

## OFFICE FRAME ST LEAD CROSSED WITH BATTERY NO. 1 CROSSBAR OFFICES

### 1. GENERAL

1.01 This section covers the procedures to be followed in connection with troubles due to office ST leads crossed with battery.

### 2. INDICATIONS OF TROUBLE CONDITION

- 2.01 Originating trouble indicator displays.
- 2.02 Originating marker connector time alarms.
- 2.03 Subscriber sender load alarms.

### 3. REACTIONS DUE TO TROUBLE

- 3.01 All markers except the one in trouble will be unable to complete calls to a pair of office link frames, and will time out and make a retrieval.
- 3.02 During periods of heavy traffic, the excessive marker holding time may delay the connection of senders to markers, with consequent marker connector time alarms.
- 3.03 Due to excessive sender holding time, the sender load may reach the point where load alarms are received, or possibly a point where slow dial tone is encountered. If subscribers start dialing before dial tone is received, partial dials may occur, thereby reducing sender call carrying capacity.

### 4. IMMEDIATE PROCEDURE TO FOLLOW

- 4.01 Analyze trouble indicator records.
- 4.02 Determine cause of office frame lockout.
- 4.03 Make busy marker associated with trouble.
- 4.04 Block non-operated the falsely operated MP relay and also the associated E relay;

otherwise an automatic preference circuit transfer might reintroduce the trouble reaction.

### 5. ANALYSIS OF TROUBLE

5.01 A continuous battery cross on an office ST lead will hold operated the associated marker preference (MP or E) relay, locking all other markers out of the affected pair of frames. Other markers attempting to obtain access to these frames will time out and appear on the trouble indicator as "No SPE and SPO," or "No NSE and NSO" without an OF (office) lamp.

5.02 Calls from the marker having its ST lead crossed will ordinarily be completed successfully to the pair of frames in trouble, but when directed to other frames will encounter "XOF" failures, since both the falsely connected pair of office frames and another are checked in thereby operating two O relays. This will always be accompanied by "XSS" indications, since two office SS relays will be operated.

5.03 In addition to the above indications of trouble, other failure indications may also be present, depending on the exact source of the crossed battery.

### 6. SUGGESTED PROCEDURE FOR LOCATING AND CLEARING TROUBLE

6.01 If the trouble indication does not definitely indicate that the cross is within the marker in trouble, insulate the proper contacts of the office frame TR (transfer) relay to determine in which direction the battery cross exists. If toward the marker, open the ST lead at various points (depending on the equipment arrangement) in order to segregate the cross.

### 7. TROUBLE CONDITIONS CAUSING REACTION MAY BE LISTED BELOW

7.01 Wire clipping cross, operating springs 9 and 29, any working route relay.

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