



**NEW ZEALAND POST OFFICE**

**UAX13 EXCHANGES  
COMMON FAULTS**

## 1/ CONTROL ALARMS

If TA and TB are operated then fault is in control set. If TB only is operated then fault is in L/F etc., and H relay in L/F will be operated.

Other Causes of Control Alarms are :-

<u>Vertical Marking Bank</u>	TELES Auto B5063, B5308 strictly apply. Para 5.2 is important. It is thought that this should also state that 'wiper tension must be checked at the bottom and top segments of the VMB'. Arcing is frequently observed when tension is reduced due to variations with the VMB mounting.
<u>Vertical &amp; Rotary Interrupter</u>	The operation of the Line Finder allows little tolerance with vertical and rotary movements. Standard adjustments <u>must</u> apply. TELES Auto B5061, B5304 apply.
<u>Selectors not seated in mounts correctly or loose in cradles</u>	The effectiveness of both VMB and Line Wipers depend on this. Due care and attention given to these points, especially during installation is important. TELES Auto B3013 applies.
<u>Slack Wiper Cords</u>	The parts of cords as they are routed through holes in the wiper assembly separator should be taut so that there is no possibility of fouling banks during the selector motion. TELES Auto B5308 applies.
<u>Dirty Vertical Marking Banks</u>	VMB banks which become dirty results usually from arcing due to insufficient tension on wipers. Cleaning procedure is described in TELES Auto B5018. It is important that both sides of VMB's are cleaned.
<u>Mechanically Operated Spring Assemblies</u>	Loose mounted assemblies following installation are common. Incorrect spring tensions causing hesitant Line Finder action should be looked for. TELES Auto B5305 para's 32 - 36 apply.
<u>Adjustment of Line Relays</u>	Armature misplacement caused during shipping or installation must be examined for. Care must also be taken to gently replace relay covers. A pre-cutover check is essential. TELES Gen F5011, F5031 apply.
<u>Adjustment of 3000 type Relays</u>	Feathering and non-twinning contacts are common faults causing Control Alarms. A thorough pre-cutover check is essential. TELES Gen F5011, F5041 apply.
<u>Contacts in Banks, Wiring and U-Points</u>	Plastic welds on wiring behind line relays, contacts in U-Points and allotter banks and VMB's are found to be common faults.
<u>Traffic Volume</u>	<p>Whether by design or outside line fault conditions the number of line finders available is important. What appears to be an inherent cause of Control Alarms occurs when only one L/F is free (both allotters could be standing on this) and two sub's, one 'odd' and one 'even', operate start conditions simultaneously, both allotters drive continuously until the timeout period causes a Control Alarm.</p> <p>The number of Control Alarms due to this is unknown and the traffic meters would not indicate while one L/F was available. A percentage of alarms is thought to be due to this condition which can happen at any time if both allotters are sitting on the only L/F outlet which is free.</p>

## 2/ LINE RELAYS

If LS1 and LS2 are not making  
If LS3 and LS4 are not making  
If LS21 and LS22 not making  
If K4 and K5 are not making  
If K22 and K23 are not making  
If P1 and P2 are not making  
If P4 and P5 are not making  
If P21 and P22 are not making

No Start to L/F. Sub N.D.T.  
All free L/F pick. Sub dials - all tie up. Have to manually be released.  
L/F's hunt without picking.  
No Metering. No effect on calling.  
LS, K and P chattering, L/F's drive in turn.  
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No effect on call.  
K relay not operated, on dialling will release and operate of P and LS L/F's will hunt.

## 3/ LINE FINDERS

VMB front contact not making  
VMB back contact making  
If H23 and H24 are not making  
If H25 and H26 are not making  
If H27 and H28 are not making  
Rotary Int not making (2 & 3)  
Rotary Int not making (1 & 2)  
Vertical Int not making  
If H1 and H2 are not making  
If H6 and H8 are not making  
If H7 and H8 are not making  
If H3 and H4 are not making  
If H21 and H22 are not making  
  
If N4 and N5 are not making  
If N3 and N4 are not making  
If N22 and N23 are not making  
If NR1 and NR2 are not making  
If NR2 and NR3 are not making  
If NR4 and NR5 are not making  
If NR5 and NR6 are not making  
H relay coil - turns S/C  
M lead dis

Switch hunts vertically but releases.  
Switch hunt to level 9 and continues to step until timed out.  
Gives double picking of L/F (next L/F starts and picks).  
L/F picks and releases; K releases.  
P stays operated; Subs in PG condition.  
L/F steps to level; no Rotary Stepping. L/F times out.  
L/F steps and hunts; no picking. L/F times out.  
L/F not stepping. L/F times out.  
Same as Vertical Int.  
L/F times out.  
L/F times out.  
L/F is not picked by Control Sets.  
K relay not operated, on dialling will release and operate of P and LS L/F's will hunt.  
L/F times out.  
L/F steps to level; no Rotary Stepping. L/F times out.  
L/F is not picked by Control Sets.  
L/F not stepping. L/F times out.  
Can't break tone. L/F times out.  
L/F not stepping. L/F times out.  
L/F starts and hunts then restores. L/F times out.  
Slow operating of H relay.  
All finders will be up on same number with only one H relay operated, whilst others have rotary magnet held. Check Subs Line Circuit of the L/F on which the H relay is operated.

### NOTE

When sub hangs up, 1st Group Selr with B24-25 relay contacts to break last usually get burnt out completely. This fault should be prevented by diode D1 in L/F's.