in all staff problems and the staff co-operation to this effect, resulted in fruitful functioning of Joint Management Staff Committees as hereunder :-

1. Staff Safety and Welfare

(a) *Safety*

The Safety Committee continued its efforts during the year towards the prevention of accidents and to this effect the following action was taken.

- (i) Appropriate Safety posters were exhibited on all Safety Boards.
- (ii) All first aid boxes provided by the Authority were properly maintained with prescribed contents.
- (iii) The Authority's offices and other places of work were regularly inspected and the fire precautions equipment installed in the Authority's premises was properly maintained.
- (iv) All accidents reported during the year were promptly investigated and every effort was made for their reduction to the minimum.

Accidents reported during the year and comparison with the previous year :

	1977	1978
Accidents which did not necessitate sick leave	5	6(1)*
Accidents necessitated 1—3 days sick leave	5(1)*	6(2)*
Accidents necessitated 4—30 days sick leave	16(2)*	10(1)*
Accidents necessitated over 30 days sick leave	3(1)*	5(2)*
Fatal Accidents	—	—
	29	27

(*Figures in parenthesis represent Traffic Accidents to employees proceeding from their residence to the place of work and/or vice versa).

(b) *Welfare*

The Joint Management/Staff Welfare Committee did its best to promote the welfare of the staff. Some of its activities are detailed hereunder:-

- (i) The construction of the Holiday Centre at Pedhoulas, which had to be postponed, will be considered in due course.
- (ii) Christmas presents generously donated by OTE (Greek Telecommunications Organization) were distributed to the children of the employees.
- (iii) Government Savings Bonds have been distributed to the children of all displaced employees of the Authority and the Fund rendered financial assistance to a number of deserving cases amongst the staff and to families of deceased employees.

All the expenses incurred during the year were paid by the Authority.

2. Establishment - Promotions - Advancement of Staff

The Authority in implementing the relative agreement with the Union through the adhoc committee appointed in accordance with the provisions of the staff rules and regulations, proceeded to 163 promotions and transfers to other salary scales.

Comparison of staff strength for the year 1977 - 1978

							1977	1978
Administration & Accounts	..	..	..	..	..	..	263	260
Engineering	..	..	..	..	..	..	1,038	1,100
Telegraph Operating	..	..	..	..	..	..	137	138
Telephone Operating	..	..	..	..	..	..	174	171
							<u>1,612</u>	<u>1,669</u>
Monthly Paid	..	..	..	..	..	..	1,499	1,547
Weekly Paid	..	..	..	..	..	..	113	122
							<u>1,612</u>	<u>1,669</u>
Less:								
Turkish employees not attending to duty	..	..					255	255
							<u>1,357</u>	<u>1,414</u>

3. Pension and Provident Funds

The Authority's Pension and Provident Funds mentioned hereunder were satisfactorily administered by their respective committees:-

- (a) CYTA Permanent Monthly Paid employees Superannuation Fund.
- (b) CYTA Permanent Monthly Paid employees Provident Fund.
- (c) Weekly Paid employees Provident Fund.

4. Training.

The Authority bears always in mind the fact that the progress of technology is rapid and that its staff should be familiar with new trends, equipment and methods, if they are to cope successfully with the incessant expansion and modernization of its services.

Therefore, the Authority, in its desire to provide opportunities for proper training to its personnel, ensures training in its own Training Centre in Nicosia, training on the site, training via correspondence courses, and finally training abroad either in institutions or suppliers establishments.

The Authority's expenses for Training during 1978 amounted to £79,666.- (£21,861 were spent in 1977) and included the following:-

(i) *Training in CY.T.A's Training Centre*

(a) Two courses on UHF Equipment	10 employees
(b) One course on loud-speaking telephones	8 "
(c) Two courses on Crossbar PABXs	11 "
(d) Two courses for new recruits on overhead and underground construction	38 "
(e) One course on basic electricity, radio and telephony for new recruits	21 "
(f) One course on telephony for new recruits	17 "
(g) One course on radio and line transmission	11 "
(h) One course on Crossbar Telephone Exchanges	21 "

(ii) *Training Abroad*

- (a) Two Engineers of the Authority attended a 15-days training course on Air Traffic Control Consoles in Florida, U.S.A.
- (b) One Engineer of the Authority attended a 5-weeks Commonwealth Maintenance Training Seminar in U.K.

(iii) *Miscellaneous Training Courses*

- (a) Twenty members of the Authority's technical staff attended a 52-hour course on electrical machines at the Productivity Centre.
- (b) Sixty-Three employees of the Authority attended night classes at the Nicosia Technical Institute for the year 1978/1979. The Authority encourages its employees to attend night classes by refunding their tuition and examination fees when they succeed in passing the relevant City and Guilds examinations.
- (c) The Authority also assists its staff to purchase British Post Office Correspondence Courses and refunds 50% of their cost to those who succeed in the relevant City and Guilds examinations.

5. Medical Funds - Medical Treatment - sick Leave

(a) Monthly Paid Personnel

All monthly paid employees of the Authority are members of the existing CYTA Medical Fund, which provides medical aid to members at approved rates, in accordance with the rules of the Fund.

