

# SUBSCRIBER'S INSTALLATION NOTES.

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## 1. PUBLIC RELATIONS.

1.1 Approach to the Job. The Senior Technician on Subs. Installation work allots the work and will endeavour to use the staff to the best advantage, he will give the technician a telephone order which he thinks will be within his capabilities, and the technician must learn the routine of -

- (i) Obtaining the material necessary to do the job.
- (ii) Finding his way around the area.
- (iii) Approaching the subscriber in the proper manner.
- (iv) Carrying out the job in a neat and workmanlike way and leaving behind a satisfied subscriber and another efficient and up to standard job.

This is not as easy as it reads, men vary in their capabilities and personalities; some men have a natural aptitude and a personality which carries them through very well in their dealings with the public, others seem to be in trouble wherever they go.

While not agreeing that "the subscriber is always right", you will find that meeting the subscriber's wishes so far as the Departmental standards will allow, is a good policy and will make the work more congenial for all concerned.

1.2 Approach to Subscriber. When you are given the job of carrying out the instructions on a Telephone Order, remember that the order is the result of the subscriber's request to the Department for work to be carried out.

It is obvious that to carry out the job properly you must locate the person who is responsible for the rental of the service, or an authorised agent or employee in the case of business or other organisations.

In the case of individuals it is only necessary to reasonably satisfy yourself that you are dealing with the party mentioned on the order. You can then discuss the location of the equipment and verify the requirements as shown on the order. If you have any doubts, or the party available is not the actual subscriber, but is an agent or deputy and is not certain of the exact location or requirements, refer back to the Senior Technician before doing any work. Sometimes a difference of opinion occurs between partners as to the location of a service, or you may find a subscriber unable to decide the location of a service because of friction in an office. Again refer to the Senior Technician for advice.

In the case of large services, the telephone arrangements are usually the responsibility of some particular employee, the switchboard attendant will be able to inform you who this person is. Obtain the information and approval from this party before you do anything. Do not consult the staff direct regarding requirements or locations of equipment; if you do you will probably find yourself the centre of an animated discussion as to who is to get the telephone, or where it is to be put. Usually the ideas of the subscriber's responsible representative varies considerably from those of the staff, and he may have some particular reason for placing the apparatus in a certain position, to suit his own staff arrangements.

The subscriber has the privilege of having the service installed where it suits him, providing his request is reasonable and does not conflict with Departmental standards, so be sure you are dealing with the right party before you install equipment.

This will obviate the possibility of the subscriber complaining later that the apparatus is in the wrong position and asking us to move it to another location, which raises the question of who is to pay for the removal.

1.3 Location of Equipment. In fixing locations of equipment there are usually some aspects which the subscriber has not considered, and a suggestion may result in a more suitable location being finally decided upon. As your experience increases you should become more competent to assess the merits of a particular location. Consider the noise, traffic, light, audibility of bell, liability to damage and privacy angles and endeavour to assist the subscriber to obtain the best location for the equipment. A satisfactory installation means a better service and benefits both subscriber and technician. Do not fail to consider the problems of the maintenance technician, especially when locating switchboards and associated cable boxes.

The subscribers installation technician should know thoroughly the various standard facilities available to the public. There are conditions attached to the installation of some of the plans which are not shown on the Telephone Order, particularly in connection with parallel telephones, adaptor services, switch extensions, and alternative telephones.

When you know the various standard arrangements of equipment, you can do your job confidently and cope with the problems which come up regularly. Often a subscriber desires the installation of an unstandard arrangement of apparatus; if you are not well versed in the subject you can easily fall into error, because many arrangements of apparatus will apparently perform quite well and perhaps suit the subscriber's requirements, and to the uninitiated appear quite O.K., but when you know the whole story and the reasons for that particular standard being set you can speak with some confidence and show the subscriber why it is not to his advantage to install the apparatus in the unstandard way. Should the subscriber persist in his attitude you should point out that you are not allowed by Regulation 117 to install the equipment in an unstandard manner without the case being referred to the Engineer for approval. Report the circumstances then to the Senior Technician who can take steps to bring the case under notice.

1.4 Queries from the Public. In the course of your work you will be asked many questions by the public regarding facilities and rentals, installation charges, availability of apparatus, prospects of obtaining new lines, outdoor extensions and so on, and also have to listen to all the complaints regarding the service, justified, or otherwise.

How to deal with these enquiries is a problem to most men in the Section. The subscriber looks upon the technician as a knowledgeable representative of the Department and some men feel they have to live up to this and offer information which can be misleading because they do not know all the facts from the Department's angle. Others plead ignorance to all queries and that is not very satisfactory either.

To be able to answer or parry questions from subscribers, and give an intelligent and satisfactory reply to all queries, you must have a good knowledge of what is written in these notes, plus the necessary technical knowledge. Working as you are in close contact with the public can be a constant worry, if you do not have confidence in yourself. If you know the right answers you will find the hurdles much easier to negotiate.

Examples of queries and difficulties met with regularly are given below, and the best way to deal with them is shown. Bear in mind, if you are not sure of your ground that it is best to admit it, and seek advice from the Senior Technician or refer the subscriber to the Superintendent, Commercial Branch.

Do not offer unsound advice for the sake of appearing wise. You will only create in the subscriber's mind an idea which someone later on has to remove, a task which can be difficult at times because - "I was definitely told I could have it" is the subscriber's attitude.

The man working in the city areas encounters most of these queries, the man at the suburban depot may never meet some of them, because of the nature of the services in the area.

Examples.

- (i) You will be queried quite often regarding the cost of additional facilities, new extensions, extension bells, parallel telephones, interswitches, changeover keys, adaptors, switchboards and intercom. services.

"What will this job cost" is a common query.

While there is no obligation on you to provide this information, (in fact, the quoting of terms and conditions is the job of the Superintendent, Commercial Branch), the subscriber often presses for an approximate figure, and you feel obliged to provide the answer. This is quite O.K. providing you know your figures, but if you are doubtful, refer the enquirer to the Superintendent, Commercial Branch.

- (ii) In your discussions with the public do not comment on the condition of the equipment or any part of the installation.

If the service appears unsatisfactory reserve your comment for the Senior Technician.

- (iii) Do not give the subscribers any telephone numbers or names of Engineering Branch officers to ring for information regarding jobs. The only telephone number you should give the public is that of the Commercial Branch Contract Clerk for the area concerned.

