



SCOTTISH HOME AND HEALTH DEPARTMENT

Her Majesty's Chief
Inspector of Fire Services
for Scotland
Report for 1984

*Presented to Parliament by the Secretary of State for Scotland
by Command of Her Majesty
September 1985*

EDINBURGH
HER MAJESTY'S STATIONERY OFFICE
£3.60

Cmd. 9600

Report 1984

of R. J. Knowlton, Esq., C.B.E., Q.F.S.M., F.I.FireE., F.B.I.M.

To the Right Honourable George Younger, M.P., Her Majesty's Secretary of State for Scotland.

Sir,

I have the honour to submit my Report on the Fire Services in Scotland for the year ended 31st December 1984. I was appointed to succeed P. Watters, Esq., Q.F.S.M., F.I.FireE, who retired from the post of H.M. Chief Inspector in August 1984. Before his retirement, he had inspected five brigades, accompanied by other members of the Inspectorate, and, after my appointment in September, I inspected the remaining three brigades, namely Central, Grampian and Tayside. The other members of the Inspectorate remained in post and this helped to ensure a smooth transition and continuity of advice to brigades, made easier by the fact that Mr Watters spent some time with me, before my retirement from Strathclyde Fire Brigade, helping me to understand the current policies and procedures of the Inspectorate. I would like to record my thanks for his assistance and appreciation for his long and distinguished career in the British Fire Service.

I have the honour to be,

Sir,

Your obedient Servant,

R. J. KNOWLTON.

Contents

Paragraphs

SECTION A. GENERAL

Inspections	1-2
Fire Authorities and Firemasters	3-6
Honours and Awards	7-9

SECTION B. PERSONNEL AND ADMINISTRATION

Establishments and Actual Strengths	10
Wholetime Personnel—Operational	11-17
Retained and Volunteer Personnel	18-20
Control Room (Non-operational Staff)	21-22
Discipline	23
Health	24

SECTION C. OPERATIONAL

Fires and Other Emergencies	25-28
Fatalities	29-35
Rescues	36
Road Accidents	37-38
Fire Damage in the UK	39-40
Standards of Fire Cover	41
Salvage	42
Workloads	43

SECTION D. SUPPLIES AND SERVICES

Transport	44-45
Equipment	46-47
Uniform and Personal Equipment	48-51
Water Supplies	52
Premises	53-57
Communications	58-65

SECTION E. FIRE PREVENTION

Summary	66
Education and Publicity	67-68
Inspection and Certification of Premises	69-70
Joint Fire Prevention Committee	71-72
Health and Safety Executive	73

Report 1984

of R. J. Knowlton, Esq., C.B.E., Q.F.S.M., F.I.FireE., F.B.I.M.

To the Right Honourable George Younger, M.P., Her Majesty's Secretary of State for Scotland.

Sir,

I have the honour to submit my Report on the Fire Services in Scotland for the year ended 31st December 1984. I was appointed to succeed P. Watters, Esq., Q.F.S.M., F.I.FireE, who retired from the post of H.M. Chief Inspector in August 1984. Before his retirement, he had inspected five brigades, accompanied by other members of the Inspectorate, and, after my appointment in September, I inspected the remaining three brigades, namely Central, Grampian and Tayside. The other members of the Inspectorate remained in post and this helped to ensure a smooth transition and continuity of advice to brigades, made easier by the fact that Mr Watters spent some time with me, before my retirement from Strathclyde Fire Brigade, helping me to understand the current policies and procedures of the Inspectorate. I would like to record my thanks for his assistance and appreciation for his long and distinguished career in the British Fire Service.

I have the honour to be,

Sir,

Your obedient Servant,

R. J. KNOWLTON.

	<i>Paragraphs</i>
SECTION F. TRAINING	
Scottish Fire Service Training School	74-76
Fire Service College	77-79
Fire Services Examinations Board (Scotland)	80-84

SECTION G. MISCELLANEOUS	
Scottish Central Fire Brigades Advisory Council	85-87
Research	88
Fire Service Sports and Athletics Association	89-96
Fire Services National Benevolent Fund	97-98

	<i>Pages</i>
TABLES	
1—Establishment and Actual Strength of Brigades	20-21
2—Changes in Wholetime Strength	22
3—Summary of Fires and Special Services	23
4—Fatalities	24

SECTION A

General

Inspections

1. Together with our staff my predecessor and I, between us, visited each of the Scottish brigades to verify their standards of efficiency. I am pleased to report a satisfactory outcome to these inspections, which indicate that the service in Scotland is functioning satisfactorily.

2. Additional visits were also made, either at the request of Firemasters or by arrangement, to discuss items of particular interest arising from the previous inspection visit as well as current changes affecting the service.

Fire Authorities and Firemasters

3. At the end of the year the Firemasters of the Scottish Fire Brigades were:

Central Region	Firemaster I. S. T. Adam, G.I.FireE.
Dumfries and Galloway	Firemaster J. B. Stiff, G.I.FireE., F.B.I.M.
Fife	Firemaster J. Thomson, F.I.FireE.
Grampian	Firemaster T. Bond, G.I.FireE., F.B.I.M.
Highland and Islands	Firemaster W. Shand, Q.F.S.M., G.I.FireE.
Lothian and Borders	Acting Firemaster G. Hibbard, B.A., F.I.FireE., M.R.S.H., A.M.I.E.T., A.F.I.C.D.
Strathclyde	Firemaster C. B. Halliday, M.I.FireE.
Tayside	Firemaster D. Nicoll, M.B.E., F.I.FireE.

4. It will be noted that new Firemaster appointments were made in Central Region, Dumfries and Galloway and Strathclyde. Firemaster F. G. Wilton resigned to take up an appointment as Chief Fire Officer of the County of Avon Fire Brigade, Firemaster R. F. Holland-Thomas retired because of ill health, and I retired from my post in Strathclyde to take up my present position. To Mr Wilton and Mr Holland-Thomas I wish every success in the future and I extend a welcome to my successor, who was previously the Chief Fire Officer of Northern Ireland Fire Brigade. Firemaster W. M. G. Kerr, Q.F.S.M., F.I.FireE., of Lothian and Borders Fire Brigade, also retired during the year and his post was expected to be filled early in the new year.

