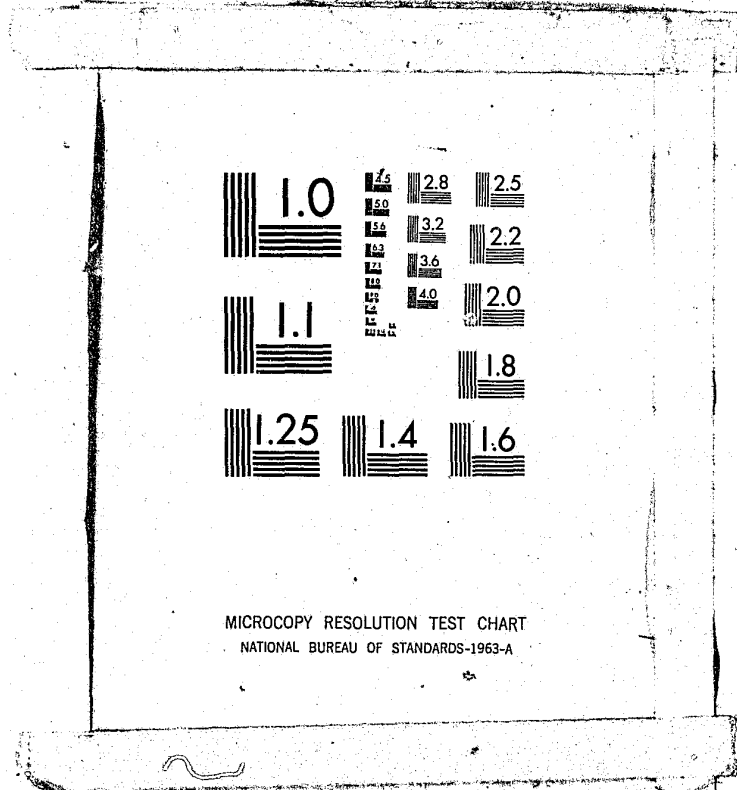


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INTRUDER ALARMS - THE POLICE POLICY

PRESENTATION BY

S.E. BAILEY, ESQ., C.B.E., Q.P.M.

CHIEF CONSTABLE, NORTHUMBERIA POLICE

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ACQUISITIONS

We must quickly look at the changing pattern of Security Alarm Systems over the years to identify the emerging pattern in an attempt to put into perspective plans for future operation in an area that has seen an industry grow from extremely humble beginnings into one which has an estimated turnover of between £50m - £60m. It is an expanding field which to a certain extent acts as a barometer of social conditions and the increasing need for personal protection is perhaps an indictment of the state of our society.

The use of Alarms in recent years has proliferated and the general public, commerce and industry are seeking the protection of alarms for an increasing number of reasons. We are all familiar with Burglar Alarms, Fire Alarms and more recently Social Alarms and the parties traditionally involved in the Alarm Industries - manufacturers, installers, insurance companies, the Fire Service and the Police - have an obvious interest in the use of Alarm systems.

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Their concern may be equally good but for different reasons; for example - commercial expansion, social good, profit, protection of life or a general interest in law and order - that is the prevention and detection of crime. As has the customer. Obviously the Police Service has an interest in the Alarm Industry and is rightly concerned with present developments but before moving on I would first like to quickly trace the development of alarm systems with which police are directly involved.

WHAT IS AN ALARM ?

An alarm is not aimed at solving a particular problem but is in effect simply an advisory or warning message which makes someone else aware of a situation so that arrangements can be made to take the necessary action. The alarm does not substitute human action but it is an expansion of the sensory capability with the emphasis placed upon human response. We can see therefore that an alarm tells us of danger, attracts attention or warns. It in fact speaks.

An alarm which fulfils this advisory function performs the job for which it was intended but with the growth of alarm installations there has also been a vast increase in the number of false alarms; there is nothing new in this situation.

EARLY ALARMS

Early alarms were primarily directed to the safety of persons from attack or assault; the Romans were well aware of the benefits of keeping geese in the vicinity of houses to give warning of anyone approaching but like some latter day systems the benefits of protection were quite often exceeded by the inconvenience and uncertainty of geese being able to discriminate between "friend and foe".

There does not appear to have been any great thought given to mechanical means other than the occasional use of trip wires attached to bells, pans and tins;

perhaps the high false alarm rate caused by wild animals, the wind, or carelessness inhibited the development from an early stage.

