G-TEL Enterprises, Inc.

payphone.com

Elcotel Series-5

Instruction Manual

Includes Instructions on Installation, Programming, and Troubleshooting for use with
G-TEL Payphones with Model Series-5 Elcotel Smart Chassis

Version 2.0

TABLE OF CONTENTS

INTRODUCTION

This phone has been specifically configured for Semi-Public applications. Responsibility for the type of use of the phone, call rates, and any federal, state, or local regulations are at the sole discretion of the telephone owner. It is recommended that you contact your state PUC (Public Utilities Commission) or state PSC (Public Service Commission) regarding questions about product application.

IMPORTANT NOTICE

Your Elcotel Series-5 payphone has been pre-programmed specifically for your calling area and with the rates you requested. However, if this payphone is not installed within 2 weeks of receiving it, it is likely that the programming will be lost due to lack of battery back-up and therefore will need to be downloaded by G-TEL. Indications that the programming may be lost are:

1. If the rates the phone is charging are different from what you requested or not in sync with your calling area. You can check the rates the phone is charging simply by dialing a number before depositing any coins. The phone's voice should prompt the required deposit for the call you dialed.
2. If the phone's voice prompts say "Invalid Number" while trying to place a call

If either of the above is occurring with your phone, G-TEL will need to download the programming back into the phone. The download is done free of charge and will only take approx. 1 to 2 minutes. If you feel your payphone needs to be reprogrammed, please call us toll free at 1-800-884-4835.

Coin Box Overfilling Prevention

It is strongly recommended that you periodically check your coin box volume to prevent the coin box from over-filling. **Over-filling of the coin box can lead to the malfunction of several major components of the payphone**.

Technical Support

G-TEL Enterprises, Inc. offers technical support via telephone and Internet only. **Before trying to contact G-TEL Technical Support, we strongly advise that you read the portion of the manual related to your support needs so that a technician will be able to better assist you.**

G-TEL Technical Support via e-mail: support@payphone.com
G-TEL Technical Support via phone: 1-800-884-4835

MOUNTING INSTRUCTIONS

Mounting the Backboard or Enclosure

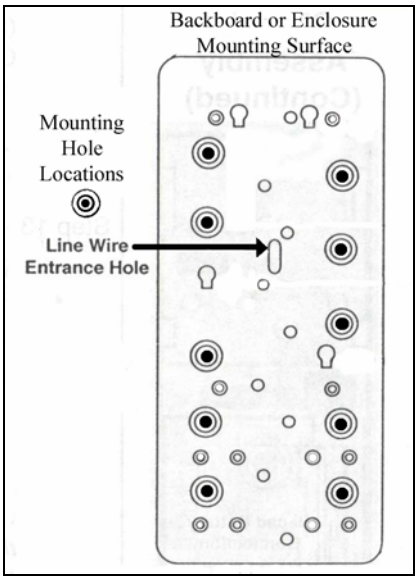
OUTDOOR INSTALLATION

If the payphone is to be installed outdoors, you must use an outdoor pedestal / enclosure to mount the payphone and to prevent weather deterioration. Outdoor pedestals can be mounted using concrete anchors. Outdoor wall-peds can be mounted using toggle bolts. The telephone cable should be routed to the pedestal using EMT conduit. Once the pedestal and enclosure is mounted, follow the instructions starting on page 4 to mount the payphone to the pedestal and enclosure.

INDOOR INSTALLATION

λ *It is recommended to use ¼" Toggle Bolts (with washers) to secure the backboard or enclosure to the wall. The length of the toggle bolt depends on the thickness of the wall. Anchor Screws may be used as an alternative to Toggle Bolts.*

1. Ensure that the wall that the backboard or enclosure is to install to is flat and level.
2. The top height of the backboard or enclosure should be determined by the following:
   Standard Height = 63" from floor Wheelchair Accessible = 54" from floor
3. Place the backboard or enclosure against the wall at the desired height and mark the Line Wire Entrance Hole and Mounting Holes to be used, (the backboard or enclosure offers 10 mounting holes, although not all 10 must be used.) Use the diagram below to ensure the backboard or enclosure is not upside down or backwards.
4. Drill through the marked holes on the wall using a drill bit similar to the size of the toggles being used.



5. Route the telephone line cable through the Line Wire Entrance Hole.
6. Insert each toggle bolt and washer through the mounting holes being used on the backboard or enclosure.
7. Secure the backboard or enclosure against the wall through the pre-drilled holes and tighten each toggle bolt.