- (iv) The following type of inquiry should be referred to the Commercial Branch Enquiry Section, without any comment -

- (a) "I have had an application in for years for a telephone at my home. What is the position now?"

- (b) "When are we going to get the switchboard we applied for some time ago?"

- (c) "We have an application in for an outdoor extension. Do you know when we will get it?"

- (d) "Can we get another point installed on our Intercom. service?"

- (e) "Can we get more Exchange lines on our switchboard?"
- (f) While working on a job, another subscriber enquires when his job is going to be done. Do not offer any information on these queries, because you do not know the position regarding the availability of equipment and cable pairs.

(v) Enquiries re coloured handsets, long cords, deaf aid apparatus, supply of additional directories should also be referred to the Superintendent, Commercial Branch, (Contract Clerk for the particular area).

(vi) The query "who is paying for this work" usually arises when the job involves work in excess of the subscriber's actual requirements; perhaps a rearrangement of cabling has to be done to provide one or two extensions and the subscriber wonders what it is all about.

Do not commit yourself regarding costs in these circumstances, refer the subscriber to the Senior Technician.

(vii) You must be prepared to handle complaints regarding the service; your entry into the premises is the cue for the subscriber to relate all the troubles he has had with the service. Remarks such as -

- (a) "This is the worst telephone in Melbourne".
- (b) "I can't get anywhere when I dial".
- (c) "I always get wrong numbers".
- (d) "The 'phone has never been any good". -

should be countered firstly by, "Have you reported these troubles to the Exchange".

It is a fact that some subscribers will endure a genuine fault for quite a long time without reporting it. They will tell you all their troubles, but have not bothered to read pages 2 and 3 of the Telephone Directory - have you?

You can help the subscriber by explaining dial tone and the correct way to dial and how to listen for the busy tone between the dialling and what this tone means.

Refer them to Pages 2 and 3 of the Directory and point out the correct method to report service troubles.

Should there be an obvious fault on the service see that it is reported immediately. Faulty operation of substation equipment by the subscriber is the cause of a great many service troubles.

You should always be prepared to explain the correct operation of equipment. You enter an office and the subscriber says "We have a new girl looking after the switchboard, will you show her how to operate it properly". It is up to you then.. You are obliged to instruct the operator in the use of the cordless switchboards and other items of equipment except the floor pattern P.B.X's. The Telecom. Division have a staff available to visit these P.B.X's and instruct the operator in the correct procedure. This applies to new installations and "in situ" boards, so that if you encounter a subscriber having "operator trouble" with a floor pattern P.B.X. advise them to get in touch with the Commercial Branch.

You can see from all this that in your constant contact with subscribers in their homes and offices you are placed in a position of some responsibility; your appearance, behaviour and ability to handle tactfully awkward questions and situations can mean the difference between having a congenial job and being in constant bother with both the public and your Senior Officers. Nothing is gained by adopting the attitude that the subscriber is a nuisance and should be put in his place at every opportunity.

You are bound to meet people with whom it is impossible to reason and nothing you can suggest will suit.

It is easy to forget the right tactics in such circumstances and you are in a deadlock before you know it. Bandyng words and emerging with what you consider is a "victory" is no help to the officer who has to go along later and straighten out the trouble.

You will have access to places and people where you must use discretion in what you do and say. You will see and hear things which you should not pass on.

Your work may take you unattended into the private rooms of the highest or the lowest in the land. It is a compliment to the behaviour of the majority of the staff of the section in the past, that we can move around as we do in subscribers' premises.

Do your best to maintain this happy state of affairs.

- 1.5 Dealing with the Public. As Public Servants we are providing a service. The subscriber pays for a service and has certain rights and privileges. We want harmony with the public, and will get it if the approach is made in a commonsense way. If you know what the public is entitled to, do not say too much, but be correct in what you do say. Don't discuss facilities, rentals, etc. unless you are sure your details are correct. The safe way is to refer enquirers to the Superintendent, Commercial Branch.

Be businesslike on the job and watch your time. The subscriber usually has a good idea of what is going on, particularly in the city area where business men abound.

Look tidy and work tidily. Create goodwill, there will always be another technician following you later on. If you borrow anything, ladders, keys, etc., return them. Don't break things, if you do, report to the Senior, there will probably be a claim from the subscriber. Don't disfigure buildings, and don't forget to clean up after you. Don't use main frames as dumps for material.

Working outside on your own you have certain privileges, you are not tied down as you would be in workshops, and this brings responsibilities. Don't abuse this latitude. The good man outside is trustworthy, has initiative, resource, willingness and is able to give and take, to keep things going smoothly.

The reaction from members of the public, test desk officers, faultmen, etc. follows quickly if you should do the wrong thing, so again it is "Consult the Senior if in doubt". Don't leave him in the dark - he is responsible for your deeds and misdeeds, and providing you tell him your difficulty he is only too willing to help you.

SUB'S. INSTALLATION NOTES.

2. GENERAL.

2.1 Obtaining the Correct Apparatus for the Job. We will see how equipment is obtained from an Engineer's Store, but the technician has to know what equipment is necessary to provide the service. This means he must know what equipment is needed to make up the various Plan numbers.

A new service is usually listed as a certain Plan number, the most common being Plan 1 which is an exchange service with a handset type telephone.

The Exchange call number will tell the technician whether the telephone will be one with or without a dial, or a magneto instrument.

Other new services providing various facilities, are listed in E.I. TELEPHONE Substation A 0010.

If the order is stamped "Indoor Box" it signifies that the cable pair allotted for the line terminates on a cable box or main distributing frame in the building, and the service can be jumpered or wired from the cable box or frame without the necessity for the fitting of a substation protector, because the cable pair enters the building under a lead cover which is continuous from the exchange.

Should the cable pair be connected to open wire, either aerial or covered, prior to its entry into the buildings, then this stamp "Indoor Box" is not on the order, and the technician must fit a substation protector at a point near to the entry of the outside wire into the premises, and connect the earth wire provided by the lineman to the protector.

Note: E.I. TELEPHONE Protection E 0100 covers protection of substation apparatus.

The technician has now established from the order the type of telephone and whether a substation protector is necessary or not. He will need a quantity of wire and possibly a backboard for the protector, or conduit for protection of the wiring. These things he draws from the Store as shown previously. A telephone directory is also provided for each telephone installed.