I think it is interesting at this point to identify the emphasis on personal/community protection from violence and assault.

In addition to the basic alarms the role of guard or watchman was important for here was the human response to the alarm.

AMERICAN BEGINNINGS

The development of present day intruder alarm systems has coincided with the progress made in the electrical and telephonic field and it wasn't until the mid Nineteenth Century that there appeared in America the first central office burglar alarm operation.

This was founded by EDWIN HOLMES which evolved into HOLMES PROTECTION INC. In 1874 the American District Telegraph Company (ADT) was founded and the use of alarms and detection devices spread to provide protection services through the use of messengers and telegraph lines.

By 1889 the use of electronic protection for industrial and commercial enterprises in New York City was well established. The first system was basically operating as a Central Station.

Burglar Alarms made a later appearance in this country and it wasn't until 1903 that the RELY A BELL Company was founded. Development was much quicker in the United States and by the end of World War 1 a burglary protection council had been formed which held its first meeting in 1921. The result of this Council was to thrust Underwriting Laboratories into the business of establishing specifications for testing and certifying burglar alarm systems and devices.

By the early 1930's several new Alarm Companies had been established and the first volumetric protection in the form of an ultrasonic detector emerged.

In 1932 the '999' Autodialler was developed and brought into use and several familiar names appears - BURGOT - AUTO-CALL - HORNET.

The period immediately before and during the Second World War shows little expansion or development in the industry. After the war, however, due mainly to wartime defence developments, new ideas were tried and we have seen the emergence of the industry as it stands today. Now poised for even greater strides in balancing new demands and new technology.

The immediate post war growth appeared to be in the protection of commercial buildings and security of valuables but social conditions have changed and

there has been greater movement towards the protection of domestic properties and the safety of the residents. It seems a sad reflection that life has turned a full cycle and we are once again planning to protect ourselves against the threat of assault and injury.

PERIOD PRIOR TO WORKING PARTY

By 1978 the growth of intruder alarms had continued at a prolific rate and the resulting effects upon the police and environment began to be seen as potentially detrimental when viewed against the effectiveness of alarm systems.

Intruder Alarm systems have a valuable role to play in protecting property in this country. Both the Police Service and the public benefit from efficient intruder alarm systems because they can reduce the likelihood of burglary or the loss resulting from burglary and additionally a number of intruders

are arrested annually following the activation of alarms but to be effective these systems must retain credibility by enjoying the confidence of (1) the persons who respond to intruder alarms and (2) the client who has certain expectations from the installation of an alarm viz., immediate response to activation and expectation that the alarm will perform the necessary function for which it is intended.

It had become apparent throughout the country that a great deal of police time was being spent in dealing with false alarms, concern was being expressed that coupled with the proliferation of 'digital dialler' installations police operational problems were likely to occur. The number of Central Station alarm systems were increasing to such an extent that police Crime Prevention and Communications branches could be seriously affected.

The following factors required careful consideration:-

- (1) Because alarm signals were transmitted over the public telephone, direct to the receiving unit, such equipment could be installed almost anywhere, even in the room of a private house.
- (2) This could result in quite small organisations, even individuals setting up what they might term 'Central Stations' but which in effect would only be 'collection centres'.
- (3) From these, calls would still have to be transmitted on to Police and a mushrooming of such centres could well result in Force Headquarters Communications Departments being swamped with applications for direct line telephone facilities.

(4) An overloading of Post Office telephone switching centres with calls from digital diallers resulting in congestion (referred to by the Post Office) would lead to considerable delay before Police received the call and hinder even further Police attendance.

(5) There was also a possibility that the simplicity of such a system (cost apart) could open the door a little wider and admit the more disreputable organisation or person to the field of security.

Some control could be exercised by adopting a firm line with regard to signalling equipment, but it was clear that other aspects needed close attention.

It was therefore resolved that a Working Group comprising representatives from the C.I.D. and Communications Committees of the Association of Chief Police Officers, together with nominated Force Crime Prevention Officers be convened to consider the matter.

As Chairman of that Working Party I would like to comment on the issues we considered, our findings and my views on solutions or the making of improvements.

ALARM INDUSTRY

The Working Party recognised the important contribution being made within the Industry by the B.S.I.A. and the N.S.C.I.A. and other associations in their efforts to introduce minimum standards within the industry.

Whilst they sought to bring in B.S.4737 as the minimum British Standard it was recognised that these Standards could only be applied to members of the Associations.