5. Apart from those Firemasters who resigned from their posts during the current year, Firemasters Shand, Bond and Nicoll have indicated that they will retire from service shortly.
6. The consequence of such actual and impending changes will be that seven of the eight Scottish brigades will have a new man at the helm by the time this Report is published. I look forward to establishing the same close relationship with the new Firemasters as has been maintained in the past by my predecessors.

Honours and Awards

7. The following received recognition in The Queen's Honours Lists:
- Member of the Order of the British Empire (Civil Division)
David W. Campbell, A.M.B.I.M., Assistant Firemaster, Strathclyde Fire Brigade;
- Ian McMurtrie, M.I.FireE., Assistant Firemaster, Lothian and Borders Fire Brigade.
- British Empire Medal (Civil Division)
Ian C. MacMillan, Volunteer Fireman, Strathclyde Fire Brigade;
Miss Jean Spence, Group Fire Control Officer, Strathclyde Fire Brigade.
- Queen's Fire Service Medal
William M. G. Kerr, F.I.FireE., Firemaster, Lothian and Borders Fire Brigade.
8. The Fire Brigade Long Service and Good Conduct Medal was awarded to 203 members of the Scottish Fire Service in 1984.
9. I offer sincere congratulations to all those whose service has been recognised by these awards in 1984.

SECTION B

Personnel and Administration

Establishments and Actual Strengths

10. The establishments and actual strengths of brigades are shown in detail in Table 1.

Wholetime Personnel—Operational

11. The total establishment figure for Scottish brigades is 4,375, which represents an increase of three over the total for the previous year. The actual strength total, at 4,270, reflects a shortfall of 105 (2.4%) below the establishment, compared with a shortfall in 1983 of 81 (1.85%).

12. The main shortages occur in the following brigades:

Fife	7 (1.9%)	(5 in 1983) (1.3%)
Grampian	11 (4.3%)	(2 in 1983) (0.8%)
Lothian and Borders	12 (1.8%)	(10 in 1983) (1.5%)
Strathclyde	54 (2.4%)	(46 in 1983) (2.2%)
Tayside	15 (3.7%)	(12 in 1983) (2.9%)

13. These figures relate to the position in brigades at the end of the year. Recruitment procedures, however, had already been carried out to produce a number of recruits available to attend a recruits' training course starting in the early part of 1985 and, within the first quarter of the new year, these shortages will be substantially reduced.

14. Standards of entry for recruits in the fire service in Scotland are detailed in the Fire Services (Appointments and Promotion) (Scotland) Regulations 1978. These Regulations provide for an examination for potential recruits but no national guidance has ever been issued to fire authorities on the standards required or the form of any examination. In 1977, the Central Fire Brigades Advisory Councils authorised a research project designed to produce a standard set of tests, known as ability range tests, to assess potential recruits more effectively. The Advisory Councils received the report of the research project in 1980 and recommended its distribution to fire authorities, for use by those brigades which wished to implement the tests. These were intended to identify six abilities which a competent fireman should possess. As a result of experience in brigades, some minor modifications have been made to the tests since their first use, and it has been decided to continue the voluntary trial period for a further 12 months, after which national discussions will be held to decide whether this system should be incorporated into the Regulations to make the tests mandatory for entry to fire brigades.

15. A working group has been set up to re-examine all other entry standards in the Regulations, with the aim of improving the relevance of the standards to the needs of modern fire brigades. This group is expected to start work early in 1985.

16. During the year, a total of 103 wholetime operational personnel were recruited into fire brigades in Scotland and 111 persons left the service. The figures for last year were 123 and 111 respectively.

17. An interesting point arising from the losses section of the statistical return (Table 2) is the increase in the proportion of men retiring for medical reasons. In 1984, 31 members of brigades retired from the service on pension as a result of age and length of service, but 46 retired on health grounds. Of that latter figure, 10 persons failed to meet the approved medical standards for personnel over the age of 40 years. The corresponding figures for 1983 and 1982 were: age and service, 32 and 27; medical discharge, 29 and 30.

Retained and Volunteer Personnel

18. The part-time retained and volunteer establishments and strengths are as follows:

	<i>Establishment</i>		<i>Actual Strength</i>	
	1983	1984	1983	1984
Retained	2,548	2,558	2,359	2,339
Volunteer	1,465	1,477	1,295	1,320

19. A new retained fire station was opened in Grampian Fire Brigade during the year to provide additional fire cover in the developing area around Dyce airport.

20. It is appropriate, at this point in the Report, to pay tribute to the personnel of the retained and volunteer units for the service they have given to their respective communities over the past year. Although the number of actual incidents attended is not large and may not seem unduly onerous, the personnel themselves provide a 24-hour availability throughout the year and for this heavy commitment we must be truly grateful. Service within the retained section of the fire brigade places a great imposition on family life and, for this reason, I would include in my tribute the families of part-time firemen, who have given their support so wholeheartedly.

Control Room (Non-operational Staff)

21. The establishment for control room staff has been reduced from 204 to 181; the actual strength in post at the end of the year was 193. The reduction in establishment is largely due to the reorganisation which has taken place within Strathclyde Fire Brigade. This Brigade has now centralised its control room functions in a new control built at Johnston and has closed five existing controls at Hamilton, Glasgow, Clydebank, Johnstone and Ayr.

22. A reduction in control establishment was linked to this centralisation and, though the Brigade still shows an excess over that figure, a further

reorganisation of duties and responsibilities of control staff will lead to a more balanced picture later in the coming year.

Discipline

23. There were 28 cases of breach of discipline, under the Fire Services (Discipline) (Scotland) Regulations 1953, reported during the year. In 23 of these cases punishments were awarded. The figures for 1983 were 20 and 12 respectively, but there was some distortion of annual figures owing to delays in hearing cases in Strathclyde in 1983; these arose from the need to await the result of a High Court action affecting the principle of Brigade hearings.