The Administration of the Fund is carried out by a committee and it is financed jointly by its members and the Authority, the employees contributing 1% of their basic salary and COLA and the Authority 2%. In addition a special financial assistance, by an amount of £7,000.-, was granted for this year to the Fund by the Authority through the Welfare Fund.

(b) Weekly Paid Personnel

All the regular weekly paid employees are members of the Government Social Security Scheme and enjoy sick leave and medical treatment in accordance with the rules of the scheme.

The membership to the Fund provides a contribution of 1% of the wages of each member and of an equal amount of contributions by the Authority.

(c) Sick leave granted to the monthly Paid employees

	1977	1978
Clerical Staff	946	1,064
Telephone Operating Staff	864	1,015
Telegraph Operating Staff	330	459
Technical Operating Staff	168	92
Technical Staff	602	680
Skilled Staff	2,232	2,446
Messengers & Watchmen	442	266
	<u>5,584</u>	<u>6,022</u>

(d) Sick leave granted to Weekly Paid employees

The man-days lost in respect of the sick leave granted to Weekly Paid employees during the year 1978 were 385 as against 359 in 1977.

The cost of the man-days lost (except the first day of each period of sick leave granted to employees) are reimbursed to the

Authority by the Government Social Security Scheme and the total amount reimbursed was £1,088.-.

6. Annual leave all staff

Table showing the leave entitlement:

	No. of working days	
	1977	1978
Balance brought forward from previous year	8,441	8,331
Leave entitlement for the year	39,708	39,895
	48,149	48,226
Leave granted during the year	39,818	38,951
Balance due to employees	8,331	9,275

7. Leave without pay to employees securing employment abroad.

As mentioned in the previous reports, among the decisions taken by the Authority in its effort to face the redundancy and ensure the best – under the circumstances – utilization of the services of the redundant personnel was the granting of leave without pay to employees securing employment abroad.

To this effect 20 employees were on leave without pay as at 31st December 1977. Nine (9) of them returned to their duties and eight (8) resigned from the Authority's service. Therefore the total number of staff on leave without pay as at 31st December, 1978 was 3.

8. Retirements, Resignations, Dismissals etc.

- (a) 16 Employees retired from the Authority's service.
- (b) 8 Employees resigned from the Authority's service.
- (c) 5 Employees were dismissed from the Authority's service.
(Termination of services).

9. Recruitments

86 employees (2 Engineers III, 36 Skilled Workmen Grade III, 34 Technicians Grade III, 4 Techn. Cleaners W.P., 3 Store Labourers W.P., 6 Workmen W.P. and 1 Charwoman W.P.) were recruited during 1978.

10. Missing Employees

6 employees are still missing as a result of the 1974 Turkish invasion.

5. COMMONWEALTH TELECOMMUNICATIONS ORGANIZATION (C.T.O.)

The Authority followed closely the developments within the Commonwealth Telecommunications Organization through active participation in the meetings of the Commonwealth Telecommunications Council (CTC) and its four Specialist Groups – on Network Operation (SGNO), on System Development (SGSD), on Accounting Arrangements (SGAA) and on Marketing and Tariffs (SGMT).

The Chairman of the Authority, Mr. N. S. Roussos, continued to represent Cyprus on C.T. Council and, accompanied by his adviser Mr. A. Char. Kritiotis, attended the 17th C.T. Council's annual meeting which was held in Lusaka, Zambia, in November 1978.

This meeting was formally opened by General Kingsley Chinkuli, Honourable Minister of Power, Transport and Communications. The meeting was attended by Representatives from twenty-one Partner Commonwealth Countries and the British Overseas Territories & Associated States and it was presided over by the Representative for Canada, Mr. J-C Delorme.

During this meeting, the activities and matters affecting the future of C.T. Organization were considered in detail; among these was the development of Commonwealth Transit Remuneration Plans and the possible financial implications of their application in view of their direct relation with international practices or recommendations (CCITT, CEPT, etc.) which might not be compatible with Commonwealth Telecommunication Financial Arrangements (CTFA).

With regard to the future of the Financial Arrangements, the Council decided to set up a "Committee of Council on Development of Financial Arrangements" (CCDFA) to consider the form of collaborative financial arrangements best suited to the needs of the Partnership in the 1980's.

C.T. Council examined also the report of the C.T. Bureau Review Group and accepted almost all the recommendations put forward and aimed at re-organizing and strengthening of C.T. Bureau.

The Authority was also represented on the four Specialist Groups, namely on System Development (SGSD) and Network Operation (SGNO) by the Chief Engineer, Mr. G. C. Papaioannou, on Accounting Arrangements (SGAA) by the Assistant Chief Accountant, Mr. S. Modestou and on Marketing and Tariffs (SGMT) by the Assistant Telecommunications Officer, Mr. A. Ch. Kritiotis.

The Specialist Group on Network Operations (SGNO) accepted the invitation of Cyprus to host its 7th annual meeting planned to take place in Nicosia, in October 1979.

