

MAINTENANCE OF S x S EXCHANGES

QUALITATIVE INSPECTIONS OF PRE-2000 TYPE EXCHANGES

(NOTE.- As this Instruction has been completely revised individual paragraphs have not been starred.)

1. CANCELLATIONS. Nil.

2. GENERAL.

2.1 Read this Instruction in conjunction with B 5500, Gen O 0001 and O 0002. It describes the organisation of qualitative maintenance in pre-2000-type step-by-step exchanges.

2.2 Fig. 1 depicts in a flow diagram the actions that are taken when a control inspection is called for.

3. INSPECTIONS.

3.1 Control Inspections are made personally by the Senior Technician or, in the case of large exchanges, his immediate deputy, for the purpose of determining the precise nature and extent of work to be performed. They will be detailed on the Annual Maintenance Plan but can also result from information revealed by the indicators discussed in par. 4.7 of Gen O 0001.

3.2 The period between Control Inspections laid down in this Instruction must not be exceeded although it may be shortened if necessary.

3.3 Control Inspections resulting from a study of indicators will cover a representative sample of equipment and can be confined to a specific piece-part, relay, or adjustment of any item. This type of Control Inspection may indicate the need for a special inspection: refer to par. 6.2.3 of Gen O 0001.

3.4 If the Senior Technician decides after his inspection that some maintenance work is necessary he indicates the priority, if any, and the precise nature and extent of the work to be done. As an example, consider the bank cleaning of a Group-selector rack. The Senior Technician could call for -

- (a) Shelves A and B - all selectors clean as in B 5306, par. 2.1(a-c).
- (b) Shelves C-F Selectors 1-4, clean as in B 5306, par. 2.1(a-c).
- (c) Shelves C-F Selectors 5-10, clean as in B 5306, par. 2.1(a).

This information is entered on a maintenance work report prepared as in Gen O 0002, par. 4.3.

3.4.1 The presence of microphonic noise through tarnished or dirty bank contacts is an important fact to be considered when deciding upon the extent of work to be performed.

3.5 Some items listed in Table 1 are shown as being given a 'General' control inspection.

3.5.1 A general inspection is to cover all parts not specifically covered elsewhere and will not normally be done unless the need is indicated by fault analysis or other indicators.

3.5.2 As the frequency of these inspections is at the discretion of the Senior Technician, no maximum period is specified. Senior Technicians are advised to make frequent random checks of these items in addition to fault analysis.

3.6 Special Inspections. If a Special Inspection, as discussed in Gen O 0001 is authorised, the nature and extent of the work is to be detailed, as should instructions regarding the use of gauges.

3.6.1 If the Special Inspection does not result from a scheduled Control Inspection, the work report serial number is to be made up as in Gen O 0002 using a number beyond those in use on the Maintenance Plan.

3.6.2 Special Inspections resulting from Control Inspections are to use the Control Inspection serial with 'S' added as a suffix. This will avoid confusion if a Control Inspection results in authorisation of, for example, routine bank cleaning and a special check for faulty wiper-cord terminations. In this instance it may be necessary to complete the Special Inspection before the bank cleaning is undertaken.

3.7 Service Inspections. These are inspections done by staff whilst performing other work authorised as the result of a Control Inspection. They are discussed in Gen O 0001, par. 6.2.4.

4. TESTS.

4.1 In general, testing of equipment is done at set intervals.

4.1.1 Routine testing of step-by-step equipment is covered in B 5500.

4.1.2 However, some tests of equipment are not made as a routine but are only performed if it is necessary to verify operation of plant - e.g., traffic recorders before use - or if fault analysis or other indicators show a need for the tests to be performed.

4.1.3 Tests of an 'As Required' nature are covered in Table 2 of this Instruction.

5. REFERENCES. B 5500 B 5306
Gen O 0001 Gen O 0002
See also Tables 1 and 2.

(Fig. 1, Tables 1 and 2 follow)