Health

24. The average number of days lost owing to sickness throughout the year was 4.39%, a slight improvement on the 5.12% calculated for the previous year.

SECTION C

Operational

Fires and Other Emergencies

25. The total number of calls to brigades for fires and other emergencies is listed in Table 3. There has been a 27% increase over last year, with 89,208 calls during 1984 compared to 70,289 for 1983. It will be noted that virtually every area of activity shows an increase in the number of incidents, with particular additions in the total fires attended and the number of secondary fires attended. Secondary fires are those which do not involve inhabited buildings and which do not come under any other specified category.

26. As grass, heath and moorland fires come into the secondary fires category, it was to be expected that that total would show an increase because of the prolonged spell of hot weather during the middle of the year. The increase in the number of fires in property is less clearly linked to the period of hot weather, but it is consistent with trends in previous years when such patterns have been associated with dry conditions. In view of the hot weather, the increase in chimney fires is unexpected. It may be partly explained by the fact that the prolonged miners' strike is likely to have forced householders to use alternative fuels, because of a shortage of domestic coal. This may have caused deposits of soot in flues to increase, with a greater likelihood of ignition of the soot, particularly where wood has been burned, producing a more tarry deposit. The longer-term trend in the number of chimney fires is much more difficult to explain. In the mid-fifties, about 8,500 chimney fires a year were attended by brigades in Scotland. By the mid-sixties, as might be expected because of the increasing use of central heating and gas and electric fires, the number had dropped to 7,500 each year. In 1975 the number was just over 4,000, but in almost every year in the last 10 years there has been an increase over the previous year's total, so that we are now almost back to the mid-fifties' figures, with 7,823 chimney fires in 1984.

27. False alarm calls also increased in all three categories and, although it is right to compliment the public for calling brigades where fire was thought to have occurred, it is once again necessary to censure those who deliberately call out fire appliances knowing that there is no fire. Last year showed a slight drop in the number of calls made with malicious intent and it is most disheartening to record an increase for 1984. Brigades maintain close liaison with the police in an attempt to trace and apprehend those who misuse fire brigade resources in this way but it is a very difficult task. I ask for the co-operation of the public and I stress that any member of the public who knows that a false call is being made should contact the police immediately. Malicious fire alarm calls cause an unnecessary drain on local authority resources, apart from committing fire service personnel and appliances when a real emergency may require their services urgently elsewhere.

28. The rapid increase, in recent years, in the number of automatic fire alarms installed in buildings is an obvious reason for the increase in automatic fire alarm faults, but the great advances in design and circuitry in recent years should have caused a downward trend in unwanted calls, not an increase. A great deal of effort is being applied to improving the monitoring and screening of automatic alarm systems to reduce the numbers of unwanted calls received by brigades, but little progress is evident from the recent figures.

Fatalities

29. The number of fire fatalities, which showed an increase in 1983, once again shows an increase (see Table 4). The total for 1984 is 164 deaths, against 155 for the previous year and 142 in 1982.

30. Of the total fire deaths for 1984, no less than 88.5% occurred as a result of fires in dwellings. A number of statutory measures have been enacted over the last twenty-five years to improve the safety of persons in their workplace, and to protect members of the public who have access to many types of buildings, such as hotels, offices and shops.

31. The annual fire death figures continue to show, however, that the vast majority of fatalities occur in the home, which has not been the subject of recent legislation. Freedom from the dangers of fire in the home depends largely on the behaviour of its occupants and, unfortunately, much of the good advice which is offered by fire brigades and other safety organisations seems to be ignored by many of the public.

32. All brigades will continue their efforts to educate people to fire dangers, however, and it is hoped that their message will be accepted, not only by the converted but by the many people who think that fire tragedies happen to others. I would hope that, for the sake of the young and the elderly, who are most commonly the victims, the lesson will be remembered by everyone.

33. Although, as might be expected, there are annual variations in the number of deaths from fire in Scotland, the underlying trend is clearly upward and the increase has been greater, proportionately, than that for England and Wales in almost every annual report. The upward tendency is partly explained by the increasing number of fires in property, which increases the likelihood of exposure to the risk of death or injury, but, fortunately, the rate of increase for fatalities is less than that for fires, when taken over the last 30 years. It is very important that this trend should be halted and, if possible, reversed if the threat to life from fire is to be contained. In 1955, 50 lives were lost in fires in Scotland; in 1965, the figure was 81; in 1975 it was 143 and this year it was 164. If that trend continues, 215 people will die by fire in 1995.

34. The disproportionate loss of life in Scotland, when compared to the figure for England and Wales, has long been the subject of speculation. The high percentage of fire deaths associated with the abuse of alcohol or drugs, proved by research work carried out in Scotland, may be a factor, but no equivalent study has been conducted in England and Wales. A recent research project which has been started in England by the Fire Research Station may,

however, throw more light on the problem when fuller results are known. This project is examining links between the frequency of fire death and patterns of poor housing, overcrowding, unemployment, crime and other similar indicators of areas of multiple deprivation. Social dissatisfaction appears to be closely related to the incidence of fire and to the number of malicious fires although, rather surprisingly, there is no apparent link between fire deaths and the number of old people in the population of an area, despite the fact that they are most frequently the victims. Two other factors of interest which emerge from the early report of this study are that problem areas may be quite small (smaller than the area covered by a fire station, for example) and that fire incidence in an area is directly related to family instability. The study's authors consider that campaigns aimed specifically at small problem areas could have a much greater impact on fire incidence and on reduction of fatalities than broader, more expensive campaigns across the country.

35. There are many important suggestions in this study which need to be followed through and their relevance to the problem of Scotland's fire deaths will be examined as the work proceeds. The high number of fatalities (89) in the Strathclyde Region, where the population density is higher appears to support the general finding of the research study. The authors have stressed, however, that for the moment they are indicating links, not causes.