6. FINANCIAL REPORT

NET SURPLUS

The net revenue surplus for the year of £2,203,236 is by £36,770 lower than that of 1977 (£2,240,006). This is due to the fact that a sum of £376,165.— was paid for special contribution as against £83,584.— for 1977. Had it not been for this difference between the two years the 1978 revenue surplus would have been by £255,811.— higher than that of the 1977.

OPERATING REVENUE

The Operating Revenue by service was as follows:—

	1977 £	1978 £	% Increase/ (Decrease)
Telephone Services	6,982,008	8,041,378	15.2
Telegraph Services	405,915	361,514	(10.9)
Telex Services	819,158	983,376	20.0
Other Services	275,533	262,055	(4.9)
	<u>8,482,614</u>	<u>9,648,323</u>	13.7

Although the revenue from the Telegraph services continued to decrease, there has been an increase in the revenue from the Telephone and the Telex services. This resulted from a greater traffic volume of both services and from additional subscribers. During the year there has been a net addition of 5,699 telephone and 203 telex subscribers.

The main contribution to the 15.2% increase in the Telephone services was from the Inland Calls (8.3%) and the Overseas Calls (5.3%), and to the 20% in the Telex services (from the Rentals 6.1% and the Overseas Calls 13.5%).

OPERATING EXPENSES

The Operating Expenses for the year 1978 were as follows:—

	1977 £	1978 £	
System Operational:—			
Telephone Services	3,524,241	3,987,087	13.1
Telegraph Services	532,431	639,775	20.2
Telex Services	320,739	383,671	19.6
Other Services	193,449	260,929	34.9
Establishment	175,154	218,635	24.8
Administration	723,024	879,321	21.6
	<u>5,469,038</u>	<u>6,369,418</u>	16.5

With the exception of staff costs and depreciation there has been only a slight increase in the 1978 Operating Expenses over those of 1977. Of the 16.5% overall increase, 12.2% is attributable to the Staff Costs, 1.9% to the Depreciation and 2.4% to the balance of the items.

The Depreciation amounts to £1,649,061 (1977 £1,544,739) and the increase represents the depreciation on the additions to the fixed assets.

Operating staff costs went up by £664,962.- and reached the amount of £3,837,320.- (1977 £3,172,358.-) mainly as a result of the 6% revision of salaries from 1.1.1978, the 9.66% increase in the Cost of Living Allowance (4.83% on 1.1.1978 and 4.83% on 1.7.1978) and the normal increments.

FINANCIAL EXPENSES

This year's financial expenses include £100,000 contribution to the Archbishop Makarios III Fund and £38,342 financial assistance to the displaced employees of the Authority.

The above additions were set off mainly from a reduction in the loss of exchange and the bad debts.

DEVELOPMENT

The net additions to the fixed assets during the year were £2,226,988 and is arrived at as follows:-

(i) Telecommunications Installations:-

Telephone Exchanges, Line Plant and Apparatus	£1,666,299
Telex Exchanges and Apparatus ..	251,214
Telegraph Plant and Apparatus ..	35,163
Radio and Repeater Stations ...	496,595
	<hr/>
	2,449,271

(ii) Other Expenditure:-

Land and Buildings	58,115
Motor Vehicles	35,050
Furniture and Office Equipment ..	22,372
Tools	33,658
	<hr/>
	149,195

2,598,466

Less:-

Installation and Removal Fees ..	£166,106
Disposals	205,372
	<hr/>
	371,478

2,226,988

A substantial portion of the development (70%) was financed from internal sources and the balance of 30% from external borrowing (credit facilities from overseas suppliers).

CONTRACTUAL COMMITMENTS

The contractual commitments as at 31st December, 1978 amounted to £5,152,000 (1977 £1,380,000). They represent mainly outstanding orders for additional plant and equipment of which £1,865,000 refer to the Satellite Earth Station, which is expected to be delivered and installed in the coming year.

LONG-TERM LIABILITIES

These consist of:-

- (a) £3,006,711 due to suppliers for equipment and services and are repayable over a period between 2 and 10 years at rates of interest ranging between 6% and 9% per annum.
- (b) £1,613,761 representing the Authority's liability to the Staff Superannuation and Provident Funds; £51,785 of this amount will be repaid over a period of 3 years and the balance of £1,561,976, which is the balance of the deficiency in the Superannuation Fund, will be repaid over the next 31 years by equal annual instalments at 5% interest per annum.