As mentioned previously, the method of getting the equipment and material to the job varies slightly at different Depots, due to local conditions in respect of travelling and transport, but Paragraph 162 of Works Procedure and Costing Instructions applies, this reads -

"Upon receipt of the requisition at the Engineers' Stores, the material shall be taken out for despatch, and either handed over the counter against the signature of the Receiving Officer or despatched per carrier, in which case the cartage docket or consignment note number shall be quoted and the requisitioning officer himself actually draws the material from the Engineer's Store, he shall sign the requisition as the requisitioning officer, as the officer-in-charge of the Store, and also as the receiving officer".

2.2 Installation of Single Telephone Services. The apparatus associated with each Plan No. is also listed in E.I. TELEPHONE Substation A 0010 and the technician must make himself familiar with the facilities provided by the Plan numbers so that he knows what apparatus and material are necessary.

(i) Residential Services. The Plans 1, 2 and 16, which are the single telephone services, are the simplest, and the new man will gain his early experience on this type of work. The main difference between the work in the suburbs and the city area shows itself even at this stage, the man in suburbs is concerned mainly with the running of the internal wire, the cable pair allotted to the service having been provided and tested into the premises by the Lines Section, in the great majority of cases.

The technician's job then becomes a matter of locating a suitable position for the telephone, meeting the subscriber's wishes so far as departmental standards will allow, and running the internal wiring in a manner which conforms to the department's standards, at the same time doing a neat and inconspicuous job. The technician can encounter plenty of problems in this particular phase of the job.

Building style and design are constantly changing, the vogue nowadays is to eliminate what are termed unessentials. Unfortunately these include picture rails, architraves and other items which are very convenient for running wire, and in their place we now have obstacles such as mirrors, built in furniture, treated walls, etc., which need resource on the part of the technician to overcome and do a good job. You should make every endeavour to do this good job, because the work you do in the subscriber's home or office is the measuring stick by which the public form their opinion of your capabilities. It is to your advantage to create goodwill with the public. Remember that the installation of a telephone is a big event to the majority of subscribers, and a neat job done in a private home is much appreciated, whereas a slovenly job is a constant annoyance and an eyesore.

- (ii) Single Services from Indoor Boxes. The providing of a telephone service from an "Indoor Box" or main distributing frame means that the installing technician must test the underground cable pair from the M.D.F. in the building, and then extend this pair, by jumpering via any other intermediate distributing frames or boxes, to the point nearest to the subscriber's premises, and wire from this point.

These U.G. terminations in the buildings may vary in size from five to 500 pairs. The locating of these M.D.F.'s in the buildings, the identifying of the cable pairs, and the extending of the line through the various intermediate boxes to the subscriber's premises, causes both the new and not so new man a great deal of concern.

It is impossible to give an inexperienced man enough information and tuition to enable him to cope with this part of the job from the outset. A general idea of cabling schemes can be shown and the principle grasped, but you must keep in mind that there are not two buildings in any large city exactly alike, and every one of them has its own particular problems in regard to the location of cable boxes and the running of cable. In fact, if you are on subscribers' installation work long enough, you will find that you can do a thousand jobs and every one will be in some respect different. There is no substitute for experience on this work; you can not learn to find your way (from the cabling angle), around city buildings except by experience.

The aim of architects these days is towards concealment of all cables and boxes, if at all possible. This trend together with the extended use of glass and metal in design, adds to the difficulties, until the stage is reached when the installation of a single telephone in a location such as the ground floor of a city emporium, seems to be a hopeless proposition.

However a survey of the position by an experienced officer will usually find some way out of the difficulty.

SUB'S. INSTALLATION NOTES.

3. COSTING.

3.1 This is a subject which could fill books. To the technician who feels that clerical work is beyond him, and more or less a waste of time, an insight into costing is necessary. A knowledge of the methods used to carry out the costing in the Engineering Division will convince him that there is quite a lot of reason behind it all and enable him to do his small part in the proper manner.

Firstly, everyone must realise that in an organisation the size of the P.M.G.'s Department, handling millions of pounds worth of assets and employing over 80,000 people throughout the Commonwealth, chaos would result if some central authority did not control the provision and expenditure of funds for new works, maintenance of existing plant, labour, etc.

To do this with any degree of certainty and provide the proper funds and labour necessary to keep the machine working smoothly, records must be kept of money and manhours spent, equipment used and so on.

The charging of your working time or the material you handle to the correct account may not seem very important in the single instance, but in the aggregate is very important for statistical purposes. Statistics collected through the Costing Section are used to draw up a Works Programme for which Parliament provides funds for the material and labour.

These funds are split up among the sections of the Engineering Division and the Costing Section advises the amounts available for labour, materials and incidentals for each of the Plant Accounts -

- |                                    |  |
|------------------------------------|--|
| (i) "Providing" plant.             | (iii) "Renewing" or "Rearranging" Plant. |
| (ii) "Maintaining" existing plant. | (iv) "Recovering" or "Abandoning" Plant. |

The Divisional Engineers concerned are responsible for ensuring that the expenditure in their respective divisions does not exceed the funds provided as shown in the Works Programme, hence the necessity for stating correctly how you expended your time and on what plant account.

The Engineering Division uses a system called "Plant Unit Costing". The object is to find costs per unit for "New Work" and "Maintenance". The answer is found by dividing costs by units.

Expenditure is classified to particular classes of plant, and so for each class of plant there has been determined a particular item of that class. This item serves as the plant "Unit". For example, for installations on subscriber's premises (other than P.A.B.X. installations) there are other items besides telephones - conduit, wiring, interswitches, P.B.X.'s, control locks, coin attachments, etc., but the "Telephone" is the item selected as the plant unit for substation plant. The unit for exchange equipment is known as "one working end". This includes private branch exchanges (P.B.X.'s) also.

3.2 Plant Account symbols are obtained in the following way -

Example -

Exchange	becomes X'change
Telephones	becomes Instruments
Providing	becomes Provision
Maintaining	becomes Maintenance
Renewing, Rearranging	becomes Renewals, Rearrangements.
Recovering, Abandoning,	becomes Recoveries, Abandonments.



Thus on Subscribers' Installation work the plant account symbols are -

- (a) The Providing Account. - XIP.
- (b) The Working Expenses Account in Three Subsections.
  - (i) XIM Current M'tce.
  - (ii) XIR Renewals, rearrangements.
  - (iii) XIC Recoveries.

and you must use the appropriate symbol when taking apparatus and material out of store, returning recovered material to store, and when charging time on the job on your working report - WP.1M).