Rescues

36. Fire brigade personnel rescued 534 persons from fire situations during the year and a further 486 persons were rescued from other dangerous locations. The incidence of rescues from fire is rising, roughly in proportion to the increase in the number of fires in property.

Road Accidents

37. Fire brigades attended a total of 1,262 road accidents during the year to render assistance to occupants of vehicles, or assist in the removal of vehicles and spilt fuel from the roadway. This total is an increase of 170 on the figure for the previous year. The long-term trend in this category is also sharply upward.

38. During these operations, 547 persons were rescued from vehicles, compared to 403 in 1983. Fires resulted from the accidents on only 3% of these occasions but, no doubt, many more would have occurred but for the precautionary measures taken by fire crews.

Fire Damage in the UK

39. Figures obtained from the British Insurance Association indicate that the estimated monetary fire loss for the United Kingdom in 1984 was £553.6 million, compared with £565.6 million in 1983. The corresponding figures for Scotland are £43.3 million in 1984 and £59.2 million in 1983. While both figures show a drop in losses compared to last year, the Scottish figure is the lowest since 1980, but the UK figure, which of course includes Scotland's total, has risen by 18% in the same period. It is difficult to pinpoint precise

reasons for this difference but it seems likely that fewer single fires involving very high loss are now occurring in Scotland. An increasing proportion of the total loss in the UK and abroad is made up of individual fires, each of which causes many millions of pounds of loss.

40. Many of these large fires occurred in warehousing premises; 20% of the total estimated fire loss for the United Kingdom in 1984 can be attributed to three warehouse fires. There were 10 fires where losses were in excess of £1 million each, illustrating the serious dangers attached to premises where high value goods are stored in such a way that fire can spread quickly.

Standards of Fire Cover

41. The national standards, by which the attendance times of fire appliances are determined, were agreed in 1958, although minor revisions and improvements have been made in the intervening years. The publication, in 1980, of the Consultative Document on Future Fire Policy led to the formation of a national committee to review these standards. The main work of the committee has now been completed and a report will be published in mid-1985. A technical working group will continue to meet to discuss the associated levels of provision for special services (i.e., the incidents other than fires which are attended by brigades). A report on this aspect of cover standards will also be circulated to brigades when the group has finished its task.

Salvage

42. The fire insurance companies, which had managed and financed salvage corps in London, Liverpool and Glasgow for over one hundred years, decided to disband the three corps by April 1984. In order to ensure that their responsibilities for salvage under the Fire Services Act 1947 would continue to be met all Scottish brigades reviewed their salvage provision. The Brigade most affected, Strathclyde, revised its establishment to allow for two special salvage appliances to be brought into use and the equipment levels on other appliances were adjusted to compensate for the changed role of crews in the absence of a specialist corps. Two ex-officers from the Salvage Corps have been employed by the Brigade to train all crews in special salvage techniques. As part of the arrangements for the transfer of the salvage role to local authorities, the insurance companies transferred the former Corps Headquarters and its appliances to Strathclyde Fire Brigade. The building is next to the large complex of Brigade buildings in Cowcaddens which includes workshops, stores, training areas and, more recently, a divisional headquarters and large fire station.

Workloads

43. It will be apparent from comments in a number of the sub-sections in Section C that the operational workload of fire brigades in Scotland is increasing. When viewed over a longer period, say 20 or 30 years, this increase is very marked and it has been taking place during a period of increasing pressure on training, safety and financial provision. It is a measure of the skill and application of the management and officers of brigades that the standards of efficiency remain high and that improvements continue to be sought.

SECTION D

Supplies and Services

Transport

44. Brigades aim for a vehicle replacement programme which will produce an optimum useful life from their appliances. They also provide a high standard of routine maintenance to ensure the maximum practicable availability of the vehicles. Fluctuating financial allocations make this difficult to achieve in some brigades and the position is constantly monitored by the Inspectorate.

45. The present total of first line appliances available in Scotland is 592, of which approximately 9% are over 15 years old. This figure shows a steady improvement in spite of financial constraints in recent years. Last year's figure was 10% and five years ago it was 15%. This movement is essential because all appliances are now built on standard commercial chassis, and spare parts for these are normally kept by manufacturers for only 10 years.

Equipment

46. The overall level of equipment in use by brigades is of a good standard. In the past year, purchases of breathing apparatus sets and improvements in the provision of decontamination equipment and protective clothing for use at chemical incidents have been given special attention. Some brigades are still in the process of replacing the last of the obsolescent, heavy, brass hose equipment with light alloy items but this is now a very small proportion of the total equipment in use.

47. Thermal-imaging cameras have been purchased by two brigades and have been used to advantage in a number of incidents. They enable firefighters to find hidden fires or human bodies by temperature differences which are detected by infra-red radiation and displayed on a screen at the back of the camera. Other types of infra-red equipment are under development and there is clear potential for increasing use of this form of detection in operations by fire brigades.

Uniform and Personal Equipment

48. In this, as in many other fields of supply, fire brigades are free to purchase the type of uniform and equipment which best suits their local needs but, whenever possible, they comply with nationally-agreed standards which are drawn up by a Joint Committee of the Central Fire Brigades Advisory Councils. This Committee produced two revised fire uniform specifications in 1984 and decided to change the basis for the specification of a third.

49. The new fire boot specification will lead to improved safety and serviceability. Although the changes will probably increase the cost of boots to brigades they are necessary to give the firefighter better protection in the hostile environment in which he must work.

50. After a long period of research and trial, the Committee has produced a revised standard for overtrousers, intended to improve durability and personal protection, while minimising the danger from flammable, waterproof materials.

51. Previous standard specifications for fire tunics have itemised materials and designs but, because a number of new materials and design features have recently come to its notice, the Committee decided to start work on a performance-related specification. This will allow manufacturers to produce garments of varying designs and fabrics which meet the criteria established by the Committee. This continues the trend in recent years to regard personal fire clothing solely as protective equipment rather than to combine its function with that of a parade dress uniform.