RESERVE FUND

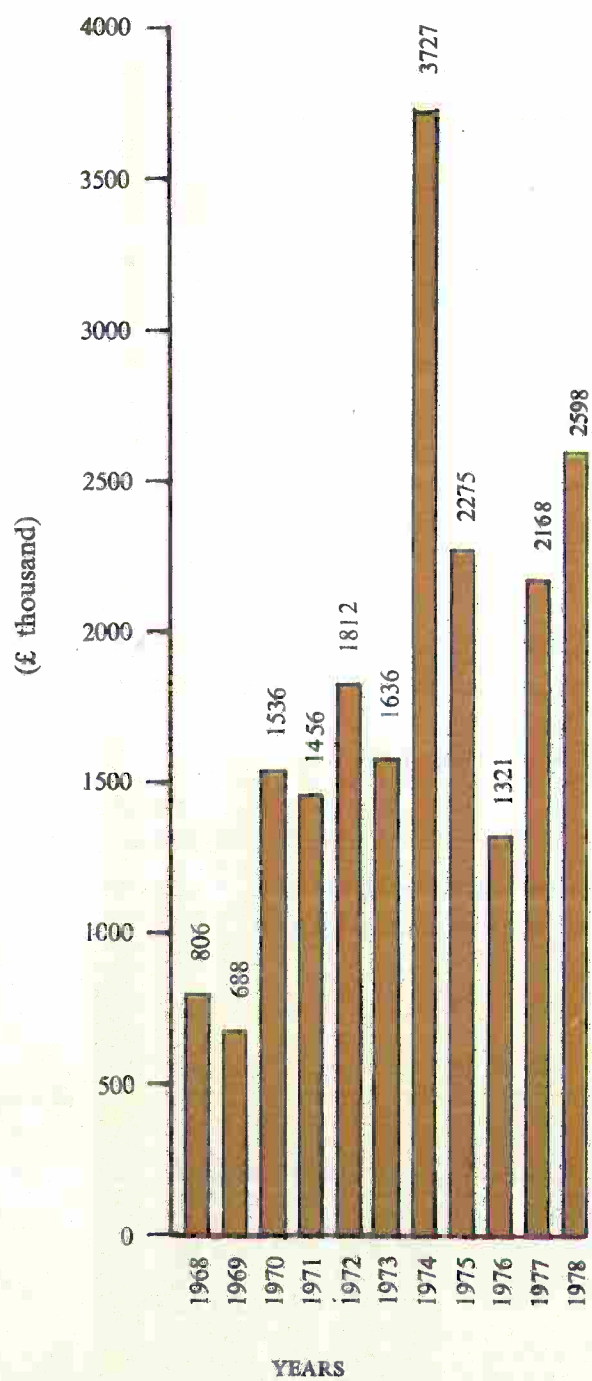
The Reserve Fund as at 31st December, 1978 amounted to £9,200,443.- as against £7,111,894.- of 31st December, 1977.

N. S. ROUSSOS
Chairman

A. N. STYLIANIDES
General Manager

S. A. KOKKINIDES
Secretary

CYPRUS TELECOMMUNICATIONS AUTHORITY
TABLE SHOWING CAPITAL EXPENDITURE 1968-1978



CYPRUS TELECOMMUNICATIONS AUTHORITY

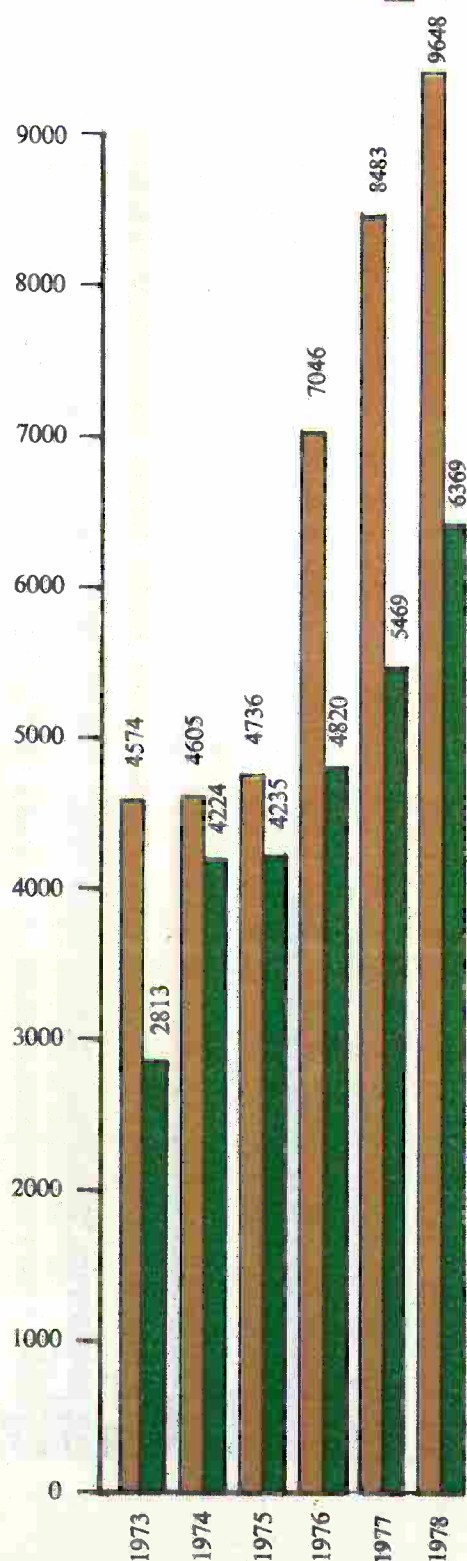
TABLE SHOWING OPERATING REVENUE AND EXPENSES 1973-1978

	I	II
1968	1722	1525
1969	2065	1771
1970	2292	1877
1971	2713	2200
1972	3551	2512

I OPERATING REVENUE
II OPERATING EXPENSES
(£ Thousand)