When you know the correct procedure, and charge the cost of the apparatus and the manhours to the correct plant account, it follows that an accurate record can be made of the cost of providing new plant units - (XIP), and of maintaining existing plant units - (XIM), etc.

3.3 Why Plant Accounts are kept. When you consider that many manhours a day are used on installation, and each man draws quantities of valuable apparatus from store, you will realise that it is essential to know how and on what work this money is being spent. From the information shown on the completed telephone order is extracted the number of new plant units connected, and existing plant units rearranged, and from Service Technician's report is taken the number of faults and the time spent in clearing them.

So we see that from the clerical work of the Technician on his time sheet, telephone orders, and stores requisitions, statistics can be compiled showing:-

- (i) Number of new plant units connected.
- (ii) The cost of connecting these new plant units.
- (iii) The average cost and time to install a new plant unit.
- (iv) Total number of plant units now installed ("in situ").
- (v) Total number of hours spent servicing these plant units.
- (vi) Cost of replacing faulty apparatus per plant unit.

These statistics are used to plan future work and anticipate the number of staff necessary to install and maintain given numbers of plant units.

3.4 Plant Accounts. As stated previously, the symbols covering practically all the work encountered by the technician on Subscribers' Installation are XIP, XIM, XIR and XIC. To enable you to charge the cost of the apparatus and the labor involved to the correct Plant on the -

- Forms (i) WP.20 (Obtaining stores),
- (ii) WP 1 M (Time Sheet),
- (iii) S7 or WP.97 (Recovery of apparatus), -

the following paragraphs should be studied, and if the basic principle is grasped completely, you will be able to deal properly with most of the cases which arise.

If there are any doubts as to which Plant account to charge or credit, you should ask the Senior Technician, because there are, at times, jobs of a complicated nature which do need a ruling.

XIP. (The Providing Account). This accounts records -

- (i) "The cost of providing the actual plant in use."
- (ii) "The cost of placing it in position and condition for working."

XIM. (The Maintenance Account). This account covers normal day to day maintenance up to a cost of £200.

XIR. (The Renewals, Rearrangements, and Shifting Account). This account covers renewal of plant by other plant of the same type and size, with the number of plant units unaltered, over an estimated cost of £200; and the shifting of plant from one location to another in the same exchange area, or the rearrangement of existing plant.

XIC. (The Recoveries, and the Net Loss Account). This account covers cost of dismantling and recovering plant of a different class, size or capacity, charged to providing, or which is not being replaced; and the cost of all plant in situ which is abandoned due to impracticability of recovery.

Examples of the use of XIP, XIC, XIM and XIR.

- (i) The shifting of existing plant from one building to another in the same Exchange Area is XIR, likewise the shifting of plant from one part of a building to another.
- (ii) Where the subscriber moves from one Exchange Area to another, the cost of dismantling and recovery at the old Exchange Area is charged to XIC, and the cost of providing the service at the new Exchange Area is charged to providing - XIP. (You have created a new plant unit from that Exchange.)
- (iii) Where a subscriber's line or apparatus is not actually removed, but is left for an incoming applicant to take over, the cost of providing a new line and apparatus at the new address of the original subscriber should be charged to XIP.
- (iv) Where rearrangement of a subscriber's service involves additions to the existing plant (this is an addition to the number of plant units), the cost of such addition should be charged to XIP and the cost of rearranging the existing service to XIR.
- (v) Where plant is recovered or demolished and is not being replaced, the cost is charged to XIC, and the apparatus or material recovered should be shown on Form S7 or WP.97 (Surplus and Recovered Material Advice) and credited to plant account XIC.
- (vi) Where plant is recovered or abandoned and replaced by plant of a different class or size, and the number of plant units is altered, the cost of providing the new plant is charged to XIP and the cost of recovery of the old plant to XIC. The plant recovered is to be shown on Form S7 or WP.97 and credited to XIC account.
- (vii) Repairs to existing plant, removal of faults, replacing of faulty apparatus, and all types of day to day maintenance up to a cost of £200 is charged to XIM.
- (viii) Work on Main Distributing Frames and cable boxes, such as tidying up of jumpering, testing of cable pairs and making up of cable books and cards is charged to XIM.

Note: Where this work is likely to extend over more than one day, the attention of the Supervising Technician should be drawn to the job, regarding desirability of preparing an authority for the work.

3.5 Authority for Provision of New Plant and Removals of Plant. On Subscribers' Installation we are concerned primarily with work which is the result of an application from subscribers and intending subscribers, either for rearrangement of existing plant or provision of new plant. These jobs range from the simplest to the complex, and naturally the cost of the job varies from a modest sum 7/6 to possibly a £1,000 or even more.

The Department recoups the cost of these jobs in different ways. Work done on the XIP account involves provision of new equipment, for which an annual rental and a service connection fee is charged.

The rental is based on figures calculated to recoup the Department over a period of years, for the depreciation in value of apparatus, the servicing of the equipment, plus any costs over and above the service connection fee.

On the other hand, work done on the XIM and XIR accounts usually means that rentals remain the same, so that the Department must make certain charges for work made necessary by the action of the subscriber. Thus all removals, rearranging, and work not covered by normal maintenance is charged to the subscriber, but in different ways, according to the type of job, as will be seen later.

- 3.6 New Plant - (XIP). The public make their applications to the Superintendent, Commercial Branch, for the telephone facilities they require. These may vary from the simplest single telephone in a private home to an Automatic Exchange of several hundred working ends in business premises.

All the standard facilities which the Department has found from experience caters for practically all subscribers' requirements, are found in a "Standard Telephone Facilities" booklet which is similar to E.I. TELEPHONE Substation A 0010. With the aid of this booklet, the Telecommunications Division representative and the applicant decide upon the most suitable facility to meet the subscriber's requirements. An agreement or contract is signed, rental in advance is paid, and a Telephone Order is then issued by the Commercial Division to cover the installation of the necessary apparatus.

This, of course, may be an entirely new service or an addition or change of apparatus on an existing service.

A Telephone Order is issued for all this work regardless of the cost of the equipment and the labor cost. To keep a proper check over the many and varied jobs it has been laid down that only jobs costing less than £200 can be done on a Telephone Order alone. If it is anticipated that the job will cost more than £200 an estimate is made of the job by the Supervising Technician and an Authority made up with copies of the estimate and job details going to everybody concerned in the Engineering Division and the Costing Section; this enables a check to be kept of equipment and manhours spent on the job. The Authority is given a number and all equipment, material and labor is charged to this number and the appropriate Plant Account and not to the Telephone Order. The Costing Section has the job of checking these estimated jobs and will query us if there are discrepancies between the estimate and the completion report.