Water Supplies

52. At the end of the year there were 130,821 local authority hydrants in Scotland, an increase of 1,625 over the figure for 1983. Non-standard hydrants comprised 4.4% of that total but the majority of these are satisfactory as far as pressure and output are concerned. No brigade is currently involved in any major replacement programme but brigades who have non-standard hydrants continue to upgrade them as water authority renewal schemes go forward.

Premises

53. In general, the majority of premises visited were found to be in good order with an acceptable standard of maintenance.

54. New premises for retained and control room use are described in paragraphs 19 and 21 respectively.

55. As part of the overall development plan for Glasgow, Strathclyde Fire Brigade closed the North and Central Fire Stations and opened a new Divisional Headquarters and station at Cowcaddens.

56. Strathclyde Region has also taken over the former Glasgow Salvage Corps premises at Cowcaddens which are to be developed as a Brigade training school, to cater for the wide variety of local courses in their training programme.

57. As stated last year, the use of fire service personnel in the cleaning and general maintenance of part-time fire stations is a continuing anomaly but Firemasters in those areas where this practice exists are making arrangements to avoid interference with training periods.

Communications

58. The Co-ordinating Committee which was set up to monitor the implementation of the new arrangements stemming from the World Administrative Radio Conference (WARC) has been making progress in its work. The changeover programme is as follows:

<i>Brigade</i>	<i>Changeover Period</i>	<i>Completion</i>
Fife	1985/86	April 1986
Highland and Islands	1985/87	April 1987
Tayside	1986/87	April 1987
Strathclyde	1985/89	April 1989
Central	1987/88	April 1988
Dumfries and Galloway	1987/88	April 1988
Grampian	1987/88	April 1988
Lothian and Borders	1987/89	April 1989

59. Planning for the link survey programme is proceeding; the future programme is as follows:

1985	PHASE I — Highland and Islands (especially Orkney, Shetland, Caithness)
1985	PHASE II — Strathclyde
1985/86	PHASE III— Grampian Central Tayside
1986	PHASE IV— Lothian and Borders Dumfries and Galloway

(Fife was surveyed privately as part of an earlier communications contract.)

60. As a result of the reduced cover at high band, to which emergency services are moving, additional hill-top sites will be needed. Latest estimates indicate that fire brigade needs will be 138 sites, an increase of 60%.

61. A computerised frequency allocation system has been developed jointly with the Home Office Directorate of Telecommunications. The computer holds details of the frequencies in use and the sites planned to be used by the emergency services. Predictions from the computer will be used in the frequency allocation programme to reduce the likelihood of interference when the new frequencies are allocated.

62. Survey teams have continued to examine area cover and have now almost completed surveys in all regions except Dumfries and Galloway and Lothian and Borders. These two surveys are scheduled for spring/summer 1985. The teams will also be available in 1985 to carry out supplementary surveys in case additional information is required to assist brigades during the system design phase.

63. Microwave link surveys are scheduled to commence in the spring of 1985. Equipment has been purchased and Directorate of Telecommunications

staff are attending training courses and have also been conducting trials on equipment and aerial systems for microwave links.

64. The development and increased use of hand-held radio sets in brigades has made a notable improvement in fireground communications.

65. The development of a breathing apparatus radio interface continues, with the draft user requirement circulated for approval in 1984. The Directorate hope to issue invitations to tender in February 1985.

SECTION E

Fire Prevention

Summary

66. The number of premises visited by brigades for fire prevention purposes was 63,642, a reduction of 4,014 from the 1983 total. Plans submitted to fire prevention departments for comment increased by 1,020 to a total of 10,266.

Education and Publicity

67. A fire prevention film, sponsored by the Scottish Home and Health Department, was screened on the commercial television networks during November and December. Press releases concerning fire safety were issued at the start of National Fire Safety Week (22–27 October 1984) and immediately prior to 5 November 1984.

68. During the year the Department's two separate committees concerned with fire prevention matters, the Fire Precautions Publicity Steering Committee and the Scottish Consultative Committee on Fire Prevention, were merged to provide a more cohesive forum for consideration of fire prevention matters. This changed arrangement is working well and enables better representation on publicity aspects to be coupled with a broader approach to the whole question of fire prevention enforcement, advice and education.

Inspection and Certification of Premises

69. The number of Fire Certificates issued under the Fire Precautions Act 1971 during the year was:

Factories	210 (201)
Offices and Shops, etc.	749 (943)
Hotels and Boarding Houses	97 (109)

70. The 1983 figures are shown in brackets and it will be seen that the figures for two of the categories continue to reduce. The total workload in this area is balanced however by an increase in the number of Fire Certificates which were revised during the year. The numbers are as under, with the previous year's total in brackets:

Factories	254 (201)
Offices and Shops, etc.	454 (402)
Hotels and Boarding Houses	557 (459)

Joint Fire Prevention Committee

71. A draft code of practice for the use of lifts as a means of escape for disabled people in places of employment has been prepared by a working party of the Joint Committee. The British Standards Institution has been invited to consider the draft code as a basis for producing a BSI code to cover the wider range of premises used by disabled people.

72. Following the Second Report by the Planning/Legislation Sub-Committee on the Review of the Fire Precautions Act 1971 and the views expressed at the Central Fire Brigades Advisory Councils for England and Wales and for Scotland, a consultative document has been prepared and it is expected that this will be available for wider consultation mid-1985.

Health and Safety Executive

73. The Inspectorate staff maintain their attendance at the Health and Safety Executive Committees dealing with dangerous substances and the certification and testing of breathing apparatus. This forms an important link with the fire service committees dealing with associated subjects and ensures that the fire brigades' interests are properly represented.

SECTION F

Training

Scottish Fire Service Training School

74. A total of 100 recruits completed their training at the School during the year. Other courses, with attendances in brackets, were provided for Retained Firemen (69), Retained Leading Firemen/Sub-Officers (24), Retained Sub-Officers/Station Officers (4), Wholetime Leading Firemen (61), Breathing Apparatus Instructors (35), and Retained Volunteer Firemen (32).

75. In addition to the above, 36 students from Scottish brigades attended courses on specialist legislation, where the course content is geared to fire prevention aspects of legislation applicable to Scotland.