■ OPERATING REVENUE

■ OPERATING EXPENSES

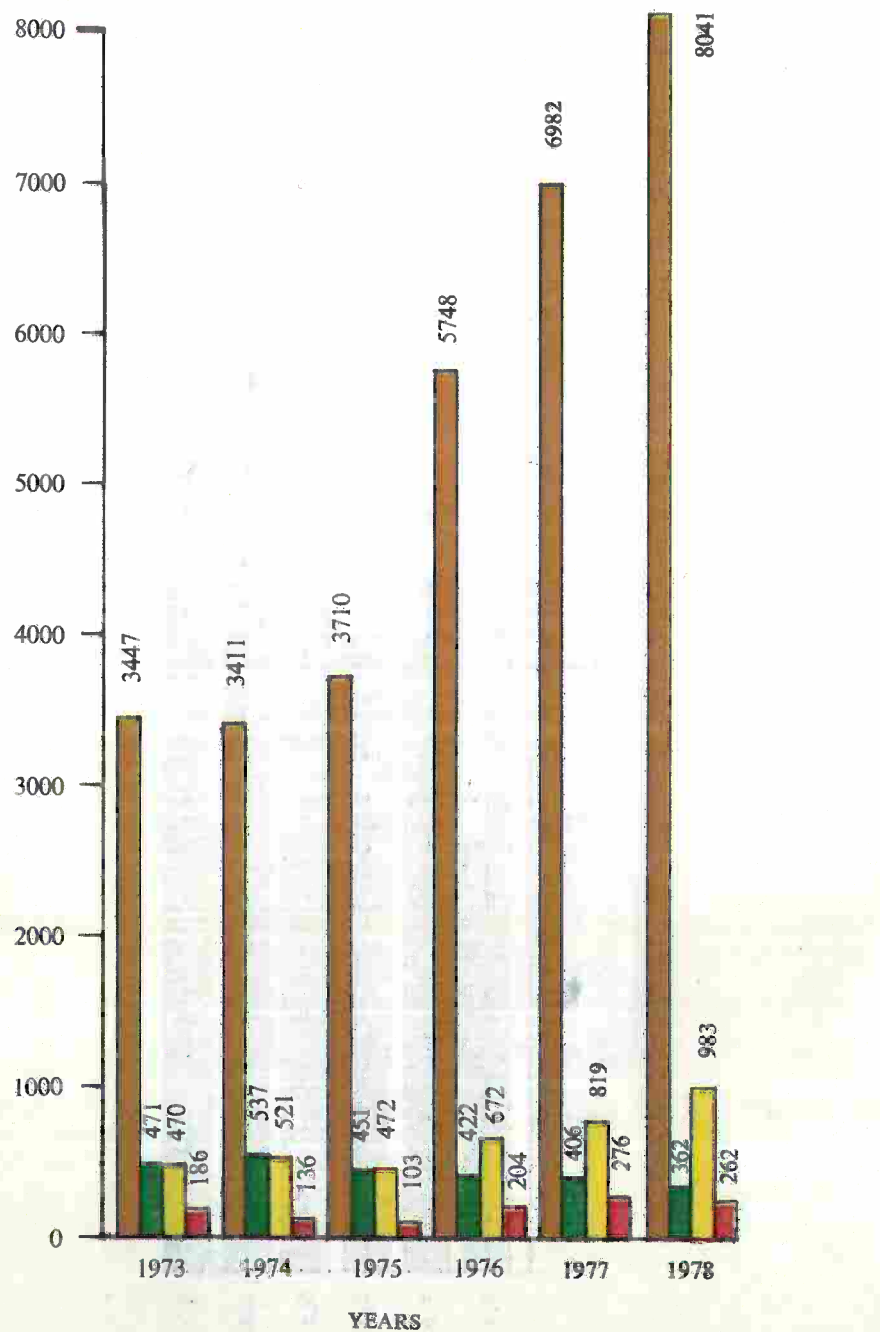


CYPRUS TELECOMMUNICATIONS AUTHORITY

TABLE SHOWING OPERATING REVENUE 1973-1978

I TELEPHONE REVENUE
II TELEGRAPH REVENUE
III TELEX REVENUE
IV OTHER REVENUE
(£ thousand)

	I	II	III	IV	
1968	1175	407		140	TELEPHONE REVENUE
1969	1380	411	81	193	TELEGRAPH REVENUE
1970	1550	381	154	207	TELEX REVENUE
1971	1890	410	234	179	OTHER REVENUE
1972	2665	413	302	181	



CYPRUS TELECOMMUNICATIONS AUTHORITY

ANNUAL ACCOUNTS 1978

Contents

	<i>Page</i>
Report of the Auditors	59
Balance Sheet	60
Revenue Account	61
Notes on the Accounts	62
Statement of Source and Application of Funds	70
Return on Capital Employed	71

REPORT OF THE AUDITORS

We have audited the annexed Balance Sheet, Revenue Account and the Notes thereon of the Cyprus Telecommunications Authority and have obtained all the information and explanations we considered necessary. In our opinion the Authority has kept proper books of account and the Balance Sheet and Revenue Account are in agreement therewith.