MOUNTING INSTRUCTIONS

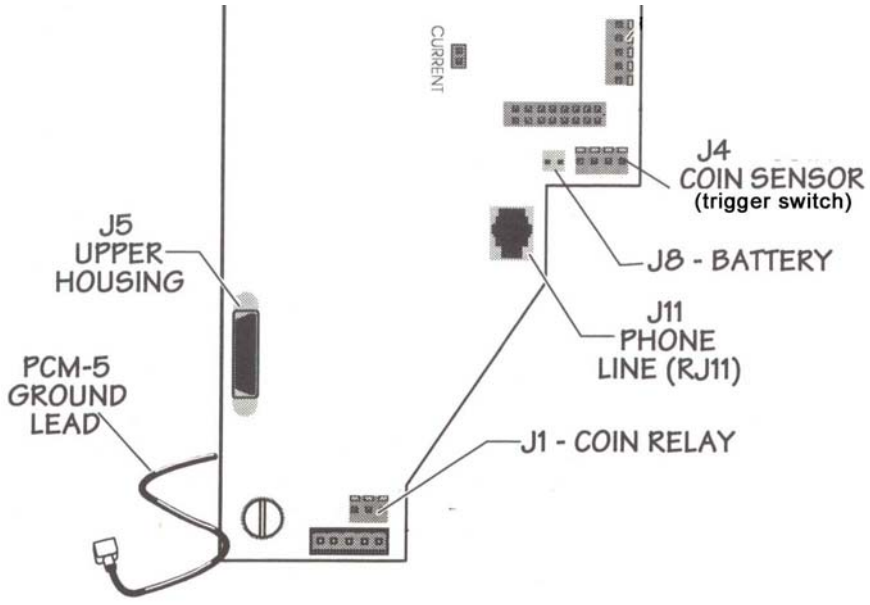
Separating the Upper and Lower Housing

1. Insert the upper housing key into the upper housing lock (located on the right side of the phone) and turn it 1/8 turn counter clockwise.
2. Insert the T-wrench key into the T- wrench insert (located approx. 6 inches above the upper housing lock) and turn it 1/8 turn clockwise, until you hear the phone 'snap' open.
3. Slide the upper housing away from the lower housing (make sure the upper housing cable is disconnected from the circuit board.)

Removing the Circuit Board Chassis

1. Disconnect the 4-wire Coin Sensor/Trigger Switch plug from J4.
2. Disconnect the 2 or 3-wire Coin Relay plug from J1.
3. Disconnect the modular RJ11 Phone Line connector from J11.
4. Disconnect the Ground Lead from the middle spade terminal of lower housing base.
5. Loosen the flat head screw at the bottom left of the circuit board chassis.
6. Remove the circuit board chassis by carefully pulling up and then away from the inside of the lower housing.

Circuit Board Lower View



MOUNTING INSTRUCTIONS

Removing the Coin Acceptor

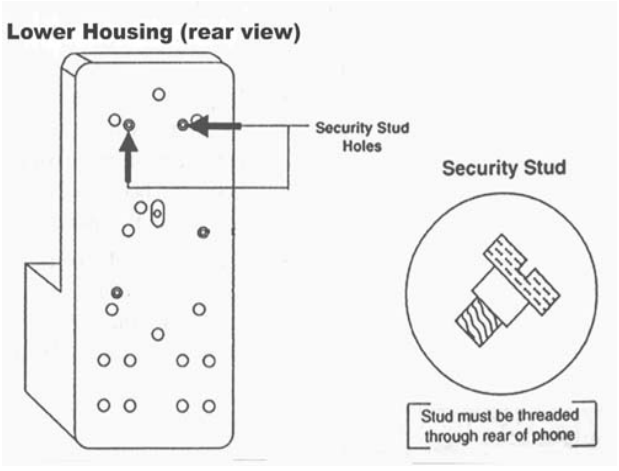
1. Remove the coin reject chute from the coin acceptor by loosening the screw that attaches the top of the reject chute to the bottom of the coin acceptor.
2. Loosen the slotted nut at the top rear of the coin acceptor.
3. Remove the coin acceptor by pulling it up and then outward, away from the inside of the lower housing.

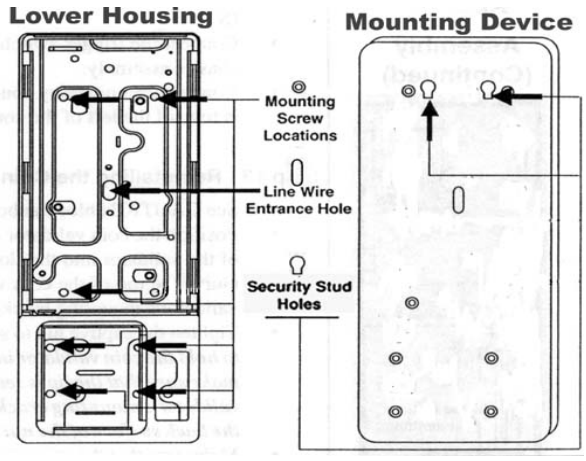
Removing the Vault Door and Coin Box

1. Insert the lower housing key into the lock on the left side of the lower housing and turn it ¼ turn counter-clockwise.
2. Insert the T-wrench key into the vault door's vertical T-wrench key insert (located at the center of the vault door) and turn it 1/8 turn clockwise.
3. Remove the vault door and the coin box from the vault area. *The phone's battery should be removed from inside the coin box. It was placed there for shipping purposes only.