These Authorities, when the cost is estimated at between £200 and £500 are known as Minor Works Authorities, between £500 and £1,000 as Quantity Costed Minor Work Authorities. If the work will cost more than £1,000 a Major Works Authority is necessary and again an estimate is made covering equipment and the anticipated manhours needed to complete the job.

Remember that all time spent and equipment and material used is charged to the Authority Number and correct Plant Account and not the Telephone Order.

Similarly, any equipment recovered is credited to the Authority and the appropriate Plant Account - (Recoveries of plant is a credit to XIC).

When the job is finished, completion forms are filled in and sent to the Costing Section. These forms also advise the number of plant units provided or recovered (if any), for statistical purposes, as explained previously.

The Costing Section also extract from WP.20's, S7's, WP.97's, WP.98's and time-sheets, particulars of all equipment, material and manhours spent on the job, by reference to the Authority number shown on these documents.

The Telephone Order associated with the job is returned in the usual way through the Telephone Order Clerk but is endorsed "Work done on Authority No. ...." so that the Telephone Order Clerk can view all the papers and charge the subscriber if this is necessary.

We cannot provide any new plant units without a Telephone Order, because there is either a rental or installation charge involved, and sometimes both - and a contract is necessary between the Department and the subscriber. That is why you must not alter the facility authorised by the Telephone Order without a further application and signature from the subscriber. (Technicians should carry a few Form Tel. 40's with them.)

The Commercial Branch uses Symbol letters on the Telephone Order to indicate whether the cost of the job is chargeable to the subscriber or not. Thus as applied to the XIP account -

- (i) Symbol "A" involves a standard service connection fee.
- (ii) Symbol "B" is a standard charge job.  
(For example, 5 yards of wire are allowed on the installation of an extension telephone or extension bell, if this is exceeded the subscriber is charged at the current rate for the excess wire over 5 yards.
- (iii) Symbol "C" denotes an actual cost job.  
(For example, where groups of extensions (3 or more) are installed, the actual cost of the cable and manhours is charged to the subscriber).

Symbols, their meanings and the information required on the Telephone Order will be dealt with fully later.

Apart from authorisation of work by Telephone Order, engineering work is undertaken under the following authorities:-

- (i) Minor Works Authorities (cost up to £500).
- (ii) Quantity Costed Minor Works (£500-£1,000).
- (iii) Major Works Authorities (above £1,000).

Work done under these authorities must be approved by either the Divisional Engineer or a higher officer and is done at Departmental expense to provide a Capital asset from which rentals are collected, so that the job eventually pays for itself.

3.7 Recoverable Works Authorities. If the whole or part of the cost of the job is to be recovered from the subscriber, either at the request of the subscriber or because the Department considers that the work is necessary, and the subscriber is liable for the cost, a Recoverable Works Authority is issued. These are either:-

- (i) Recoverable Works Dockets.
- (ii) Recoverable Works Minor Authority.
- (iii) Recoverable Works Major Authority.

The procedure on R.W. authorities, minor and major, is similar to an ordinary minor or major authority.

The Plant Account symbols XIP, XIM etc. do not apply in the case of an R.W. authority, the account is classified as an R.W. account and shown as such on all vouchers and time sheets.

3.8 Special Authorities. These authorities are issued for special purposes only, usually for Departmental reasons. As the name implies, there is usually a special reason for the authority. A case could be when extensive damage is done to equipment and doubt exists as to the identity of the party from whom the costs should be recovered. Rather than issue an R.W. authority, which can only be withdrawn by the Director if the costs prove irrecoverable, a special authority is issued as a matter of urgency, and the authority can be changed later to an R.W. if circumstances warrant.

SUB'S. INSTALLATION NOTES.

4. STORES.

4.1 Material into Engineers' Bin Store. Before attempting to do the job you will need equipment and material.

This is obtained in the first instance from the Stores Branch Main Store by the storeman in charge of the Engineers' Bin store at the Depot. He requisitions on Form S.6 for all material and apparatus necessary to keep the men supplied with all the variety of material needed to do the jobs.

Stock items, together with maximum and minimum quantities, have been prescribed for each store. These quantities must not be allowed to fall below the minimum laid down. Storemen should prepare requisitions in advance so that stocks do not fall below the minimum prescribed amount.

The Storeman should keep the store in good order and file the Engineers' store copies of the various forms so that they are readily available for checking and reference.

Entries on the Bin Tally Cards are made regularly, and kept up to date so that the storeman can see when a requisition for material is necessary to maintain stock.

The storeman obtains material from the Stores Branch on Form S.6. his authority being the Engineers' Store Work Order No., which for example is 4/371 for the sixteen depots in the 4th Division.

4.2 Serial Lists (Serial and Item No.'s). The types of material and equipment used in the Department, and particularly in the Engineering Division, are extremely numerous and there must be some system of identification to facilitate description of the innumerable bits and pieces. This is done by -

- (i) Serial Lists.
- (ii) Standard Stock Title Books..

(a) Serial Lists - Equipment and material is grouped under Serial Lists according to its nature or use, and then each particular item in each serial is given a separate identifying number.

Serial 1 for example covers telephones and there are approximately 140 items in this serial group, each with an identifying number.

There is no regularity in the sequence of item numbers, because new types of material are added to this list as they are introduced into service, and it is not practicable to keep any numerical sequence.

There are thousands of items covered by the serial lists, from the smallest screws and washers to the most valuable equipment.

(b) Standard Stock Title Books - Every type of material, such as -

- "Sleeve, waxed paper, 1 wire" Serial 18/1,
- "Billycan, Tin Small, 4 pint" Serial 118/16.
- "Motor Generator No. 26, 600 amperes," Serial 36/32.

is listed in the Stock Title Books, of which there are nine, covering Lines, Telegraph, Light and Power, Broadcasting, Exchange and Substation Apparatus, Tools, Testing Instruments, Cable and Wires.

In the handling of stores, the serial and item numbers must always be shown; in fact, to the Stores Branch people they are of more importance than the title of the equipment, a storeman will know what a 268/16 looks like and not be able to identify it as a "Switch, Extension".