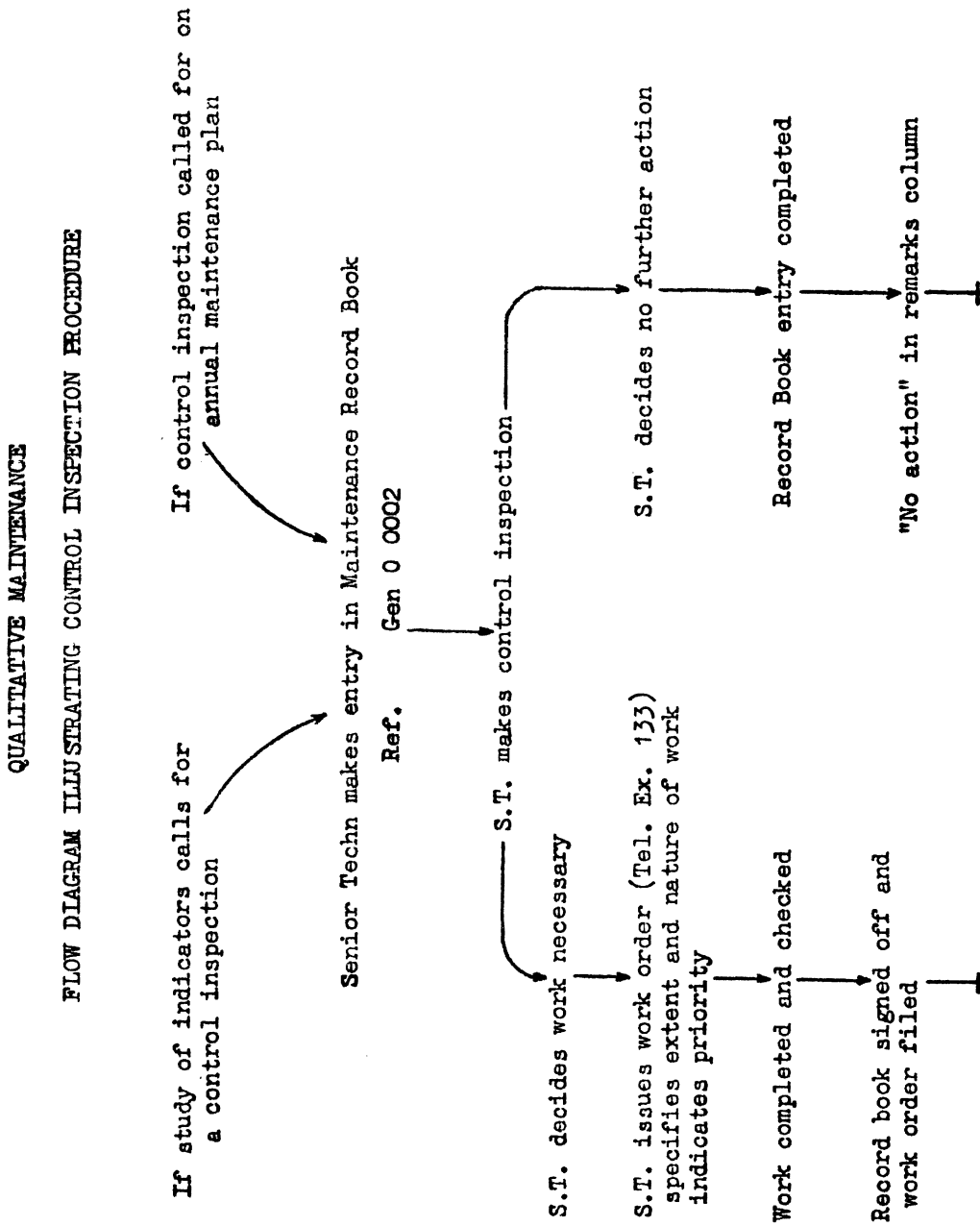


FIG. 1

TABLE 1
QUALITATIVE MAINTENANCE CONTROL INSPECTIONS

| <u>Item</u> | <u>Purpose</u> | <u>E. I. Reference</u> | | <u>Maximum Period Between Control Inspections</u> |
|------------------------------------|---|---|--|---|
| | | <u>Inspection</u> | <u>Adjustment</u> | |
| <u>LINE CIRCUITS</u> | | | | |
| <u>Secondary Line Switches:</u> | | | | |
| Uniselectors | Cleaning and lubrication (all types) Inspection | B 5051 | - | 6 months |
| Group relays | Inspection (a) Siemens No. 16 system (b) Strowger system | S.B. Report No. 853 Gen F 5011 Gen F 5011 | S.B. Report No. 853 S.B. Report No. 860 A.E.C. A 110 | 6 months 6 months 6 months |
| <u>Pre-2000-Type Selectors:</u> | | | | |
| Group selectors | (Cleaning and lubrication | B 5051 | - | 6 months |
| Final selectors | (Cleaning of bank contacts | - | B 5306 | 3 months |
| Test distributors | (Wipers and cords General: Siemens 16 system Strowger system G.E.C. P.C. system | B 5308 B 5302 B 5302 B 5302 | - S.B. Report No. 854 A.E.C. A12C-125 B.P.O. B 5103 | 6 months Note † Note † Note † |
| <u>MISCELLANEOUS UNI-SELECTORS</u> | | | | |
| | Cleaning and lubrication | B 5051 | - | 6 months |
| | Inspection (a) B.P.O. Type 1 (b) B.P.O. Type 3 (c) G.E.C. Type C 3500 (d) Siemens 10 point (e) A.E.C. minor switch | B 5168 B 5188 B 5188 S.B. Report No. 853 A.E.C. R 109 | B 5181 B 5183 B 5186 S.B. Report No. 853 A.E.C. M.A.I. | 12 months 12 months 12 months 12 months 12 months |