Subject to the reservations contained in Notes 2 and 18, in our opinion the said Accounts, which have been prepared under the historical cost convention, give a true and fair view of the state of affairs of the Authority at 31st December, 1978 and of the surplus for the year ended on that date.

Scottis & Polydorides
Chartered Accountants

"Pantheon" Building,
40, Evagoras Avenue,
NICOSIA.

30th June, 1979.

CYPRUS TELECOMMUNICATIONS AUTHORITY

BALANCE SHEET 31st DECEMBER, 1978

	1978 £	1977 £
Assets		
Fixed Assets (Notes 1 (b) 2, 3)	11,854,037	11,218,477
Investments (Note 4)	731,122	577,579
Long Term Debtors (Note 5)	247,145	345,330
Current Assets (Note 6)	6,262,519	5,580,931
Deferred Debits (Note 7)	2,342,580	2,488,786
	<u>£21,437,403</u>	<u>£20,210,703</u>
Liabilities and Reserve Fund		
Loans and other long term liabilities		
Government loans (Note 8)	3,126,800	3,161,351
Debenture stocks (secured) (Note 9)	1,250,000	1,250,000
Other long term liabilities (Note 10)	4,620,472	5,582,293
	8,997,272	9,993,554
Current liabilities (Note 11)	2,827,012	2,682,642
Deferred credits (Note 12)	412,676	431,543
Total liabilities	<u>12,236,960</u>	<u>13,107,739</u>
Reserve fund (Note 13)	<u>9,200,443</u>	<u>7,102,964</u>
	<u>£21,437,403</u>	<u>£20,210,703</u>

The notes on the Accounts form an integral part of these Accounts.

N. S. Ronsson
Chairman

A. N. Stylianides
General Manager

S. Modestou
Assistant
Chief Accountant

CYPRUS TELECOMMUNICATIONS AUTHORITY
REVENUE ACCOUNT
FOR THE YEAR ENDED 31st DECEMBER, 1978

	1978 £	1977 £
Operating Revenue (Note 14)	9,648,323	8,482,614
Deduct:		
Operating Expenses (Note 15)	6,369,418	5,469,038
Net operating revenue	3,278,905	3,013,576
Add:		
Investment and other income	149,174	208,455
	3,428,079	3,222,031
Deduct:		
Financial and other expenses (Note 16)	848,678	898,441
Special contribution (Note 17)	376,165	83,584
	1,224,843	982,025
Revenue surplus for the year carried to reserve fund	£2,203,236	£2,240,006

The notes on the Accounts form an integral part of these Accounts.

CYPRUS TELECOMMUNICATIONS AUTHORITY
NOTES ON THE ACCOUNTS
FOR THE YEAR ENDED 31st DECEMBER, 1978

I. Accounting Policies

(a) Basis of accounting

The accounts are prepared under the historical cost convention.

(b) Fixed Assets

Amortisation of leasehold properties is provided so as to write off the cost of these properties by equal annual instalments over the period of the lease. Depreciation on other assets is calculated on a straight line basis at annual rates estimated to write off each asset within its normal useful life. Freehold land is not depreciated.

In respect of additions to fixed assets during a financial period, a full year's depreciation charge is applied and in the case of disposal of fixed assets during a financial period no depreciation charge is applied in that period.

Capital work projects undertaken by the Authority are valued individually at material cost plus an addition for direct labour and other appropriate expenses.

Interest payable on the suppliers' extended credit on the purchase of plant and equipment is not included in the capital cost of the respective asset but is written off to revenue as it arises.

(c) Debtors

Known bad debts are written off and specific provision is made for any considered to be doubtful of collection.

(d) Stores

Stores, which include plant and equipment for current development, are physically verified by continuous stock takings carried out throughout the year; they are valued at cost less provision for obsolescence.

(e) Retirement benefits

Liabilities for pension and other retirement benefits are provided by payments to the respective funds which operate independently from the finances of the Authority. Liabilities which relate to past service are being paid, with interest, over a period of years.

The normal contributions and an appropriate part of the deficiency in respect of past services are charged against current revenues. The balance of the deficiency which is carried forward for future write off is shown in the deferred debits.

(f) *Excavations*

Expenditure on excavations for the line plant is written off by equal instalments over a period of three years. The amount of expenditure remaining to be written off is included in the deferred debits.

(g) *Repairs and renewals*

Expenditure on repairs and renewals is written off in the year in which it is incurred.

(h) *Balances and transactions in foreign currency*

Foreign currency balances are translated into Cyprus pounds at the rates of exchange ruling at the end of the financial year. Exchange differences on such translation are, as from the current year, dealt with through the reserve fund instead of being carried forward in the deferred accounts. In consequence of this change the comparative figures for the previous year have been restated and the effect of this change on the reserve fund is shown in Note 13.

Realised exchange differences attributable to the purchase of fixed assets for specific projects are capitalised until the completion of the project whilst unrealised differences are carried forward and are capitalised in the year of completion. Otherwise, exchange differences are dealt with through the Revenue Account only in so far as they are realised.