There are no statutory requirements for the installers of intruder alarms to register or otherwise and the opportunity for anyone to commence a business in this field is relatively simple. This is somewhat exacerbated by the ability of convicted criminals to gain employment within the industry and even to set up Alarm Companies.

Standards within the Industry obviously vary and whilst N.S.C.I.A. members' installations are submitted to inspection it is of concern that many other Companies' installations are not inspected and standards of these cannot be assessed.

In 1974 a Report was published by Loughborough Consultants Ltd commissioned by the Home Office to carry out a detailed research programme into the causes of false alarms.

The following were found to be the causes of activation:

- (a) Human error/negligence 25%
- (b) Alarm system design or layout 23%
- (c) Equipment failure 24%
- (d) Equipment mismatch with physical environment 28%

The factors at (b) and (d) are the direct responsibility of the installing company, who are also partly responsible for (c) and even failures arising from human error and negligence may result from poor instruction.

In an article in the SECURITY SURVEYOR of March 1978

Mr. W. Cornwell, an N.S.C.I.A. Inspector, gave the following causes for malfunction and false alarms:

- (a) Subscribers' error
- (b) Inadequate surveying of premises
- (c) Lack of maintenance
- (d) Equipment failure
- (e) Main electricity supply faults
- (f) Standard of installation
- (g) P.O. line faults

It would appear that the prime cause of these malfunctions was attributable to the Alarm Companies.

The insurers of commercial and some high risk domestic installations have a considerable interest in the assessed risk and consequently on the extent of protection to be provided. The aims of the insurer may not always run parallel with those of the Alarm Industry or the Police Service.

There is obviously a need throughout the whole of the industry to meet basic professional standards in order to encourage and sustain confidence in the quality of service provided. Whilst the present arrangements show a coming together of the larger organisations into Associations their membership criteria - particularly financial requirements - seem to exclude smaller companies. The associations also tend to be inwardly protective.

There is a need to ensure that when potential customers are considering installing alarms their requirements are correctly identified by standard criteria and that the installation specifications are clearly set out to allow them to assess comparative costs. It does not necessarily follow that expensive equipment and high maintenance cost provide the best or most adequate protection.

FALSE ALARMS

One of the greatest problems affecting Police Forces is that of the False Alarm Rate for intruder alarms and the subsequent police action necessary in response.

The problem is one which encompasses the whole of the Intruder Alarm Industry and continues to be one of the most pressing areas for improvement.

Recent statistics provided for a national overview of the false alarm rate in this country revealed an average of about 98% and whilst there may be strong arguments against the accuracy of these figures

I think everyone will agree that the False Alarm Rate is unacceptably high and needs to be urgently reviewed. An evaluation of these figures has been made and in the main support the conclusions of the Loughborough Consultants Ltd Report of 1974.

The most pressing difficulty in assessing any figures involving false alarms is the wide variation in the interpretation of the definition of a "False Alarm".

Quite clearly, interest parties take differing views, for instance some Police Forces view any activation of an alarm system other than by an intruder as a false alarm while in other instances the detection by the system of something which activates the alarm as opposed to an identified fault is not classified as false.

We then have the interpretation of false alarms by the alarm companies and we can often find conflict between the subscriber, alarm company or the post office as to the cause of a false alarm.

It is quite apparent that for statistics to have any meaningful influence on Intruder Alarm thinking there must be a more commonly accepted definition of a False Alarm to enable useful comparison to be made.

My Working Party in their deliberations identified this weakness as an obstacle to achieving reductions in false alarms and recommended a standard definition

be established together with definitive counting rules to enable more meaningful comparisons to be made.

This action would involve a full scale in-depth analysis of statistics relating to intruder alarms and false alarms. There is much work to be done in this area and a solution to the problem will allow all parties to concentrate on wider improvements.

EFFECTS OF FALSE ALARMS

False alarms have a great impact on all parties involved in the chain of action which follows them and in addition many other people are also affected through the inconvenience, noise and loss of essential police availability.

Systems which continuously false alarm tend to reduce the sense of urgency in responding to them by police being conditioned to an excessive false alarm situation which, when added to the effect false alarms have

generally upon the police, serves to create an attitude which is counter-productive to what can be an important part of Crime Prevention.

The Police Service is affected by false alarms in three ways, and each in itself clearly identifies an area of grave concern :-

(1) USE OF RESOURCES

Most important police resources are wasted when a police officer is diverted from other duties and when one considers the time and the commitment of equipment the actual cost of attending an alarm is in itself a very expensive waste for any police force.