76. Owing to spare capacity at the School it was possible to organise other courses for personnel involved in hospital fire safety (47), industrial fire services (48), and a special course was arranged for 12 members of the fire service from Eire.

Fire Service College

77. College courses are well supported by Scottish brigades and every opportunity is taken to ensure that junior officers are introduced to the progressive training system at the appropriate stage of their career.

78. A large number of members of junior rank have now passed through the various linked courses and, following promotion, are available for nomination on specialist courses designed for their particular references.

79. There is now a wide variety of courses available at the Fire Service College, covering all likely training needs in specialist subjects, as well as the progressive training courses designed for career development. Frequent seminars are held to enable brigade training officers to discuss the policy and background of all College courses, and to gain information about developments planned in the training field. An appropriate proportion of instructors at the College are on secondment from Scottish brigades.

Fire Services Examinations Board (Scotland)

80. The 1984 written promotion examinations took place at various venues throughout Scotland during the months of January, February and March. The results were as follows, (the 1983 figures being shown in brackets):

<i>Examination</i>	<i>No. of Candidates</i>	<i>No. of Passes</i>
Leading Fireman	338 (393)	100 (116)
Sub-Officer	323 (330)	96 (116)
Station Officer	235 (226)	46 (56)

81. At a ceremony held in Edinburgh on 12 June 1984 prize certificates were awarded to the following candidates, who obtained the highest marks in the written examinations for promotion to Leading Fireman and Sub-Officer:

Leading Fireman—Fireman Stewart Thomson, Central Region Fire Brigade

Sub-Officer—Fireman Kenneth Higgins, Tayside Fire Brigade.

82. In the Station Officer written examination no candidate reached the Board's required standard and therefore no award was made.

83. Practical examinations for Leading Fireman and Sub-Officer candidates were conducted by fire authorities and the Board respectively during April and May with the following results, the 1983 figures being shown in brackets:

<i>Examination</i>	<i>No. of Candidates</i>	<i>No. of Passes</i>
Leading Fireman	131 (185)	72 (127)
Sub-Officer	172 (197)	94 (112)

84. The Report of the Joint Working Party which was set up in 1983 to consider the establishment of a common promotion examinations system for the fire service was considered by the Fire Services Examinations Board (Scotland) and the Fire Services Central Examinations Board at their respective meetings held in the summer of 1984. Both Boards accepted the recommendations in the Report for a new unified examinations system and the creation of one Examinations Board to replace the existing Boards. These proposals were referred to the Joint Training Committee of the Central Fire Brigades Advisory Councils for England and Wales and for Scotland and it was agreed that work leading to an amalgamation should continue.

SECTION G

Miscellaneous

Scottish Central Fire Brigades Advisory Council

85. At the Council meetings held on 15 June and 14 December, the Chair was taken by Mr A. L. Rennie, Secretary, Scottish Home and Health Department, and by Mr Michael Ancram, Scottish Office Minister for Home Affairs and the Environment, respectively.

86. At the December 1983 meeting, it was agreed that reports from Joint Committees would, in future, be received once each year instead of twice, as at present. The reports would be so timed that half would be taken at the June meeting and the remainder at the December meeting. This arrangement worked satisfactorily and the Council considered reports from the Joint Committee on Appliances, Equipment and Uniform; the Joint Committee on Fire Brigade Operations; the Joint Training Committee; the Joint Fire Prevention Committee; the Joint Pensions Committee; the Joint Committee on Fire Research; the Joint Committee on Fire Brigade Communications; and the Joint Committee on the Review of Standards of Fire Cover.

87. The Council also considered papers on "Safety matters arising in fire service training and operations" and proposals for a review of the appointment provisions of the Fire Services (Appointment and Promotion) Regulations 1978.

Research

88. During the year the Joint Committee on Fire Research continued to monitor various fire-related projects and to advise on the programmes of research carried out by the Research and Planning Unit of the Home Office and a number of outside agencies. These included projects concerned with health hazards to firemen, false alarms from automatic fire detection systems, and smoke and toxic hazards.

Fire Service Sports and Athletics Association

89. The Scottish fire service continues to support sporting activities organised by the Association, and personnel from Scottish brigades participated, with considerable success, in a number of sporting events at national and international level during 1984.

90. Golfing honours were shared among four brigades with a team from Lothian and Borders taking second place in the British team championships, held in June, and Dumfries and Galloway gaining a creditable third place.

The Scottish Golf Championship competition, which was held in August, was organised by Tayside, who won one of the team trophies, and Strathclyde won the other two. The international match against England was played at Gullane in fine conditions but the Scottish team was heavily defeated.

91. After travelling 500 miles to compete, Strathclyde representatives took eight trophies in the National Angling Competition held in October at Yarmouth, Isle of Wight.

92. Scotland's team beat England in a fire brigade football international held in October at Leicester.

93. A football team from Highland and Islands reached the quarter-final of the British Cup before being defeated by the eventual winners, but their five-a-side team won its way to the final of the Scottish event by beating a Strathclyde team.

94. The Scottish Swimming Championships held in April were hosted by Dumfries and Galloway, who provided excellent organisation, but unfortunately only three brigades took part.

95. The Scottish Volleyball Championships were held in Fife in April and gave a clear indication of the growing popularity of this sport.

96. There was the usual full programme of track and field athletics in Scotland but there were no major international honours during 1984.

Fire Services National Benevolent Fund

97. Scottish fire brigades continue to play a full part in the work of the Fund, which was set up towards the end of the 1939–45 war to care for and assist those who were bereaved or injured as a result of firefighting duties. The work of the Fund has expanded considerably in recent years and it is currently caring for 200 orphans, 660 widows and many members and ex-members of fire brigades who are disabled, suffering prolonged illness or have handicapped children. In 1984 fund-raising, contributions and investment income raised £1½ million, and grants and other disbursements amounted to £690,000. The assets of the Fund are now in excess of £10 million and it has two major convalescent centres on the south coast of England, as well as other properties converted for the use of disabled and handicapped persons.