A point here is that the parts of equipment are also serialised, for instance, the Automatic dial parts are serialised under Serial 41 and cover 100 parts.

You are interested in the serial and item of parts in connection with the damage to telephones. When you recover damaged equipment you must specify on the Telephone Order the serial and item numbers of the actual parts broken, so that the subscriber can be charged correctly.

4.3 Issue of Material to the Technician from Bin Store. Material required for use on Plant Accounts, Work Orders or Telephone Orders, when obtained from Engineers' Bin Stores, is to be requisitioned on -

- (i) Form WP20 - When issued to a Minor, Major or Recoverable Works Authority.
- (ii) Form WP20A - When issued for work on Telephone Orders and routine maintenance (Printed Serial and Item).
- (iii) Form WP20D - Similar to WP20A - Items written in.

It should be noted particularly that Form WP20A and WP20D should not be used for issue of material to major, minor or recoverable Works Authorities. Use Form WP20.

A separate form is to be used for each Plant Account, but one form can be used for any number of Telephone Orders on the same Plant Account.

The forms should be numbered consecutively at each Engineers' Store commencing with No.1 as from 1st July each year. A separate series of numbers should be used for Forms WP20 and WP20A/WP20D.

WP20. - Where practicable the Form WP20 should be prepared by the officer requiring the material, and he retains the fourth copy.

The other three copies are handed to the storeman, who obtains a receipt on the three copies, files the third copy in numerical sequence, and forwards the first and second copies to the Cost Clerk.

Forms WP20A and WP20D. - These forms are used where numerous issues of material and equipment to workmen are made daily.

Only material and equipment to be used on Telephone Orders or routine maintenance is issued on Forms WP20 A and D. A separate sheet is used for each Plant Account. The Telephone Order No. must be shown against each entry on the XIP sheet and either a Telephone Order No. (for removals and renewals) or the appropriate subscribers exchange call No. (for maintenance or rewiring) on the XIM sheet.

The issue of equipment and material on Forms WP20A and D is covered in a Victorian Engineering Instruction and is quoted below in full.

EXTRACT OF VIC. E.I. NO. 63 (30TH JUNE, 1945).

"WORK DONE UNDER TELEPHONE ORDERS - ISSUE AND RECOVERY OF TELEPHONE EQUIPMENT."

Issue of Equipment for New Services or Alterations. - The Officer in Charge of an Engineers' Store must not issue equipment for work authorised on a Telephone Order unless the "M" copy of the order is produced by the mechanical officer concerned. Before issuing the equipment he must endorse in ink, the number of the WP20 A or D voucher and the name of the store and his signature on the relative telephone order.

Recovery of Equipment. - Similarly, the number of the Engineers Store S.7 or WP97 or the Main Store S.7 and the name of the Store must be endorsed in ink, on the "M" copy of the relative telephone order.

Renewals of Subscribers Equipment. - In future, telephone instruments must not be issued from an Engineers' Store for maintenance purposes unless the store O.C. is in possession of a written order, on the prescribed form, from a Supervising or Senior Technician in charge of the work. These

authorities must be prepared in duplicate; the original is for the Store O.C. and must be attached by him to the triplicate copy of the relative WP20 A or D voucher and retained at store for reference purposes; the duplicate is to be retained by the issuing officer, filed in numerical sequence and be readily available for reference purposes. In addition, the Stores O.C. is required to quote the authority No. on the relative stores vouchers and complete the details required on the authority form in regard to the issue and recovery of the equipment.

Renewal of Damaged Equipment. - Where equipment, which has been damaged and has been replaced at subscribers premises, is returned to store, the S.7 form should bear an endorsement to that effect and EE511 or Telephone Order Number must also be quoted.

Omission of Details from Stores Vouchers. - It is noticed that essential details are being omitted from Stores Vouchers. It is particularly important that serial and item numbers, and authority numbers such as the Major, Special, Minor, Telephone Order or the maintenance authority referred to above, be quoted on the relative Stores Vouchers.

Work Performed at Variance with Order. - Where a different type of equipment to that provided for under the Telephone Order is installed, the reason for the alteration must be stated on all copies of the Telephone Order so that the Superintendent, Commercial Branch, can be advised if rentals are affected.

Receipts for Material Issues. - Some O.C.'s of Engineers' Stores have been writing on the WP20 A or D copies the name of the officer who receives the material. This practice must cease forthwith. The mechanical officer who receives the material must sign the WP20 A or D copies in the appropriate column. In giving a receipt for material issued on WP20A where the items of material are printed at the top of the form, it is particularly important that a straight line or lines in ink or indelible pencil should be ruled beneath the items not issued and in alignment with the quantities of the items issued.

This is necessary in order to prevent quantities being inserted after a receipt has been given. It will be the responsibility of both the Stores O.C. and the receiving officer to see that this action is taken before a receipt is given.

END OF EXTRACT.

- 4.4 Issue of One and Two Pair Cable. Form WP20U is used to record the usage of one and two pair cable by the Technician. The Storeman, when issuing a coil of cable obtains the Technician's signature on the left hand section of the form. The amount of cable used on each job is entered against the telephone order number on the right hand section of the WP20U by the Technician. The Storeman later relates this record to the correct Plant Account on Form WP20A.
- 4.5 Small Stores. - Apart from the equipment needed for the job, the technician needs a supply of small stores, such as staples, clips (locking, flat and conduit), anchoring devices (Sebco and Rawlplug), Clout tacks, screws, lacing twine, beeswax, candles, solder, petrol, cleaning cloth, emery paper, wiping metal and pad. These items are serialised but are not issued to separate orders, they are obtained as a free issue from the Engineers' store.

The technician is also entitled to a regular, reasonable issue of matches and solvol.

Forms to Carry. (EM23, EM101, SE508, Tel. 40.)

The technician should always carry a small supply of -

- (i) Form EM23, (Subscribers' Apparatus Card.) This form is to be left in all Public Telephones and P.B.X.'s installed by the technician, and gives details of the number and name of the service, when installed, and by whom. It is then used to record all future work or faults encountered on the service.
- (ii) Form EM101. (Not in Attendance Cards.) These cards are left by the technician when he is unable to gain access to the subscriber's premises to do the work required. The telephone number given for the subscriber to advise us when he will be available should be a non-metering number.
- (iii) Form SE508. This is a form provided so that the technician can obtain the signature of the subscriber, to relieve the Department of the responsibility for any unavoidable damage where plugging etc., is necessary in doubtful conditions, for example, single brick walls, tiled surfaces and the like.
- (iv) Tel. 40. (Application Form for Additional Facilities or Removals.) This form is used by the technician to obtain the subscriber's signature for any variation, of a minor nature, of the requirements shown on the Tel. Order.