In responding to an alarm call there are few occasions when a single officer can effectively deal with the call so that in most cases at least two officers are detailed and in the case of more complicated commercial and industrial property often more than two officers are required.

Policing arrangements for urban and rural areas show great variation but in almost every alarm situation there is a reliance upon vehicular response which involves additional heavy commitment and when one adds to this the difficulty of tracing keyholders whose details are incorrect then I think you can see the emergence of a very costly police exercise particularly when viewed againsts the broad policing requirement.

It has been estimated that two police manhours are required to service each alarm call and when support and other costs are added the average cost is £50 per false alarm.

It can be seen, therefore, that the cost to the Police Service of attending false alarm calls is extremely high. In 1977 there was a total of 677,218 false calls from '999' Central Station and Direct Line systems;

this does not include those false calls emanating from "bell only" systems which also necessitated police response.

The estimated minimum cost to the Police Service therefore of attending false alarms in 1977 was £33,860,900 - HOW DOES THIS COMPARE with the annual turnover of the industry ?

In terms of manhours the waste could be as high as 1,354,436 - the equivalent of 168,300 man days - or between 460 and 690 officers daily, according to the manner of counting.

Even if these figures are in error to the extent of 100 per cent, the consequentially reduced figures still represent a very expensive and wasteful use of valuable resources.

In the present stringent economic climate police manning levels are being more and more carefully appraised to ensure maximum operational efficiency and it is now a matter of urgency that Officers be released from unnecessary tasks.

(2) PSYCHOLOGICAL EFFECT OF A 'CRY WOLF' SYNDROME

There is a great danger in operational police situations that repeated false alarm calls can lead to a 'cry wolf' syndrome on the part of police response.

In emergency situations the traditional response to the service has been to attend with all possible despatch. The public have come to expect this. The result of this course of action effectively introduces a degree of danger.

It is therefore necessary that in order to maintain this standard of response that Police Officers must have confidence in the emergency and identify the need to make prompt operational judgements. This confidence is in great danger of being eroded by the common acceptance that approximately 98% of Intruder Alarm calls are false and this knowledge is bound to have a profound psychological effect and there is a real danger that when an officer eventually responds to a genuine call he may be neither mentally nor physically prepared to deal with the emergency.

This can result in officers becoming frustrated, perhaps even offhand and discourteous, in dealing with the keyholders thus resulting in strained police/public relations.

There is also the danger of despatching a single officer to an alarm call assuming the likelihood of it being false which if genuine could place that officer in danger.

I do not intend to over-dramatise the police response role but I feel very strongly that it is essential for confidence in the reliability of intruder alarms to be maintained at as high a level as possible.

(C) ENVIRONMENT

From an environmental point of view a ringing alarm bell is a nuisance and if persistently ringing unjustly can discredit itself and other alarms in the vicinity. Members of the public often complain on these occasions to the police who are considered by many to be responsible for the delay in reducing the nuisance.

I have tried to show the picture as clearly as possible in order that you can see the considerable influence false alarms have upon operational policing and the need for future development to recognise this problem.

It is evident from the information available that there is an urgent need to determine common standards of performance against which individual installations can be measured and their reliability and effectiveness assessed. For only by improving standards can confidence be enjoyed and the detrimental effect of false alarms upon the industry minimised.

If the two per cent of alarm calls which have genuinely re-acted to intruders had not done so then the man-hours spent on investigating these additional crimes would have been a small proportion of those spent in responding to false alarms !

It must question the economic value of intruder alarms when false calls are excessive.

FORCE POLICIES/Common Standards/Approved Installers

It has been recognised that Force policies and acceptance of standards in relation to intruder alarms vary from one police area to another and the result of these variations causes some confusion to both the Alarm Industry and subscribers. Quite clearly there is a need to develop a common approach which would be of benefit to all. I feel it is essential that firstly there should be a clear understanding of minimal police requirements and that Alarm Companies and the police should work to the British Standard BS4737 as the minimum acceptable level. By adopting this as a minimum standard it will assist the Police Service in the second and difficult task of assessing the suitability of alarm installers.

This is a particularly thorny subject for it is essential that the Service should maintain its integrity and keep clear of any commercial involvement and be seen to apply a consistent criteria. The record of approved installers should be periodically reviewed and if any Company falls below an acceptable level of performance its name should be removed.