98. Scottish brigades raised £77,884 in 1984 compared to £75,319 in 1983.

ESTABLISHMENT AND ACTUAL

as at 31st

TABLE I

Wholetime Operational	CENTRAL			DUMFRIES AND GALLOWAY			FIFE			GRAMPIAN		
	Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength	
		Male	Female		Male	Female		Male	Female		Male	Female
Firemasters	1	1	—	1	1	—	1	1	—	1	1	—
Assistant Firemasters	1	1	—	1	—	—	1	1	—	2	2	—
Senior Divisional Officers	—	—	—	—	—	—	—	—	—	—	—	—
Divisional Officers Grade I	1	1	—	—	—	—	2	2	—	2	2	—
Divisional Officers Grade II	4	4	—	—	—	—	3	3	—	2	2	—
Divisional Officers Grade III	—	—	—	4	4	—	1	—	—	4	4	—
Assistant Divisional Officers	5	6	—	5	5	—	9	9	—	11	11	—
Station Officers	15	15	—	10	10	—	38	37	—	25	24	—
Sub Officers	23	20	—	6	6	—	27	27	—	27	27	—
Leading Firemen	28	26	—	8	8	—	58	56	—	38	37	—
Firemen	140	141	—	52	51	—	236	233	—	145	136	—
Totals	218	215	—	87	85	—	376	369	—	257	246	—
Wholetime Control Room												
Prin. F.C. Officers	—	—	—	—	—	—	—	—	—	—	—	—
Group F.C. Officers	—	—	—	—	—	—	—	—	—	—	—	—
Fire Con. Officers	—	—	—	—	—	—	1	—	1	1	—	1
Sen. Fire Con. Operators	1	1	—	1	—	1	4	—	4	4	—	5
Lead. Fire Con. Operators	4	1	3	4	—	5	4	—	4	4	—	4
Fire Control Operators	8	1	7	8	1	6	8	1	6	8	—	8
Totals	13	3	10	13	1	12	17	1	15	17	—	18
Part-time Retained												
Station Officers	4	—	—	3	3	—	2	2	—	11	9	—
Sub Officers	16	15	—	16	16	—	8	8	—	33	36	—
Leading Firemen	20	19	—	20	20	—	10	11	—	45	51	—
Firemen	160	139	—	157	149	—	92	73	—	361	330	—
Totals	200	173	—	196	188	—	112	94	—	460	426	—
Part-time Volunteer												
Assistant Divisional Officers	—	—	—	—	—	—	—	—	—	—	—	—
Sub Officers	—	—	—	—	—	—	—	—	—	3	3	—
Leading Firemen	—	—	—	—	—	—	—	—	—	4	4	—
Firemen	24	14	—	—	—	—	—	—	—	25	24	—
Totals	24	14	—	—	—	—	—	—	—	32	31	—
GRAND TOTALS												
WHOLETIME OPERATIONAL	218	215	—	87	85	—	376	369	—	257	246	—
WHOLETIME CONTROL ROOM	13	3	10	13	1	12	17	1	15	17	—	18
PART-TIME RETAINED	200	173	—	196	188	—	112	94	—	460	426	—
PART-TIME VOLUNTEER	24	14	—	—	—	—	—	—	—	32	31	—
GRAND TOTALS	455	405	10	296	274	12	505	464	15	766	703	18

STRENGTH OF BRIGADES

December 1984

HIGHLAND AND ISLANDS			LOTHIAN AND BORDERS			STRATHCLYDE			TAYSIDE			TOTALS		
Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength		Establishment	Actual Strength	
	Male	Female		Male	Female		Male	Female		Male	Female		Male	Female
1	1	—	1	—	—	1	1	—	1	1	—	8	7	—
1	1	—	3	3	—	5	5	—	1	1	—	15	14	—
—	—	—	2	2	—	7	8	—	—	—	—	9	10	—
—	—	—	4	4	—	2	2	—	5	5	—	16	16	—
5	5	—	4	4	—	13	13	—	1	—	—	32	31	—
—	—	—	7	7	—	17	17	—	8	9	—	41	41	—
10	10	—	16	15	—	33	38	—	14	12	—	103	106	—
9	8	—	33	31	—	177	173	—	37	34	—	344	332	—
7	7	—	67	72	—	233	233	—	36	36	—	426	428	—
13	13	—	94	98	—	272	266	—	44	45	—	555	549	—
48	48	—	428	411	—	1,514	1,464	—	263	252	—	2,826	2,736	—
94	93	—	659	647	—	2,274	2,220	—	410	395	—	4,375	4,270	—
—	—	—	—	—	—	1	1	—	—	—	—	1	1	—
—	—	—	1	—	1	1	1	—	—	—	—	2	—	2
—	—	—	4	2	2	5	1	8	1	—	1	12	3	13
1	—	1	4	3	1	4	—	6	4	—	4	23	4	22
1	—	1	4	2	2	12	2	11	4	1	3	37	6	33
9	—	9	12	3	9	44	4	45	9	2	7	106	12	97
11	—	11	25	10	15	67	8	71	18	3	15	181	26	167
13	13	—	5	4	—	8	8	—	7	7	—	53	46	—
27	27	—	25	26	—	55	55	—	18	19	—	198	202	—
54	53	—	30	29	—	65	65	—	35	39	—	279	287	—
284	265	—	215	198	—	511	465	—	238	185	—	2,018	1,804	—
378	358	—	275	257	—	639	593	—	298	250	—	2,558	2,339	—
2	2	—	—	—	—	—	—	—	—	—	—	2	2	—
95	95	—	—	—	—	—	—	—	1	1	—	99	99	—
90	90	—	—	—	—	—	—	—	1	1	—	95	95	—
978	830	—	—	—	—	224	214	2	30	40	—	1,281	1,122	2
1,165	1,017	—	—	—	—	224	214	2	32	42	—	1,477	1,318	2
94	93	—	659	647	—	2,274	2,220	—	410	395	—	4,375	4,270	—
11	—	11	25	10	15	67	8	71	18	3	15	181	26	167
378	358	—	275	257	—	639	593	—	298	250	—	2,558	2,339	—
1,165	1,017	—	—	—	—	224	214	2	32	42	—	1,477	1,318	2
1,648	1,468	11	959	914	15	3,204	3,035	73	758	690	15	8,591	7,953	169

