

PREMATURE RELEASE OF ORIGINATING MARKER NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section covers methods to be followed in connection with troubles causing premature release of the originating marker on calls requiring marker stage functions.

1.02 This section is reissued to modify the information describing the equipment reaction attending the failure of an originating marker ST1 relay to lock and to include information relative to another trouble condition that will cause similar equipment reactions. The title of this section has been changed to permit the inclusion of trouble conditions that cause similar equipment reactions. The text has been generally revised and therefore the arrows usually employed to indicate changes have been omitted.

2. INDICATIONS OF TROUBLE CONDITION

2.01 If a trouble develops causing an originating marker to release prematurely on every call during periods of heavy traffic, an abrupt interruption in the normal noise level of the switch room may shortly become evident.

2.02 An exceedingly large number of originating senders will become stuck.

2.03 Dial tone delay lamps (DL) may light on the line load control cabinet (where provided). Otherwise in central offices served by a local DSA board, there will be no switch room visible or audible alarm. In central offices served by a central DSA board and automatic timed release senders an audible alarm will be received provided the automatic release feature is canceled on some of the senders and any of these senders become stuck.

3. REACTIONS DUE TO TROUBLE

3.01 Originating traffic, handled by the marker in trouble, to points requiring marker stage functions, will not complete.

3.02 Subscribers may experience delays in receiving dial tone, or may not receive dial tone at all due to the large number of stuck originating senders.

3.03 Originating traffic overload indications may be received during periods of heavy traffic.

4. IMMEDIATE PROCEDURE TO FOLLOW

4.01 If a protracted lull in the normal noise level of a switch room is observed or an excessive number of stuck originating senders is experienced, check the originating marker busy lamps at the miscellaneous panel associated with the originating trouble indicator to determine if all originating markers are functioning in both decoder and marker stages. Under normal operation of the originating markers, the decoder stage busy lamp (DB) lights at the start of a call in the marker, followed by the lighting of the marker stage busy lamp (MB), if the call that is being handled requires marker stage functions. If the check of the originating marker busy lamps reveals that only the decoder busy lamp (DB) associated with one of the markers is lighting intermittently, make this marker busy.

4.02 If none of the originating marker busy lamps are lighting it may be an indication that all of the originating senders are stuck. In this instance make a test of each originating marker, using the originating trouble indicator and a routing requiring marker stage functions, to determine which marker is in trouble. When the marker in trouble is located make it busy.

4.03 With the exception of the stuck senders held for analysis, have all others primed.

5. ANALYSIS OF TROUBLE

5.01 Under normal operation of an originating marker serving a call that requires marker stage functions, a release signal is not returned to the originating sender until after continuity through the marker transmitting relays has been checked, the office and district link frames are attached to the marker and an idle trunk has been selected. The completion of these marker functions is indicated by the operation of the marker TK, O and AK1 relays respectively and the release of the TKE relay, and results in the operation of the marker SR relay. The operation of the SR relay closes

through the release lead (RL) to the subscriber sender indicating that the decoder stage functions of the marker have been completed. The originating marker connector is released, breaking the connection between the subscriber sender and the marker. Marker relay CK6 releases opening the operating ground for the ST1 relay. The ST1 relay, however, should remain operated to ground provided through the 4 and 5 bottom contacts of the operated SR relay and, by remaining operated, should permit the call to enter the marker stage of the marker. If a call that requires marker stage functions is blocked from entering the marker stage due to the ST1 relay releasing prematurely the call is treated as though it were of the type that requires only decoding. Under this condition the originating marker is released before a channel is established between the district junctor, associated with the call, and an outgoing trunk. As a result the originating sender used on this call remains stuck in trunk test, and when traced it is found that the district link cross-points are not closed.

5.02 Equipment reactions similar to those described in 5.01 will occur if the 1 and 2 top contacts of the marker SR relay become locked. These contacts normally close the release lead (RL) from the marker to the sender, with the operation of the SR relay. In this case, due to the trouble condition, ground is applied to the release lead (RL) with the operation of marker relay CK6. The subscriber sender recognizes this ground as a legitimate release signal, the originating marker connector and marker are released before the marker functions are completed, and the subscriber sender will become stuck. When traced it is found the S6 and S6' relays are normal and the district link cross-points are not closed.

6. SUGGESTED PROCEDURE FOR LOCATING AND CLEARING TROUBLE

6.01 Method of locating and clearing is covered in 4.01 and 4.02.

7. TROUBLE CONDITIONS CAUSING REACTIONS MAY BE LISTED BELOW

- 7.01 Contacts 4 and 5 bottom of marker SR relay not making due to loss of follow.
- 7.02 Top 1 and 2 contacts of marker SR relay locked and top 3 contact not making with top 2 contact.