Securing the Lower Housing to the Mounting Device

1. Fasten two security studs to the rear of the lower housing. (If the mounting device you are installing to does not provide security stud holes, do not fasten security studs to rear of lower housing.)





2. Insert the telephone line cable through the line wire entrance hole.
3. Hold the lower housing against the mounting device and insert the security studs into the security stud holes. (If you are not using security studs, you must hold the lower housing against the mounting device while performing Step 4.)
4. Fasten four **¼ x 20 x ¾** mounting screws through the lower housing and into the mounting device.

MOUNTING INSTRUCTIONS

Reinstalling the Coin Box and Vault Door

1. Insert the coin box inside the vault area of the lower housing.
2. Make sure the lower housing key is in the unlock position.
3. Insert the T-wrench key into the vault door's vertical T-wrench key insert (located at the center of the vault door) and turn it ¼ turn clockwise.
4. Insert the vault door into the lower housing vault area and turn the T-wrench key ¼ turn counter-clockwise to secure it.
5. Turn the lower housing key clockwise to the lock position and remove the key.

Reinstalling the Coin Acceptor

READ TO INSURE PROPER COIN ALIGNMENT

1. Before re-installing the coin acceptor, ensure that the trigger switch unit that the coin acceptor installs on top of is firmly secured into the trigger switch sleeve in the back of the lower housing, (the trigger switch should not be loose.)
2. Guide the tab at the bottom rear of the coin acceptor into the rear of the trigger switch.
3. Position the top of the coin acceptor bracket onto the rear lip of the coin acceptor slotted nut and then tighten the nut.
4. Reinstall the coin reject chute and secure the screw at the top of the reject chute to the bottom threads of the coin acceptor.

MOUNTING INSTRUCTIONS

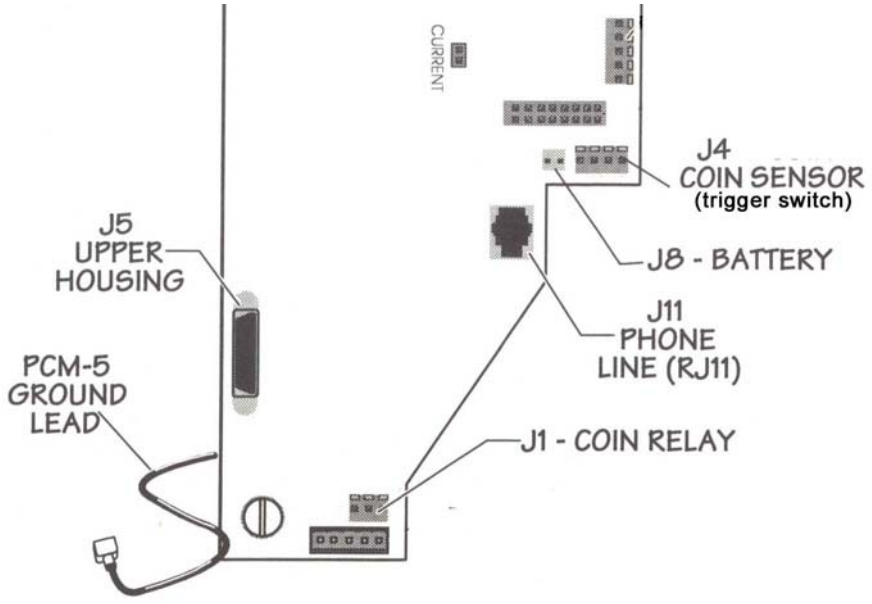
Reinstalling the Circuit Board Chassis

1. Install the circuit board chassis by guiding the tab at the top-left of the chassis into the slot at the top-left of the lower housing. As you position tab, guide the mounting screw onto the mounting stud of the lower left side of the lower housing and then tighten it.
2. Connect the 4-wire Coin Sensor/Trigger Switch plug to the J4 Coin Sensor/Trigger switch connector.
3. Connect the 2 or 3-wire Coin Relay plug to the J1 Coin Relay connector.
4. Connect the modular RJ11 plug to the J11 Phone Line connector.
5. Connect the circuit board Ground Lead to the middle terminal of the terminal block.
6. Connect the Battery plug to the J8 Battery connector of the circuit board.