CHANGES IN WHOLETIME STRENGTH AS AT 31st DECEMBER 1984

TABLE 2

	CENTRAL		DUMFRIES AND GALLOWAY		FIFE		GRAMPIAN		LOTHIAN AND BORDERS		HIGHLAND AND ISLANDS		STRATHCLYDE		TAYSIDE		TOTALS	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
GAINS																		
(i) By Recruitment	10	—	6	2	6	1	4	4	13	—	—	—	57	—	7	1	103	8
(ii) By Transfer from other Brigades	4	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	6	—
Total gains	14	—	6	2	6	1	4	4	13	—	—	—	59	—	7	1	109	8
LOSSES																		
(i) By Death:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Attributable to service	—	—	—	—	—	—	—	—	2	—	—	—	3	—	1	—	6	—
Not Attributable to service	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(ii) By Resignation or Discharge:	—	—	1	—	—	—	1	1	—	—	—	—	1	—	—	—	3	1
(a) During 1st or 2nd year of Service	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b) After 2nd but under 10 years of Service	4	—	1	—	—	—	2	—	2	—	—	—	11	11	1	19	11	
(c) After 10 years of Service	1	—	—	—	2	—	—	—	—	—	—	—	1	5	—	6	5	
(iii) By Retirement:	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(a) On Pension	2	—	1	—	3	—	1	—	3	—	—	—	18	3	3	31	3	
(b) On Medical Grounds as a result of Over 40 Medical	2	—	3	—	—	—	—	—	3	—	—	—	2	—	—	10	—	
(c) On Medical Grounds other than at (b) above	2	—	1	—	2	1	4	—	—	—	—	—	22	—	5	36	1	
(iv) On Transfer to Other Brigades	3	—	—	—	—	—	1	—	4	—	—	—	9	—	—	17	—	
Total losses	14	—	7	—	7	1	9	1	14	—	—	—	67	19	10	128	21	

SUMMARY OF FIRES AND SPECIAL SERVICES WHICH HAVE OCCURRED 1984

TABLE 3

	Total Fires	Classification of fires by number of pumps used for firefighting purposes:						Chimney Fires	Secondary Fires	False Alarms			Special Service	Total
		(a) 1 pump	(b) 2 pumps	(c) 3/5 pumps	(d) 6/10 pumps	(e) 11/15 pumps	(f) Over 15			Good Intent	Apparatus Fault	Malicious		
Central	828	687	110	31	1	—	—	497	1,335	504	288	441	161	4,054
Dumfries and Galloway	473	273	177	22	1	—	—	370	381	256	127	135	196	1,938
Fife	1,059	1,044	13	2	—	—	—	603	1,363	558	592	469	283	4,927
Grampian	1,501	1,325	126	49	1	—	—	1,119	994	703	221	378	406	5,322
Lothian and Borders	4,137	3,214	761	155	7	—	—	934	4,553	2,255	822	2,038	725	15,464
Highland and Islands	786	634	134	18	—	—	—	1,468	997	318	77	140	251	4,037
Strathclyde	9,557	8,585	812	148	12	—	—	2,301	18,821	5,850	3,389	4,562	2,747	47,227
Tayside	1,705	1,645	55	5	—	—	—	531	2,018	685	312	476	512	6,239
Total	20,046	17,407	2,188	429	22	—	—	7,823	30,462	11,129	5,828	8,639	5,281	89,208

TABLE 4

FATALITIES (Listing Age Groups and Locations) during 1984

	Age Groups											Location—Dwellings						Location Other Buildings					Open	Misc.													
	Up to 5 years	6 to 10 years	11 to 20 years	21 to 40 years	41 to 60 years	Over 60 years	Total Fatalities	Flat—including Terrace/Tenement	Bungalow—Semi or Detached	Maisonette	Standard Dwelling	Other Dwelling	Hostels—Homes—	Hotels and Boarding Houses	Caravans	Vehicles	Industrial or Commercial Premises																				
																		Jan.	Feb.	Mar.	Apr.	May			June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total					
BRIGADE																																					
Central	—	3	—	1	2	3	9	1	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—					
Dumfries and Galloway	1	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—				
Fife	—	—	—	2	3	2	7	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
Grampian	1	—	1	—	1	5	8	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—				
Lothian and Borders	4	2	2	5	2	11	26	4	—	—	—	—	—	—	—	—	—	—	—	—	17	1	—	—	—	—	—	—	—	—	—	—	—	—			
Highland and Islands	4	—	—	1	3	2	10	1	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—			
Strathclyde	9	—	6	17	18	39	89	39	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Tayside	3	—	1	2	2	5	13	10	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—			
Totals	22	5	10	28	31	68	164	63	13	—	—	—	—	—	—	—	—	—	—	—	37	32	2	—	—	7	6	—	—	—	—	—	—	—	—		
Fatalities by Month																																					
Central	—	1	—	3	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Dumfries and Galloway	—	2	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Fife	1	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Grampian	—	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lothian and Borders	5	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Highland and Islands	1	1	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Strathclyde	12	10	15	16	5	2	4	5	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Tayside	1	—	1	2	1	3	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Totals	20	16	20	29	8	6	13	8	4	8	13	19	164	4	8	13	19	164	4	8	13	19	164	4	8	13	19	164	4	8	13	19	164	4	8	13	19

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

13a Castle Street, Edinburgh EH2 3AR
49 High Holborn, London WC1V 6HB
Princess Street, Manchester M60 8AS
Southey House, Wine Street, Bristol BS1 2BQ
258 Broad Street, Birmingham B1 2HE
80 Chichester Street, Belfast BT1 4JY

*Government publications are also available
through booksellers*

ISBN 0 10 196000 X