

KEY PULSING "A" SENDER LINK AND CONTROL FRAME  
COIN CONTROL LINK AND CONTROL FRAME  
ALARM ROUTINE  
NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section covers the procedure to be followed for the alarms associated with the key pulsing "A" sender link and control circuit or with the coin control link and control circuit. It also covers other features which do not bring in an alarm.

1.02 These alarms usually occur as the result of troubles which cause delays in the handling of service calls. High traffic register readings indicate an abnormal number of delays in seizing coin controls or senders or that there is excessive traffic for the various coin control or sender groups. High trouble register readings indicate an abnormal number of times that the circuit was automatically released from a trouble condition.

1.03 The AL lamp and AR (alarm release) key per control circuit are located on the link and control frames and apply to that A or B group of links and control circuit only. The trouble registers, one per control circuit, are located on the sender make busy frame. The aisle pilot lamps are white.

2. APPARATUS

2.01 No. 275A (make busy) Plugs.

2.02 No. 298A (make busy) Plugs.

3. METHOD

(A) Time Alarm

3.01 If, in response to a minor intermittent alarm, a lighted AL lamp is found on a key pulsing "A" sender or coin control link and control frame, operate the AR key momentarily to restore the alarm.

3.02 If there is no plug in the associated HD jack and the associated trouble register shows no abnormal readings and there is no repetition of the alarm then no further action need be taken.

3.03 If the trouble register shows abnormal readings or if there is a repetition of the alarm then insert a 298A plug in the associated HD jack.

Caution: With the 298A plug in the HD jack, when trouble occurs to bring in the alarm all new calls to one group of trunks or districts and

to the control circuit and possibly to its associated control circuit on the same frame will be delayed until the trouble causing the alarm is cleared or until the 298A plug is removed from the HD jack.

3.04 If, in response to a minor intermittent alarm a lighted AL lamp is found on the key pulsing "A" sender or coin control link and control frame and a plug is in the HD jack of the control circuit that operated the alarm, momentarily operate the AR key to restore the alarm.

3.05 Under this condition the white guard lamp in the floor alarm cabinet is lighted.

3.06 Observe the relays listed in 3.07 to 3.17 inclusive. The channel used and the progress of the call may thus be determined.

3.07 G0 to G9 relays operated indicate in which trunk group or district junctor group the call was originated.

3.08 T0 to T9 relays operated indicate the district junctor or trunk in the group involved in the call.

3.09 SG0 to SG3 relays operated indicate which sender or coin control group has been selected.

3.10 SS relay operated indicates that the sender or coin control group has been selected.

3.11 TE relay operated indicates that the district junctor or trunk has been selected.

3.12 0 to 9 secondary select magnets operated indicate the sender or coin control which has been selected.

3.13 If SS relay is operated and if the SA relay or one of the SS magnets is not operated or alarms are appearing on other key pulsing A sender link or coin control link and control frames insert a 275A plug in the associated sender or coin control group GB jack at the sender make busy frame. Due to this particular trouble other KPA sender or coin control links may seize this particular group; they cannot use it, however, as long as it is held on this particular trouble. Making the group busy as just

described or the operation of the SGE relay permits the other link frames which have seized this group to abandon it and select another group. This trouble may be due to the failure of the proper S0 to S4 or the SGE relay to operate.

3.14 If the SL relay has not operated, it may be due to the hold magnets not operating or to failure of crosspoints to close or the sleeve lead may not be closed through the sender or coin control circuit.

3.15 If the SL relay operated but the TST and DC relays are not operated, there may be a double connection or a false ground on the sleeve lead. Observe the hold magnets which were last operated for double connections (two fingers latched). These hold magnets may be determined by observing which group of district junctors or trunks is calling and which coin control or sender group was selected.

3.16 If the DC relay is operated but the SD relay is unoperated, the common group leads to the sender or coin control circuits may be either open or falsely grounded.

3.17 If the RL relay is operated and the circuit does not restore to normal, it may be due to a false ground keeping operated one of the relays that holds the RL relay operated.

3.18 The alarm may be due to a false ground on the CB lead.

3.19 If the trouble cannot be cleared immediately take the affected portion out of service by making busy the coin district junctors or the key pulsing "A" district junctors or outgoing trunks, the key pulsing "A" senders or the coin controls or the control circuit.

3.20 Remove the 298A plug from the HD jack and the 275A plug from the GB jack. If the circuit has not restored to normal when clearing the trouble or by making busy the circuit in trouble restore the circuit by manually operating the RL relay momentarily.

#### (B) Trouble Registers

KPA Sender Or Coin Control Link Trouble Register

3.21 A high registration (compared to other trouble registers associated with the same or other sender link or coin control link and control circuits) on the trouble register associated with a particular control circuit indicates an abnormal number of times that this control circuit was automatically released from a trouble condition.

3.22 The trouble may be analyzed by following the procedures outlined in 3.03 to 3.20.

#### (C) Traffic Registers

KPA Sender Or Coin Control Link False Start Register

3.23 If the false start register reading is high it may be an indication that:

(a) The ST lead ground opened after the HA or HB relay operated but before the TS relay of the control circuit associated with the register, had operated.

(b) Key pulsing "A" senders or coin controls were available when the HA or HB relay operated but were not available when the TS relay was prepared to operate. The PA lead is open when no senders or no coin controls are available.

(c) A false ground on the ER lead.

KPA Sender Or Coin Control Group Busy Register

3.24 If a particular group busy register reading for either a key pulsing "A" sender or coin control group is high, it may indicate:

(a) That one of the sender or coin control frames that could seize other groups of senders or coin controls with two or more senders or coin controls idle, is seizing this group of senders or coin controls even though only one sender or coin control is idle. Assuming that the group being seized with only one idle sender or coin control is the preferred group for that frame, then the reserve feature of that frame may not be functioning.

(b) Links that are associated with the other groups of senders or coin controls may be falsely busy forcing the calls into this group.

(c) A false ground on the SCB lead chain circuit of the SB relay contacts.

3.25 If all of the group busy register readings are high, it may indicate that there are not adequate key pulsing "A" sender or coin control circuit facilities or that there is trouble in some of the KPA senders and associated terminating equipment or in some of the coin control circuits or some of the coin overtime operators may have difficulty in obtaining additional deposits which is causing excessive holding time and possible time alarms.

Key Pulsing "A" Sender Load Register

3.26 A high registration on the key pulsing "A" sender load register indicates all key pulsing "A" traffic is possibly being delayed due to the lack of key pulsing "A" senders.

3.27 Restore any key pulsing "A" senders or groups of senders which may have been made busy.

3.28 Check for busy links in the key pulsing "A" sender link frames or troubles in the sender circuits as mentioned in 3.24 and 3.25.

4. REPORTS

4.01 The required record for these alarms should be entered on the proper form.