4.6 Care of Papers. The storing and carrying of these papers, plus the Telephone Orders and other odd pieces of information, circuits etc., which seem to be a part of all technician's kit is a problem to many.

Unless some protection is given these forms they will rapidly become useless. Telephone Orders in particular should be kept clean and tidy and entries made by the technician should be in soft black pencil and be done in a neat manner. All details of the job are shown on them and after leaving the technician they pass through many hands before they are finally cleared.

The most popular method of keeping papers is to use the Departmental pocket notebook and rubber bands.

4.7 Carrying Small Stores. In regard to the small stores mentioned previously, these are best carried in tins, and there is scope for ideas on this subject; one of the neatest ideas being the fitting of two lift-out trays in the tool bag to carry staples, screws and clips and the like. As the class of work varies in different districts, so does the necessity for the use of certain of the tools and gear. Quite often, aids can be made which are well worth-while; an instance is the making up of a length of cordage, one pair fitted with alligator clips on both ends, long enough to span a seven-panel distributing frame. Any technician in the city area, who has made one, will vouch for its usefulness, when the necessity arises for a temporary jumper, or for testing purposes.

The issue of tools and the maintenance of a proper kit, tool registers, loss of tools, issue of overcoats and overalls, will be dealt with separately.



SUB'S. INSTALLATION NOTES.

5. CLERICAL.

5.1 Applications From Public. - The procedure for a new exchange line or a line involving Underground cable pairs is this. The applicant writes to the Superintendent, Commercial Branch, asking for a new service, the application goes to the Priority Section where a priority is allotted the application, depending on circumstances decided on in the Telecom Division. The application is listed in numerical order in the particular priority group. A form, giving the priority number is sent to the Lines Branch cable recorders, asking for allotment of a cable pair, if or when a cable pair is available. The Priority Section is advised, they write to the applicant asking for an agreement to be signed and rental to be paid in advance. The completed agreement goes to the Contract Clerk, who sees that a Telephone Order (9 copies) is issued for provision of the service.

After the issue by the Contract Clerk the copies of the order are sent to the Telephone Order Clerk, who distributes them to the different sections concerned; each Section deals with their part of the job, and shows the details on the order of the work they do.

The copies of the order then are routed back to the Telephone Order Clerk and assembled by him. He makes any charges which are necessary, from the details shown on the order by the various workmen, and sends the Superintendent, Commercial Branch copy back to the Commercial Branch where the Accounts Branch is advised of any charges on the Account's copy and subscriber is charged. Once the service is established, applications for additions, alterations and removals are made on form Tel. 40 or by letter and handled by the Contract Clerk, who issues a Tel. Order for the work, and the procedure is the same as stated previously. The Technician must never change the text of the order without consulting the Contract Clerk and his Senior Technician and obtaining their approval, also covering the alteration by a written acknowledgement from the subscriber on Tel.40.

5.2 Telephone Order Routine. As the greater part of the work on Subscribers Installation is done as the result of a Telephone Order, the technician should know this subject thoroughly.

Firstly, the form used is known as Form Tel. 1.

There are nine copies made of Form Tel. 1 when a new exchange line is involved. They are distributed as follows -

No. 1 to Superintendent Commercial Branch	.....	S.T.
" 2 " Directory Section	.....	D.
" 3 " Lineman	.....	L.
" 4 " Information	.....	I.
" 5 " Exchange Supervising Technician	.....	Ex.
" 6 " Senior Technician Subscribers Installation	.....	S.M.
" 7 " Technician	.....	M.
" 8 " Traffic	.....	T.
" 9 " Accountant	.....	A.

Each copy is printed according to the work to be done in the Section concerned; where an indoor removal is wanted, or a job which does not involve Underground cable pairs or linework, only Copies No. 1, 5, 6, 7, 9 are issued.

- 5.3 Information Supplied on Tel. Order. - When the Contract Clerk issues the order to the various sections which have to carry out the job it should have on it all the information necessary to give the subscriber the facilities desired. At times the job is not as shown on the order, the subscriber's letter may be a bit vague and misunderstandings occur in minor matters.

The information necessary to be shown on the order is listed under these headings -

- (i) Telephone Order Number.
- (ii) Exchange and call No. of the service.
- (iii) Name and address of the subscriber.
- (iv) Particulars of the Underground Cable (UG) and pair allotted by the Cable recorder.
- (v) All the particulars of the subscribers requirements.
- (vi) Type of service (business or residential).
- (vii) Date of application.
- (viii) Particulars of entry in the Telephone Directory.
- (ix) Symbol denoting the details required from the technicians doing the job.

Taking these points in order -

- (i) No. of the Order - One series of numbers is used, covering new connections, removals, change of apparatus and cancellations. This series commences at No.1 on the 1st July each year. The practice is to prefix order numbers covering new connections with the letter X, removals and alterations by the letter R and cancellations and disconnections by the letter D.

This has led to the practice of Technicians using the prefix letter on the order to establish the plant account on which the job is to be done, - for example, they assume that the work on an X order is done on plant account XIP, and R and D orders signify an XIC job. This is probably true in the majority of cases, but on many orders it does not apply, in fact, in the city areas, it is quite common for an X order to be an XIM job, and at times X and R orders each cover work on both plant accounts.

Examples -

- (a) An X order for provision of handset in lieu of pedestal telephone is XIP and XIC.
  - (b) An X order for provision and cancellation of a temporary service is XIP and XIC.
  - (c) An X order can cover provision of new extensions and removals of existing telephones and is both XIP and XIR.
  - (d) An R order is issued for removal of extensions and provision of new extensions and is XIR and XIP.
  - (e) An R order for a removal from Central to an MU No. is XIP, XIC, and vice versa.
- (ii) Exchange and Call Number. - This is the number the rental and other charges are debited against.

In cases where there are a number of lines, such as to a P.B.X. or P.A.B.X. there is a master number on which any additional work or alterations is done, for instance, for an additional line to a P.B.X. an order is issued for the new line itself, giving the new number, and an order is also issued under the master number for the provision of the equipment on the P.B.X. to connect the new line to, and for which a charge is made.

