TIPS & TRICKS FOR ELCOTEL SERIES 5

If you are dialing any telephone number, and the phone continually says "Invalid Number.", and the relay fires when you go on-hook; check the coin trigger for a jam, usually dimes.

Dime Jams: To help prevent frequent DIME jams, pull the white flag (shaped like a "T") that sits in front of the little white coin trigger hammers. Elcotel does NOT use this flag to detect coin jams. Turn the flag back toward you, till it is pointing at you (it will have to be forced past the top of the relay), but do not break it off (in case you change to another board that uses this flag). This way, the white hammers on the trigger to not knock the flag back, they are free to move. If you do happen to break it off, it will not effect the operation of an Elcotel.

Testing the Coin Trigger: Remove, and hold it horizontally, and place a penny in each slot. Slowly rotate the trigger upright. If the pennies roll through the trigger without hanging up, the springs are tensioned correctly. Note if there is any subsequent drag on any penny.

Lubricate the CoinCo, or Imonex mechanism with a spray silicone lubricant. Do so after cleaning it out, or putting a new one in. This helps the coins move through faster, and with less friction. You'll find they perform much better this way.

You can also use the Bug & Tar removal from TutrleWax, spray can or liquid! This also works great on cleaning the face plates so they shine like new!

Battery drain: Voltage on the "CURRENT" pins should not exceed 16.5mV Off-Hook. Upper housing removed, voltage should be no > 40uV On-Hook. If the above readings are correct, but you had to replace the battery, the charging circiut in the PCM is bad, else, the batteries you are replacing with are not holding a charge. Cold weather will also depleat weak batteries. *I have personally experienced batteries with a manufactured date of 1994 (located on back of battery), that constantly fail.* To test the PCM charging circuit, go off-hook and get dialtone. Remove the battery from the plug, you should still have dial-one for a good seven seconds. If dial-one expires as soon as you remove the battery, the board needs replaced. While the battery is unplugged, and you have dial-one, measure the voltage on the battery pins, about 6.9VDC, current about 14mA. Once the phone "winks" (loss of current), the board will shut down. Also, after you recharge a battery in the shop, let it sit for 24 hours. If, after 24hrs, you get a reading above 6.12, the battery should be ok to place in the field. Do not place a battery in the phone if your volt reading is below 6.10 after reacharging, it will only fail in a few weeks or less. Handset shorts will cause a battery to drain while on-hook. If you go off-hook, and get a buzzing sound, but do not get it

when the upper housing is removed, you have a bad handset. If the line continues to buzz with the upper housing removed, you may have a short in the station wire

Note: Other handset shorts will cause an off-hook situation! When you remove the upper housing, and you get dial-tone, replace the handset!

Idle TelCo line voltage should not be < 48VDC, and no > 53VDC. Line "loop" current should be no < 23mA, and no >82mA. Ring voltage should not exceed 110V. High line current does pose a potential threat to the PCM. Although a diode locks the current while on-hook, going off-hook can momentarily send the current through the PCM. If you see jumper wires on the PCM with diodes or resistors, this is where thay have found voltage problems, or something else. Most causes of "Battery Drainange" is due to a bad board, where they have not fully failsafed the PCM. Elcotel, however, has assured that these high current readings will not harm the PCM. If the line voltage is below 48VDC for the Elcotel-5, intermittent failures will arise (false answer detect, relay won't fire, won't go off-hook). *Note: When you place a new battery in a phone, 75% of the time there is no need to call in for a download. The EEPROM will reload the ram with the operational files. Test the phone, if it does not work, then call in for a download.*

If you have any kind of AM radio broadcast audible during a conversation, you need a RFI filter or better ground.

Handset Wiring: RED to 6, YELLOW (or white) to 4, GREEN (or white) to B, BLACK to 15. Handsets that have two white wires can go to either 4 or B. If, after wiring, Dial-Tone is bold, then fades out, or fades out, reverse the wires on B and 15. White rectangles around plugs indicate grouped connections, so plugging in anywhere in that block is fine. NEW Elcotel-5 keypads only have four places where handset wires go, and are labeled accordingly. White wires simply replace Yellow/Green (Earpiece) wires, and are interchangeable.

Hook Switch: If you take the handset away from the cradle, and the toung comes up slowly, or does not come up enough, you need to tighten the cradle screws. You will have to remove the keypad to tighten the ones under it. If the toung still has resistance while going off-hook, lubricate with a silicone based lubricant.

Leaf Switch: Some "No Dialtone" situations are due to bent leaf switches on the keypad hook switch assy. Cold weather also causes them to separate. You only need to press them together to test, then adjust the outer most leaf switch to make contact when off-hook. Do this by pressing the base of the one closest to you, until contact is made, while the phone is off-hook. Release and test without applying pressure, until you have adequate adjustment to get dial-tone when off-hook.

Relay hold time: When the coin relay fires, it should hold for one full second, then release. If the relay is firing too fast, it can hold coins, or leave a return/collect door open, causing jams and other problems. To adjust the relay timing, you need to adjust the screw on the relay. You must hold the relay while making any adjustment. Turning counter clock-wise will increase the hold time, while clock-wise will lessen the hold time. If you adjust to the hold time screw too far out, the relay will not release at all. Genuine Quadrum housings with the relays are adjusted at the factory, where the cheaper off-shore housings are not adjusted properly. If the relay is bad, you can't adjust the hold timing. If the leaf switches behind the relay are improperly adjusted, you won't be able to manually adjust either. Replace the relay if hold-time cannot be set correctly (if problems are arising due to the quick-fire).