2. *Assets in occupied areas*

Certain fixed assets and other equipment and materials in stores are situated in the territory occupied by the Turkish invasion forces or in areas to which the Authority, due to present conditions, has no access. The book value of the items in stores is £459,852 but that of the fixed assets, in view of the particular circumstances, cannot be reasonably ascertained. No provisions have been made in these Accounts for any possible loss of or damage to, the aforesaid property but on the fixed assets a full year's depreciation has been provided.

The Authority is unable to express an opinion as to the present state of these assets which in the Balance Sheet are reflected at their respective book values.

3. Fixed assets

	Cost	Depreciation	Written down value	
			1978	1977
	£	£	£	£
Freehold land and buildings	1,255,754	240,027	1,015,727	1,020,344
Leasehold buildings	61,648	27,614	34,030	35,884
Exchanges, telegraph and line plant and apparatus	18,382,706	8,373,173	7,009,533	7,102,095
Radio stations	1,206,898	815,658	390,920	361,376
Sub-marine cables	2,457,732	444,362	2,013,370	2,160,840
Vehicles, tools and equipment	393,479	327,058	66,421	34,568
Office furniture and equipment	215,634	143,055	72,579	65,463
	<u>20,973,841</u>	<u>10,370,951</u>	<u>10,602,690</u>	<u>10,786,370</u>
Assets under construction	1,251,447	—	1,251,447	437,907
	<u>£22,224,988</u>	<u>£10,370,951</u>	<u>£11,854,037</u>	<u>£11,218,477</u>
1977:	<u>220,081,898</u>	<u>28,833,421</u>	<u>£11,218,477</u>	

The depreciation of fixed assets for the year ended 31st December, 1978, amounted to £1,649,061 (1977: £1,544,739) and is reflected in the operating expenses.

4. Investments

At cost, unquoted:

Trade £93,716. This represents the Authority's investment share in the International Telecommunications Satellite Organisation ("Intelsat"). Under the terms of allotment the Authority is required to make capital contributions, proportionate to its investment share, towards future development projects undertaken by Intelsat.

Other £637,406. Under the terms of issue of the 7½% Guaranteed debenture stock 1980/82 and 1981/83 the Authority is required to set aside to a sinking fund amounts in order to provide for the redemption thereof. The management of the said sinking fund is vested in the Central Bank of Cyprus.

In the opinion of the Authority the value of the investments is not less than the amount at which they are stated in the Balance Sheet.

5. Long term debtors

These are repayable by equal annual instalments till 1982 with interest at 8% per annum.

6. Current assets

	1978 £	1977 £
Stores (Notes 1 (d), 2)	2,444,422	2,704,976
Debtors and other accounts less provisions (Note 1 (e))	2,384,986	1,951,582
Bank balances and cash in hand	1,433,111	923,473
	<u>£6,262,519</u>	<u>£5,580,031</u>

7. Deferred debits

	1978 £	1977 £
Interest attributable to subsequent years	648,255	862,458
Deficiency in respect of past service retirement benefits less amounts written off (Note 1 (e))	1,318,955	1,363,968
Expenditure on excavations for the line plant less amounts written off (Note 1 (f))	186,024	122,213
Other expenses	189,346	120,147
	<u>£2,342,580</u>	<u>£2,468,786</u>

8. Government loans

	1978 £	1977 £
5½% Government loan 1969/83	81,365	95,079
5½% Government loan 1970/84	79,435	90,272
5% Government loan 1973/87	2,966,000	2,976,000
	<u>£3,126,800</u>	<u>£3,161,351</u>

9. Debenture stocks

	1978	1977
	£	£
7 ½% Guaranteed debenture stock 1980/82	600,000	600,000
7 ½% Guaranteed debenture stock 1981/83	650,000	650,000
	<u>£1,250,000</u>	<u>£1,250,000</u>

The 7 ½% Guaranteed debenture stock 1980/82 is repayable at par on 30th November, 1982 or at the option of the Authority at par at any time between 30th November, 1980 and 30th November, 1982.

The 7 ½% Guaranteed debenture stock 1981/83 is repayable at par on 31st March, 1983 or at the option of the Authority at par at any time between 31st March, 1981 and 31st March, 1983.

10. Other long term liabilities

	1978	1977
	£	£
Suppliers and other credits	3,006,711	3,905,103
Liabilities in respect of past service retirement benefits (Note 1 (e))	1,613,761	1,677,160
	<u>£4,620,472</u>	<u>£5,582,263</u>

11. Current liabilities

	1978	1977
	£	£
Creditors and other accounts	<u>£2,827,012</u>	<u>£2,682,642</u>

12. Deferred credits

	1978	1977
	£	£
Rentals and installation fees relating to subsequent years	178,714	166,241
Deposits for recoverable works	188,350	192,912
Interest receivable relating to subsequent years	45,612	72,790
	<u>£412,676</u>	<u>£431,943</u>