Thirdly, there is need to take firm action against false alarm systems which create too many false calls and withdrawal of police response appears to be the only effective sanction which the Police Service has. It is not a course of action which is taken lightly for the Police Service seeks to encourage active crime prevention but at the end of the day there must be an assessment made of the waste of police resources which are necessary to maintain a response to a repeated false alarm.

You will be aware of the charges which are to be included by Cheshire Police in their contracts on direct line installations to their Police Stations.

The activation of alarms leads me fourthly to the re-setting of equipment and the need to standardise procedures. The British Standard provides for manual re-set by a trained and authorised person and I believe the Police Service should especially require this to be done as the first stage of a withdrawal policy for alarms with an excessive false alarm rate.

TERMINATION OF INTRUDER ALARMS

There are a large number of intruder alarm calls presently received by police which, with the probable future demand for increased access, produces an urgent need to identify the most efficient transmission system.

The '999' Autodialler is the most common linkage between protected premises and police stations but it suffers from a number of drawbacks and can now be readily defeated. There has been no significant improvement in this system over the years and if it is to retain credibility it urgently needs to be updated.

The defect has been highlighted by the more secure direct line systems which have the advantage of being constantly monitored for signalling line faults or deliberate cutting of the line.

In addition, the development of digital communication systems has resulted in improved equipment in two areas :

1. A communicator which can replace the '999' Autodialler unit.
2. A receiving terminal with a capacity for audible and visual displays and the ability to present information in hard copy.

BOTH represent significant technical advances.

There is also a requirement for certain high risk premises to be directly linked with a police control room. The Working Party identified this and recommended where the nature of the risk calls for high security and a Chief Officer considers there is a need for direct line communication links between protected and police premises, then modern digital communication systems provide the best means of transferring, displaying and recording information. In addition, the Service should encourage the replacement of '999' Autodialler by Digital Communication Systems.

CONTROL ROOMS

There has been an increase in the number of alarm and security company control rooms in the majority of police areas which have to a large extent resulted in the removal of direct line intruder alarms from a number of police premises.

A number of these Control Rooms use modern digital communication systems which may be used to transmit over great distances relatively cheaply and as the establishment of a control room is quite expensive, it seems probable that there will be no great expansion and established control rooms will be used to monitor more than one force area.

However, this prediction as to the growth of control rooms could be altered considerably in the event of there being an uncontrolled growth in the supply and use of 'Police Call' buttons.

At the present time there is no recognised standard for Alarm Company Control Rooms, communications links between Alarm Company control rooms, alarmed premises and collector points and police premises: but a draft British Standard for direct signalling and remote collection centres has now been published.

Until this standard has been introduced it is recommended that police should continue to accept calls from alarms which originate from BS4737 alarm systems and which terminate in an approved alarm company control room and alarm companies should whenever possible be allowed to install at their expense a direct line from an approved control room to police premises, subject to meeting agreed police policy.

When the British Standard for Alarm Company Central Stations is introduced then existing facilities should be altered to meet the new standard.

ALARMS BY CARRIER (ABC)

This signalling system has great potential because of security and reliability and is to be welcomed as a significant improvement in the transmission of the main body of intruder alarm signals.

There are however doubts expressed as to the ability to control possible misuse and even commercial exploitation militating against efficiency.

The system has the benefit of being continuously monitored and an alarm can even be signalled whilst the telephone is being used and consequently the telephone cannot be interfered with to block the signal. The signal is transmitted to a terminal which produces a visual and audible signal as well as a paper record.

In my view, the main drawback for the Police Service is the lack of a capability to interrogate the caller and establish the nature of the emergency. With the relative cheapness of push button systems and a seeming unwillingness on the part of the alarm industry to be in at the beginning of the early ABC installations were all push button.

If this continued there would doubtless be an increase in the number of false alarm calls, all making demands on police resources.

Another problem is the location of receiving terminals. If large numbers of intruder alarms should be linked to ABC, it is unlikely they could be located in police stations as in the experiments. To do so would make it difficult to refuse other (non-ABC) alarm companies similar facilities. However, if they were it would be easier to extend the Cheshire charging policy.

The alternative therefore is for terminals located at an alarm company control room or in a control room established by the Post Office which complies with the appropriate British Standard.