Make sure that the RED wire is connected to the left side of the plug. Failure to plug in the battery properly can result in damage to the main circuit board.

The battery was packed inside of the coin box for shipping purposes only. Please remove it from the coin box if you have not done so already.

Circuit Board Lower View



MOUNTING INSTRUCTIONS

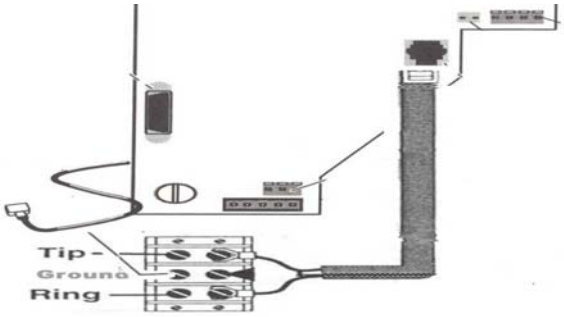
Connecting the Telephone Line

A minimum of 22ma (and 44 VDC) loop current must be provided to the payphone from the Telephone Company's Central Office. In certain situations, due to the distance between the Central Office and the phone site, the loop current may not meet the required level of 22ma. If the loop current is below 22ma, dial tone may not occur or the phone may experience only momentary burst of dial tone. It is recommended that the loop current level at the phone be tested at this time to ensure that the required loop current level is present. Information on testing the loop current can be found on page 15.

1. It is recommended that standard telephone / communication cable (No. 22 gauge, 2 pair or greater) be used to connect the telephone line with the payphone. Telephone / Communication cable usually consists of 2 or more pairs of color-coded wire.
2. Connect one pair of communication cable wire to the two points of the Telco interface box (NID / DMarc location) that the telephone line originates from.
3. Connect the opposite end of the same pair of wire to the top left and bottom left terminal screws, (terminal block is located on the base of the payphone's lower housing.)
4. Connect a proper earth ground wire to the middle terminal to ensure safety.

λ *If using a line cord with a modular RJ11 plug instead of telephone / communication cable,* disregard the RJ11 pigtail cord that originates from the terminal screws. Instead, plug in your incoming telephone line-cord directly to the circuit board RJ11 connector.

Lower Circuit Board and Terminal Block View



Re-Connecting the Upper and Lower Housing

1. Connect the upper housing cable to the J5 upper housing connector on the lower left side of the circuit board.
2. Make sure the upper housing key is in the unlock position and the "T" wrench key is in the open position, (all the way forward.)
3. Slide the bottom-lining of the upper housing along the lining of the lower housing until the two housings meet.
4. Turn the T-wrench key 1/8 turn counter-clockwise until it 'snaps' close and then remove both keys.

ACTIVATING YOUR PAYPHONE

Your Payphone's Programming

Your Elcotel Series-5 payphone has been pre-programmed specifically for your calling area and with the rates you requested. However, if this payphone is not installed within 2 weeks of receiving it, it is likely that the programming will be lost due to lack of battery back-up and therefore will need to be downloaded by G-TEL. Indications that the programming may be lost are:

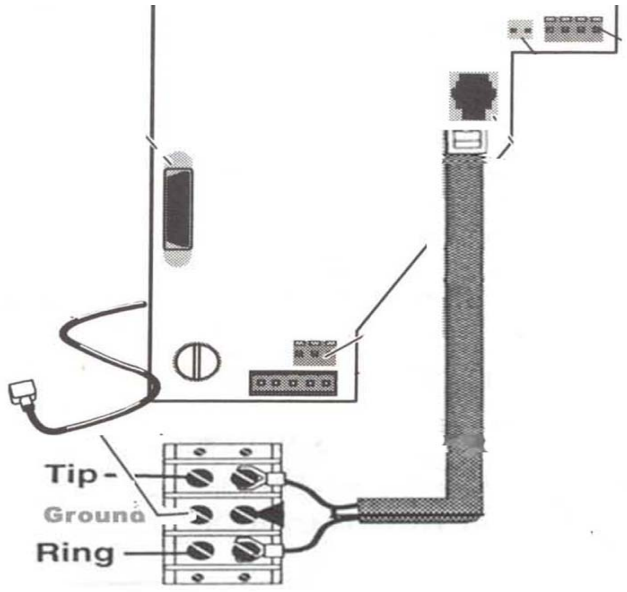
1. If the rates the phone is charging are different from what you requested or not in sync with your calling area.
You can check the rates the phone is charging simply by dialing a number before depositing any coins. The phone's voice should prompt the required deposit for the call you dialed
2. If the phone's voice prompts say "Invalid Number" while trying to place a call.