13. Reserve fund

	1978 £
Balance 31st December, 1977	7,111,894
Adjustment for the change in accounting policy relating to net exchange differences on translation of foreign currency balances at 1st January, 1978 (Note 1 (h))	8,930
Balance 1st January, 1978 restated	7,102,964
Profit on sale of fixed assets (after deducting £1,247 for special contribution relating thereto)	7,550
Revenue surplus for year	2,203,236
	<u>9,313,750</u>
Net exchange differences on translation of foreign currency balances (Note 1 (h))	113,307
	<u>£9,200,443</u>

14. Operating revenue

	1978 £	1977 £
Telephone services	8,041,378	6,982,008
Telegraph services	361,514	405,915
Telex services	983,376	819,158
Other services	262,055	275,533
	<u>£9,648,323</u>	<u>£8,482,614</u>

15. Operating expenses

	1978 £	1977 £
System operational:		
Telephone services	3,087,087	3,324,241
Telegraph services	639,775	632,431
Telex services	303,671	320,739
Other services	260,929	193,449
	<u>5,271,462</u>	<u>4,570,860</u>
Establishment	218,635	175,154
Administrative	879,321	723,024
	<u>£6,369,418</u>	<u>£5,469,038</u>

The staff costs for the year amounted to £4,201,438 (1977: £3,477,343) of which £329,604 (1977: £268,969) have been charged to capital expenditure and £34,514 (1977: £36,016) to recoverable works. The balance of £3,837,320 (1977: £3,172,358) is reflected in the operating expenses.

16. Financial and other expenses

	1978 £	1977 £
Interest on Government loans and debenture stocks	252,792	254,187
Interest on suppliers' credit	261,109	278,977
Interest on liabilities in respect of past service retirement benefits (Note 1 (e))	88,808	92,236
Bank and other interest	16,415	40,709
Authority's Members emoluments and expenses	4,820	4,930
Amount written off the deficiency in respect of past service retirement benefits (Note 1 (e))	43,965	44,000
Contribution to Archbishop Makarios III Fund	100,000	—
Other	81,009	183,402
	<u>£848,678</u>	<u>£898,441</u>

17. Special contribution

Under special legislation enacted after the Turkish invasion of Cyprus, corporate bodies are liable to make quarterly contributions to the Government's Special Fund for the Relief of Displaced Persons, computed by reference to the profit made in the respective quarter.

The charge for special contribution on the quarterly profits of the year has been materially reduced by reason of accelerated capital allowances.

18. Taxation

No amounts are being set aside to provide for income tax on the annual net revenues as the position of the Authority's liability to income tax has not yet been determined.

19. Contractual commitments

Contractual commitments in respect of capital expenditure as at 31st December 1978, not provided for in these Accounts, amounted to approximately £3,152,000 (1977: £1,380,000) of which £4,093,000 is payable in foreign currency. Amounts in foreign currency have been converted into Cyprus pounds at the rates of exchange ruling as at 31st December, 1978.

20. Contingent liabilities

(a) Claims

Contingent liabilities in respect of claims against the Authority amounted to approximately £5,700 at 31st December, 1978 (1977: £700). No provisions have been made in these Accounts in respect thereof.

(b) Staff superannuation fund

Under the regulations of the contributory staff superannuation fund, the Authority is liable to make good deficiencies which may be revealed on periodic actuarial valuations of the fund. The last actuarial valuation was made in 1976.

CYPRUS TELECOMMUNICATIONS AUTHORITY

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

	1978 £	1977 £
SOURCE OF FUNDS		
Revenue surplus	2,203,236	2,240,006
Depreciation	1,649,061	1,544,739
Funds generated from operations	3,852,297	3,784,745
Deferred accounts and exchange differences	67,930	399,844
Proceeds from sale of fixed assets (net)	37,915	637,112
Decrease (increase) in stores	260,554	(642,635)
Funds from other sources	366,399	394,321
	£4,218,696	£4,179,066
APPLICATION OF FUNDS		
Additions to fixed assets	2,598,466	2,222,278
Deduct:		
Residual value of fixed assets displaced	63,476	149,788
Installation fees recovered	166,106	178,045
	229,582	327,833
	2,368,884	1,894,445
Repayment of bank loan	—	1,000,000
Repayments towards Government loans	34,551	24,216
Decrease in creditors	817,361	38,921
Increase in bank balances and cash in hand	509,638	421,362
Increase in investments	153,543	152,628
Increase in debtors	334,719	647,494
	£4,218,696	£4,179,066

CYPRUS TELECOMMUNICATIONS AUTHORITY

RETURN ON CAPITAL EMPLOYED

	Financial years ended 31st December						
	1978	1977	1976	1975	1974	1973	1972
	£000	£000	£000	£000	£000	£000	£000
Capital employed:	20,004	18,584	17,377	15,930	13,159	10,753	9,343
Annual earnings/ (losses):	2,203	2,240	1,382	(158)	(215)	1,391	672
Percentage of annual earnings/ (losses) on capital employed:	11.01%	12.1%	7.9%	(1.0%)	(1.6%)	12.9%	7.2%

Notes:

1. Capital employed represents the average of the opening and year-end reserve funds and liabilities. The liabilities have been adjusted to exclude interest attributable to subsequent years.
2. Annual earnings/ (losses) are stated after the deduction of interest and, for the years 1976-1978, after the deduction of the special contribution.