In my view, Police should generally only respond to alarms received via ABC or Intruder Alarm Company Control Rooms from British Standard Intruder Alarm systems installations and to no other alarms unless the system provides for caller interrogation. If this is not done the demands made on police by a tremendous increase in uncontrolled push button alarms - they are relatively cheap - could swamp limited police resources. There are Health & Safety at Work provisions inherent in the growth of 'bandit' alarms.

RECENT DEVELOPMENTS

The simultaneous development of a broad range of alarm systems based upon an efficient alarm signal has effectively identified the need to introduce some form of control mechanism in the immediate future. It seems to me to be quite clear from the present situation that rapid technological advances are making alarm systems more readily available at a relatively low cost.

Modern Digital Communications systems are capable of passing information over the telephone network which identify and give information about a large number of hazards and the success of this has led to the introduction of more simple systems based upon the same principle. This equipment which has been developed for the domestic market provides three functions (Police, Fire, Relative) which when pressed relays information to a central station which identifies the premises and service required.

It is felt that the progress will lead to the development of systems combining Police, Fire and Social alarms, for at a time when society is becoming increasingly concerned at the risk of crime and physical assault there will be financial attraction for companies to enter the field each with their own control room, each requesting access to police control rooms.

If this access were to be denied then the calls may well be to the police by the PST network, using the '999' system.

These modern digital communications systems using the Post Office STD network have reduced the need by alarm companies for more local control rooms with the result that one control room may serve a large geographical area policed by a number of individual forces. It is highly likely that commercial interest will restrict this type of control room development to being dedicated to the interests of a single company or organisation; all seeking access to relevant police control rooms. The effect of such growth could lead to a mushrooming of demands for access to police control rooms and even on occasion lead to a swamping of police resources, with the inability to carry out normal policing duties.

The obvious deficiency so far as I am concerned is an inability for the system to establish the precise nature of the emergency because of the absence of oral communication. Traditionally the police service, apart from 'Approved Intruder Alarms', have been able to deal with '999' and other emergency calls in all types of situations ranging from crime to legal advice and to help in miscellaneous items such as missing persons and other domestic matters. In many cases no action has been required by the police other than to give advice and this has been possible because of the resulting dialogue between the caller and the police. It has also served to maintain the more personal contact with the public which the police of this country value highly and which often gives comfort to the caller.

I do not mean to create the impression that technological progress should be slowed for I believe that digital communications systems have been welcomed as a more efficient means of passing an alarm signal, but I think it is necessary for developers of alarms to look more closely at the need for efficiency and seek to improve reliability.

It is quite apparent that recent technological advances could ensure virtually false alarm free systems but I can well understand that the cost of achieving this standard will be high.

It is, however, possible that an improvement in services and efficiency could mean that even with an increase in crime there would be a reduction in police action with the subsequent savings in police resources. It is an attractive proposition which requires careful consideration for the prospects for the future presently suggest

that there will be a process of rapid change and growth with the probability of an increase in false alarms.

Chief Officers are seeking to achieve more standard policies on intruder alarms. However, their policies must be viewed against the overall operational efficiency of their forces and the Service. I believe this has been recognised in the Working Party recommendation that the Police Service should only respond to calls emanating from intruder alarms systems which have been installed to British Standard and in all other cases only when the caller has been orally interrogated and the nature of this emergency established or the system permits this.

CONCLUSIONS

The Committee in their work recognised the many problems and divergence of interests which exist but attempted to rationalise and seek to work towards acceptable standards which could be clearly understood by everyone.

They also considered that in view of the many changes envisaged with regard to alarm signalling systems, the commercial interests of diversifying companies and the possible exploitation of new potential market that it was necessary to establish a permanent standing committee to deal with further work arising from the recommendations.

I look forward to a recognition of the deleterious affects false alarms have on Society as a whole. We must ensure that a false alarm rate is at an acceptable level and this in my view can

be achieved by policies designed to encourage improvements in false alarm rates by encouraging use of technology to improve the level of crime protection and deterrence which would arise from fault and false call free systems.

A policy of reducing the false alarm tolerance regularly in keeping with known performance of troublesome systems should contribute materially to benefits for all concerned. I see the views I have expressed in this paper as the way ahead.

IFSSEC '81

INTRUDER ALARMS - THE POLICE POLICY

PRESENTATION BY

S.E.BAILEY, ESQ., C.B.E., Q.P.M.

CHIEF CONSTABLE, NORTHUMBRIA POLICE

WEDNESDAY, 22 APRIL, 1981

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