TABLE 1 (continued)

| Item | Purpose | E.I. Reference | | Maximum Period Between Control Inspections |
|-------------------------|-----------------------------|-----------------|-----------------------|--|
| | | Inspection | Adjustment | |
| <u>RELAY SETS</u> | | | | |
| Auto Auto | (Uniselectors | B 5051 | B 5306 | 6 months |
| Auto Manual | { Cleaning and lubrication | - | | 6 months |
| Rural lines adapter | { Cleaning of bank contacts | B 5188 | B 5186 | 12 months |
| Party-line reversing | { Inspection of mechanisms | B 5168 | B 5181 | " |
| Special service | { (a) G.E.C. type 350C | A.E.C. R 109 | A.E.C. M.A.I. | " |
| Rev. calling | { (b) B.P.C. type 1 | S.B. Report No. | S.B. Report No. | " |
| C/N finder | { (c) A.E.C. minor switch | 853 | 853 | |
| C/N tapping | { (d) Siemens 'C point | | | |
| Graduated Howler | { Relays | | | |
| | { (a) 3000-type | Gen F 5011 | Gen F 5041 | 12 months |
| | { (b) Siemens Pendant | " | S.B. Report No. 360 | " |
| | { (c) G.E.C. Pendant | " | G.E.C. Spec. No. 1514 | " |
| | { (d) A.E.C. Horizontal | " | A.E.C. A 110 | " |
| <u>AUTO ROUTINERS</u> | | | | |
| Access selector | Cleaning of bank contacts | - | B 5306 | 3 months |
| | Wipers and cords | B 5308 | - | 6 " |
| | Cleaning and lubrication | B 5051 | - | 6 " |
| | General | B 5302 | - | See Note |
| Control and Test Unit | Uniselectors | B 5051 | - | 6 months |
| | Cleaning and lubrication | - | B 5306 | 6 months |
| | Cleaning of bank contacts | B 5020 | - | Note 7 |
| Group and R.T. Relays | General | Gen F 5011 | Gen F 5041 | 2 years |
| | Inspection | | | |
| <u>MANUAL ROUTINERS</u> | | | | |
| All types | Inspection | A 5402 | - | 6 monthly |

TABLE 1 (continued)

| Item | Purpose | E. I. Reference | | Maximum Period Between Control Inspections |
|--|--|----------------------------|---|--|
| | | Inspection | Adjustment | |
| <u>TRAFFIC RECORDERS</u> Control and access | General | B 5025 | - | 12 months |
| | <u>Uniselectors:</u> Cleaning and lubrication Clean bank contacts | B 5051 | B 5306 | 6 months 6 months |
| <u>ALARM EQUIPMENT</u> Relay sets | <u>Uniselectors:</u> Clean and lubricate Inspection G.E.C. type 3500 B.P.C. type No.1 | B 5051 B 5188 B 5168 | B 5186 B 5181 | 3 months 3 months 3 months |
| | <u>Relays:</u> Inspection (a) 3000 type (b) Siemens Pendant type (c) G.E.C. Pendant type (d) A.E.C. Horizontal type | Gen F 5011 " " " " | Gen F 5041 S.B. Report No.860 G.E.C. Spec.No.1514 A.E.C. A 110 | 3 months 3 months 3 months 3 months |

NOTE / A Control Inspection of these items is not undertaken unless fault analysis or other indicator shows necessity.

TABLE 2

AS REQUIRED TESTS

| <u>Item</u> | <u>Test</u> | <u>E.I. Ref.</u> | <u>Maximum Period Between Tests</u> |
|--|-------------------------------------|------------------|-------------------------------------|
| Group selectors Final selectors Subs' line switch Other multiple wiring | (Continuity of (multiples (| B 5505 | As required |
| Traffic Recorder Auto | Functional | B 5591 | Before use |

END