If either of the above is occurring with your phone, G-TEL will need to download the programming back into the phone. The download is done free of charge and will only take approx. 1 to 2 minutes. If you feel your payphone needs to be reprogrammed, please call us toll free at 1-800-884-4835.

TESTING THE LOOP CURRENT LEVEL

A minimum of 23ma (mili-amps) loop current (and 44VDC) must be provided to the payphone from the Telephone Company's Central Office. In certain situations, due to the distance between the Central Office and the phone site, the loop current may not meet the required level of 22ma. If the loop current is below 22ma, dial tone may not occur or the phone may experience only momentary burst of dial tone. If the loop current level is below 22ma, you should contact your Local Telephone Co.

1. Locate a test meter (multi-meter) for this task.
2. Set the meter to Amps DC.
3. Make sure the incoming Telco **tip** wire is connected to the terminal block (*located at the base of the lower housing.)*
4. Make sure the incoming Telco **ring** wire is disconnected from the terminal block.
5. Connect one lead of the meter to the disconnected Telco **ring** wire.
6. Disconnect the pigtail cable ring wire (**red wire**) from the terminal block
7. Connect the other lead of the meter to the disconnected pigtail cable ring wire.
8. Lift the handset off-hook and record the loop current level shown on the meter. Verify that the reading is greater than **22ma (mili-amps)**.



TROUBLESHOOTING GUIDE

Problem – No Dial Tone

Before You Begin Test the telephone line to determine if the problem is with the telephone line or with the payphone.

Possible Cause 1: **Telephone line dead or improperly connected**
Solution: Check line for dial tone and check terminal block for proper connections

Possible Cause 2: **Battery not plugged in or battery below 6 Volts DC**
Solution: Plug in battery or test with meter for proper voltage (6 VDC)

Possible Cause 3: **Stuck coin in trigger switch assembly (coin sensor)**
Solution: Unplug 4-prong trigger switch and listen for dial tone; If dial tone is present while trigger switch is unplugged, but not when plugged in, remove coin acceptor and trigger switch to find and remove stuck coins or to separate shorted contacts.

Possible Cause 4: **Handset is defective or improperly connected**
Solution: Try replacing handset. Because some handsets are different from others, check for the following patterns with the handset wires

Handset Type 1	*Receiver = black / yellow*	*Xmit/Mic = green / red*
Handset Type 2	*Receiver = green / yellow*	*Xmit/Mic = black / red*
Handset Type 3	*Receiver = white / white*	*Xmit/Mic = black / red*

Possible Cause 5: **Hook-switch contacts are shorted**
Solution: Disconnect one hookswitch wire. Test hookswitch with a multi-meter by setting the meter to ohms and placing one lead of the meter on the disconnected hookswitch wire and the other lead on the connected hookswitch wire. When hookswitch lever goes on and off-hook, the meter should show signs of resistance. If the meter reads the same when hookswitch lever goes on and off-hook, replace the hook-switch.

Possible Cause 6: **Defective Circuit Board, Hook-Dial Assy., or Handset.**
Solution: Replace the above parts one at a time to isolate problem or send each part to G-TEL Repair Dept. for evaluation.

TROUBLESHOOTING GUIDE

Problem – Will Not Accept Coins / Coins Get Stuck

Possible Cause 1: **Coin acceptor not aligned with coin entrance slot**
Solution: Open upper housing and locate the bracket on the inside of the upper housing two inches beneath the bottom of the coin entrance slot. Loosen the two screws of the bracket and slide the bracket either left or right, depending on what direction the coin acceptor needs to move, and then retighten the two screws. *(Some upper housings may not have screws that attach this bracket; if this is the case, then it may be necessary to bend the bracket in order to adjust it.)*

Possible Cause 2: **Trigger switch and coin acceptor not aligned properly**
Solution: Remove coin acceptor and locate trigger switch. Ensure that the trigger switch is mounted properly into the back of the lower housing. If the trigger switch feels loose, remove the mounting screw that secures it to the coin hopper (the screw is located on the left side of the trigger switch and screws onto the top of the coin hopper.) Locate the trigger switch-mounting sleeve in the back of the lower housing and re-insert the trigger switch into the sleeve. Then re-tighten the screw that secures it to the coin hopper.

Possible Cause 3: **Coin acceptor jammed, dirty, or damaged**
Solution: Remove coin acceptor from phone and check to make sure it is clean and undamaged.