(iii) Name and Address of the Subscriber. - This information should cover enough to enable the technician to provide the service at the correct location. In some cases, in the city particularly the name of the subscriber as shown on the top of the order does not mean very much, because the person is operating under a business name and is not known in the building by the name shown on the order, even by liftmen or caretaker. The particulars of the Directory entry on the order will usually help in this regard.

(iv) Particulars of Underground Cable. - The U.G. cable and pair for the line or lines is allotted by the Cable Recorder in the Lines Branch, who shows the cable particulars and also his sequence number, which is his record of the cable pair allotment. At present, owing to shortage of cable pairs, the order is not issued until the pair is allotted, and you will at times find the cable particulars included in the typed text of the order.

Normally, the cable particulars are inserted by the Cable Recorder after the order is issued.

On no account should the cable pair allotted be changed without the approval of the Cable Recorder.

If the cable pair allotted on the order is available only after an alteration in the distribution of the Underground cable or a transfer of other services in the cable or other pairs, the order is so marked, for example -

Cable 100 - Box A1 - Pair 200 A/T (After Transfer)

or

Cable 100 - Box A1 - Pair 200 A/C/A (After Cable Alteration),

and in the case of a transfer a transfer sheet is attached to the order, showing the transfers to be carried out before the pair will be available at the address shown on the order.

(v) Particulars of Subscribers Requirements. - This information should give an exact description of what is required by the Subscriber. In the case of new services, the prospective subscriber and the Contract Clerk discuss the subscribers requirements, using as a guide the "Standard Telephone Facilities" booklet, which shows the various standard facilities available, under the heading of Plans and numbered from 1 to 30.

The Order is then issued, giving the plan number to denote the facility required. The technician should note that the Plan Number does not denote the actual apparatus required, it specifies the facility desired; for example, an order marked -

"N/S Plan 6 means a "new service with an extension telephone and extension switch".

The telephones can be of the wall type, pedestal type or handsets, with or without a dial. The Contract Clerk exercises discretion in the wording of the order, and endeavours to give a clear picture of what is required, he will indicate the type of telephone desired besides quoting the Plan Number and should any additional apparatus such as extra receivers, key controls, or extension bells be wanted, they will be added to the text also. When additional facilities and rearrangements of services are asked for, the Contract clerk will check back to the subscriber if the application is not clear, and will issue an order to cover the work as he sees it; despite this precaution the text of the order quite often does not convey the correct details of the subscribers requirements. The technician can adjust these minor matters by consulting his Senior Technician who will consult the Contract Clerk. The subscriber's signature on Form Tel.40 will be necessary if a change in rental is involved.

- (vi) Type of Service. - The abbreviation "Bus" denotes that the service is a business one for rental purposes, a business service being charged higher rental than a residential one. This is shown by symbol "Res".
- (vii) Date of application. - This is the date shown near the end of the text of the order.
- (viii) Particulars of Directory Entry. - This is shown in the space provided, and is the advice to the Directory Section of the manner in which the subscriber desires the number listed.

Usually, in cases of services of the residential type this entry is the same as the name and address shown at the top of the order, but in the case of business services this does not apply, and you will quite often find that the directory entry showing the business or trading name, is the only clue as to the location of the subscriber in the building.

- (ix) Symbol. - This refers to the indicator letter which is shown on the order to indicate to the technician carrying out the work, what details of material and manhours are to be shown on the order.

The order as printed provides a small square on the right hand side to carry this letter, but in practice you will find that it is typed at the end of the text of the order, and shown as Symbol "A", "B", "C", "D" or "E" as the nature of the job warrants.

The meaning of these symbols would need too much detail to go into at this stage, and will be dealt with fully later.

- 5.4 Carrying Out the Instructions on the Telephone Order. - The technician new to telephone order work should not be diffident about seeking advice from the Senior Technician if he does not understand the nature of the instructions on the telephone order.

All kinds of misunderstandings have arisen in the past in this regard, and the men concerned are not always new men in the Section, veterans can be led astray quite easily by the wording of a telephone order, so if you are in doubt, ask your Senior Technician before you go out and perhaps do the wrong thing.

The "M" and "SM" copies of the telephone orders are actually advice notes from the Commercial Branch to us of the subscribers requirements. Unless you have seen the text of a great number, you will not realise the extent and variety of the work done on a telephone order. The technician's assistant, whose work, particularly in his early experience is confined to simple straight forward jobs might assume that telephone orders begin and end with "N/S Plan 16" or "Indoor Removal of handset telephone".

The number of business and office services in the area determines the nature of the work done from the Depot.

In the city particularly, the work of rearranging, removing and providing additions to existing services comprises about 50 per cent of the jobs. Quite a number of these involve floor pattern P.B.X.'s and the associated cabling and extensions, and perhaps 200 or so manhours may be spent on the job. An order marked "Indoor removal of extensions as required", quite often means a major rearrangement of a service, occupying a couple of men for perhaps a fortnight. "Provide extensions as required", possibly means the provision of 10 or so extensions involving additional riser cables and alterations to cable boxes. The technician handles jobs connected with P.B.X.'s, N.S.U.'s Intercommunication telephones and all sorts of special circuits, and the telephone orders associated with these jobs are sometimes many and complicated.

Both technician's assistants and technicians should endeavour to scan as many telephone orders as possible; you will get a better idea from this of what they cover, and become accustomed to the style of the text and the meaning of the official terms used.

#### 5.5 Official Forms and Their Uses.

- S.6. Stores requisition.
- S.7. Surplus and Recovered Material advice.
- S.25. Stores transfer advice.
- W.P.97. Surplus and/or recovered material returned to engineering store.
- W.P.20. Requisition on Engineers Store (Authorities).
- W.P.20A. Requisition on Engineers Store (Tel. orders).
- W.P.20D. Requisition on Engineers Store (Blank form for other stores).
- W.P.20U. One and two pair cable usage form.
- W.P.1M. Working Report - work statement.
- W.P.S.1. Working Report - pay and allowance statement.
- TEL.1. Telephone order.
- TEL.40. Installation of additional apparatus or removals or alterations to a telephone service.
- E.M.23. Subscribers apparatus card.
- E.M.101. Telephone service, not in attendance card.
- S.E.508. Agreement with Dept. re the possibility of damage to premises during the installation of telephone equipment.
- S.E.511. Apparatus damaged by fire and etc., return to store, technicians report.
- S.E.578. Apparatus tag.