Will Not Detect Coins

Possible Cause 1: **Trigger switch contacts are bent too far apart**
Solution: Determine which coins are not being detected (quarter, dime, or nickel.) Next, remove trigger switch and examine the pair of contacts that validate the particular coin that's not being detected. Quarter slot is to the left; Dime slot in middle; Nickel slot to the right

Possible Cause 2: **Coin acceptor is rejecting the coins**
Solution: *See **Will not accept coins, Possible Cause 3***

TROUBLESHOOTING GUIDE

Will Not Disconnect after Hanging Up

Possible Cause 1: **Hookswitch contacts are shorted**
Solution: *See **No Dial Tone, Possible Cause 5***

Possible Cause 2: **Circuit Board is defective**
Solution: Circuit board should be sent to G-TEL Repair Dept.

No Keypad Response

Possible Cause 1: **Keypad ribbon cable is improperly connected or damaged**
Solution: Check connection and condition of keypad ribbon cable

Possible Cause 2: **Keypad is defective**
Solution: Replace keypad assy.

Possible Cause 3: **Circuit Board is defective**
Solution: Circuit board should be sent to G-TEL Repair Dept.

Relay will not Collect or Refund

Possible Cause 1: **Low battery voltage on circuit board battery**
Solution: Test battery with multi-meter.

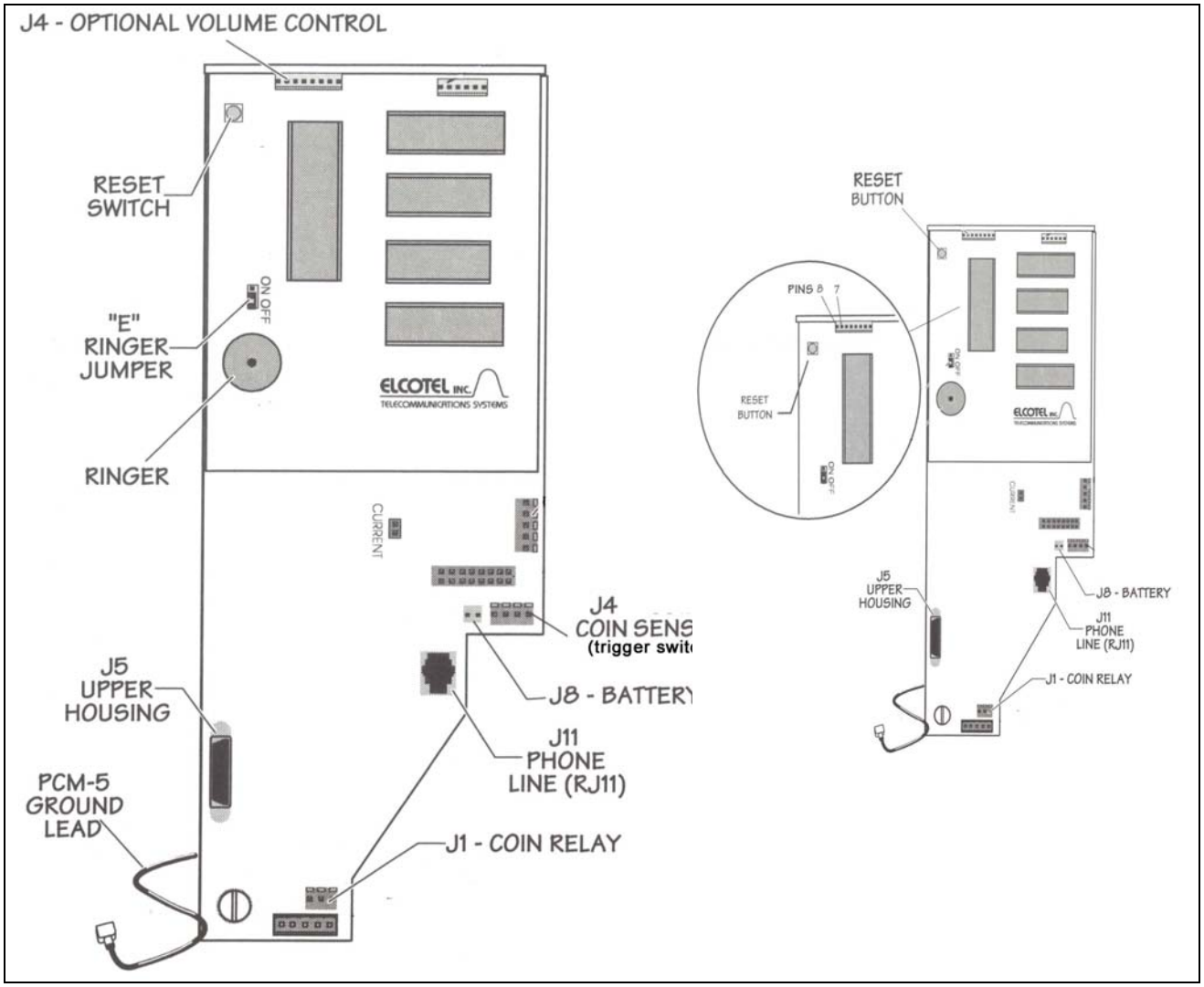
Possible Cause 2: **Relay is improperly connected or defective**
Solution: Check for proper connection of relay to circuit board. Green wire should be to the left (if applicable), red wire in middle, and white wire to the right. If relay is properly connected and problems persist, try replacing relay.

Coins Fall Straight To Coin Box or Coin Return

Possible Cause 1: **Coin Relay assy. collect gate or refund gate is stuck open**
Solution: *Replace Coin Relay assy.*

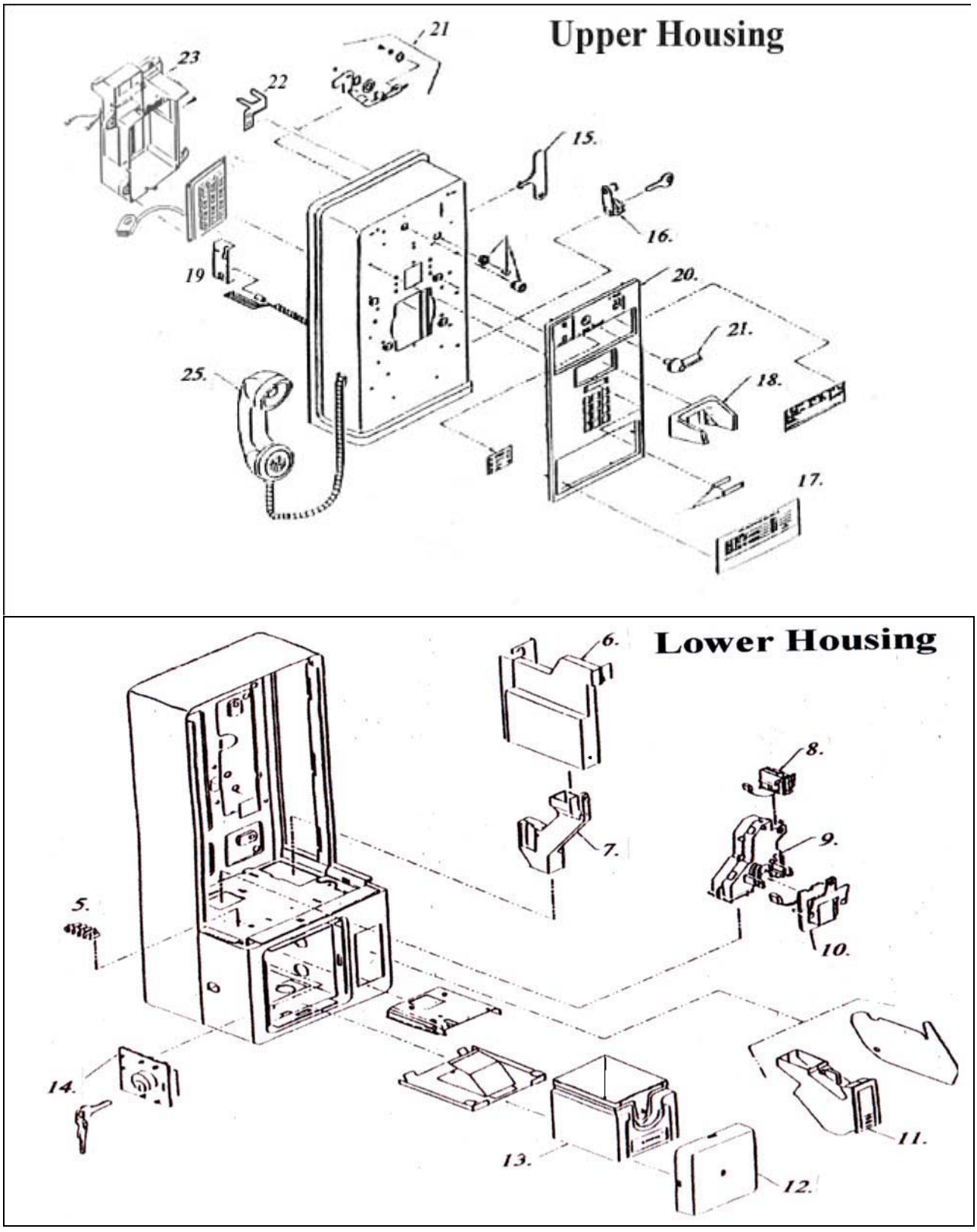
Possible Cause 2: **Coin acceptor is rejecting the coins** (this is only a probable cause if the coins are constantly going to the coin return, not coin box)
Solution: *See **Will not accept coins, Possible Cause 3***

SERIES-5 CIRCUIT BOARD DIAGRAM



PARTS DIAGRAM

See Following Page for Part Numbers, Descriptions, and Price List



PART DESCRIPTION and PRICE LIST

PARTS…….

DIAGRAM NO.	PART NO.	PART DESCRIPTION	PRICE
N/A	SLBAT6V	Sealed Lead Battery (6 Volt)	$ 15.00
5	90-12025-10	Terminal Block Assy.	$ 6.00
6	90-12019-00	Coin Acceptor	$ 49.00
7	90-12018-02	Coin Reject Chute	$ 5.00
8	90-12017-00	Trigger Switch (coin validator)	$ 15.00
9	90-12046-02	Coin Hopper	$ 18.00
10	90-12015-04	48 Volt Coin Relay	$ 39.00
11	90-12056-00	Anti Stuff Device (coin return bucket)	$ 18.00
12	90-12003-10	Vault Door	$ 19.00
13	90-12033-09	Coin Box (add $5.00 for lid)	$ 10.00
14	90-12039-02	Lower Lock and Key Set	$ 25.00
15	71-12002-00	"T" Wrench Key	$ 5.00
16	90-12038-02	Upper Lock and Key Set	$ 20.00
17	95-12020-00	Upper and Lower Instruction Card Set	$ 7.00
18	74-12021-00	Cradle Hook	$ 10.00
19	71-12005-08	Handset Lanyard Retaining Bracket	$ 5.00
20	72-12023-03	Faceplate	$ 19.00
21	90-12077-01	Coin Release Linkage Kit w/ Lever	$ 18.00
22	71-12206-00	Coin Acceptor Aligning Bracket	$ 5.00
23, 24	90-12088-01	Keypad/Hookswitch Assy.	$ 44.00
25	90-12008-01	32" Handset Assy.	$ 19.00
25a	90-12008-03	52" Handset Assy.	$ 23.00

ACCESSORIES….

	90-12100-00	External Volume Control Kit	$ 19.00
	90-70000-00	Stainless Steel Payphone Armored Cover	$ 149.00
	AR-12P	12x12 "Phone" Sign	$ 25.00
	AR-18P	18x18 "Phone" Sign	$ 35.00
	20/10	20x10 Lighted Sign w/Handset Logo	$ 169.00
	20/20	20x20 Lighted "Phone" Sign	$ 259.00
	202114	2.5" Directory Binder w/Lanyard	$ 29.00
	203114	3.5" Directory Binder w/Lanyard	$ 30.00
	90-12112-00	Mounting Backboard	$ 20.00
	K0016	16" Wood Enclosure (light oak or walnut)	$ 89.00
	K0024	24" Wood Enclosure (light oak or walnut)	$ 99.00

Prices effective 04/01/03

2003 G-TEL Enterprises, Inc.

FCC and EQUIPMENT SPECIFICATION

FCC Registration

Series-5 FCC Registration Number: E2DUSA-61027-CX-E
Ringer Equivalency Number (REN): 0.7B

This device complies with Part 15 of the FCC Rules
This equipment complies with Part 68 of the FCC rules. On the Chassis bracket of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of the devices that may be connected to the telephone line. Excessive REN's on the telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total REN's, contact the telephone company to determine the maximum REN for the calling area.

For compliance with state tariffs, the telephone company must be notified prior to connection of the equipment to the telephone line. In some states, approval for equipment connection must be obtained from the Public Utility Commission, Public Service Commission, or Corporate Commission prior to connection.

If the terminal equipment causes harm to the telephone network, the telephone co. will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. You will also be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. In this case, the telephone company will provide advance notification in order for you to make the necessary modifications to maintain uninterrupted service.

This equipment is hearing aid compatible.

ETL Listing

This equipment is in compliance with the requirements of the **Standard for Telephone Equipment (UL-1459, Second Edition)**. This equipment is listed by the ETL Testing Laboratories in compliance with the above standard.

Electrical

Input Power---------- Line Powered, loop start
Loop Limit---------- 22ma to 90ma
Dialing---------- Pulse or Touch Tone
DTMF Power Level (LOW Group)---------- -10.5 dBm (min) into 600 ohms
DTMF Power Level (HIGH Group)---------- -8.5 dBm (min) into 600 ohms
DTMF Power Level (per pair)---------- +1.0 dBm (max) into 600 ohms
DTMF Frequency Tolerance---------- $\pm$ 0.5% per frequency
DTMF Twist---------- $\leq$ 3 dB

Hardware

Housing Type---------- GTE / Quadrum Style Housing)

Environmental

Temperature---------- - 40° to +150° F (-40° to +65° C)
Humidity---------- - 0 to 95% relative, non-condensing