



# **K-TECH EMERGENCY SPEAKERPHONE INSTRUCTION BOOK**

Please read carefully before  
installation and operation

Sentry (ET501A)  
Fortress (ET1001A)  
Commander (ET501A-OEM)  
Liberator (ET501A-LP)



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## INTRODUCTION

K-Tech Emergency Speakerphones are vandal resistant and designed to provide reliable communication in the event of an emergency. Typically, up to three can share a single telephone line.

K-Tech Emergency Speakerphones are powered by a standard analog two wire telephone line. Single push-button operation offers hands-free operation during a call. The visual indicator can be caused to flash by the called party to indicate that "Help is on the way".

K-Tech Emergency Speakerphones will be automatically shut off by the disconnect (CPC) signal (common on CO lines and some PBX's) when the called party hangs up, or by the built in timer. They also feature an auto-answer function. This allows the called party to call back to the location of the emergency by dialing the number of the telephone line the units are installed on.

K-Tech Emergency Speakerphones are available in four different mounting styles. See pages 8 - 9 for more detailed information.

- Sentry (ET501A) - surface or phone box mount
- Fortress (ET1001A) - flush mount
- Commander (ET501A-OEM) - car operating panel mount
- Liberator (ET501A-LP) - surface or phone box mount

To place an emergency call, the K-Tech Emergency Speakerphone requires a New Wave™ (ET701) Emergency Dialer to dial an emergency telephone number, or a programmed or ringdown type of telephone line to complete the connection.

## KEY FEATURES SUMMARY

- Telephone line powered
- Hands-free operation
- Automatically shuts off at the end of the call with disconnect (CPC) signal or by built in timer
- Automatically answers when a call is placed back to the emergency speakerphone
- Visual indicator can be caused to flash by the answering party to indicate that “Help is on the way”

## PRE-INSTALLATION CHECK-LIST

Tools Required:

- multimeter
- small flathead screwdriver
- wire cutters
- long-nosed pliers
- drill and pilot bit for #8 sheet metal screw
- a “live” telephone line (48 VDC, CO or PBX) installed and terminated at the elevator machine room

## TELEPHONE LINES

For best operation, up to three K-Tech Emergency Speakerphones can be installed on a single touch-tone telephone line dedicated for the emergency telephones. Compatible line types are standard analog two-wire central office lines from the local telephone company, or most internal PBX systems.

K-Tech Emergency Speakerphones are compatible with Ringdown and Hot Line dialing configurations. If the telephone line is set up to automatically connect to the emergency number, the New Wave™ (ET701) Emergency Dialer is not used.

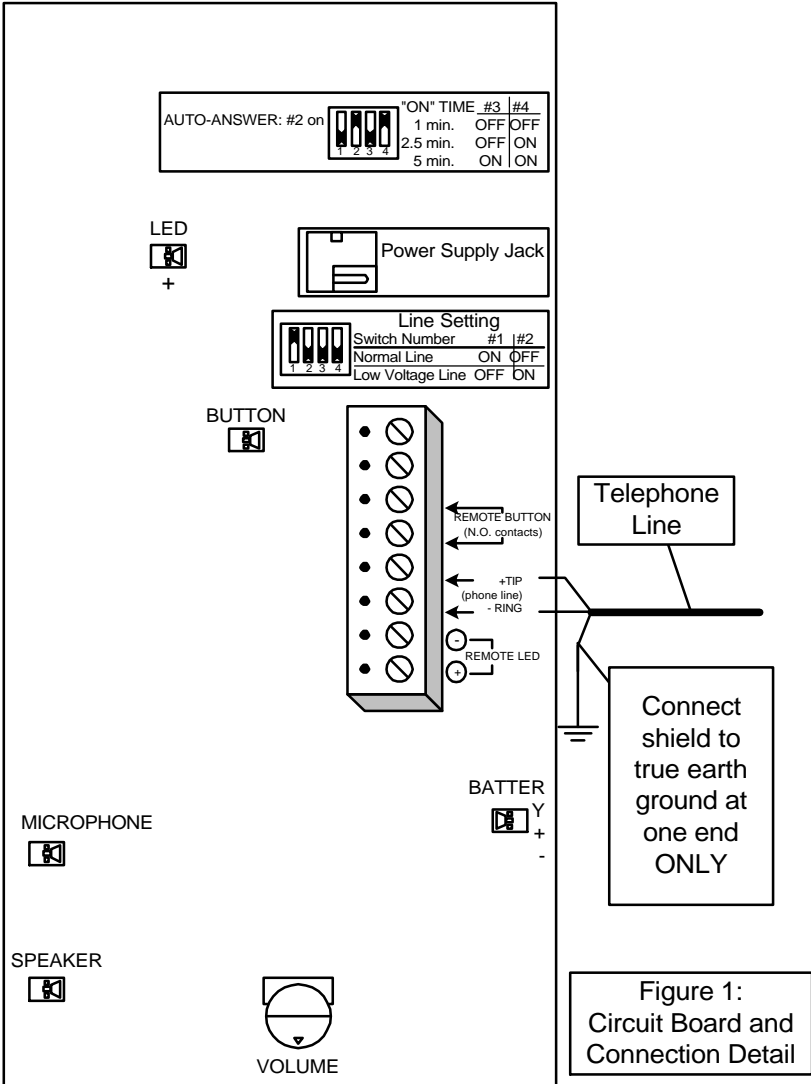
The telephone line will be assigned a telephone number which allows the called party to call back to the location of the emergency. Take care to note this number and supply it to the called party.

### RECOMMENDED TELEPHONE LINE SPECIFICATIONS

<b>Line Voltage</b>	48 VDC ( $\pm 3$ VDC) on-hook voltage
<b>Loop Current</b>	30 mA minimum (lower current will cause low volume and misdialing)

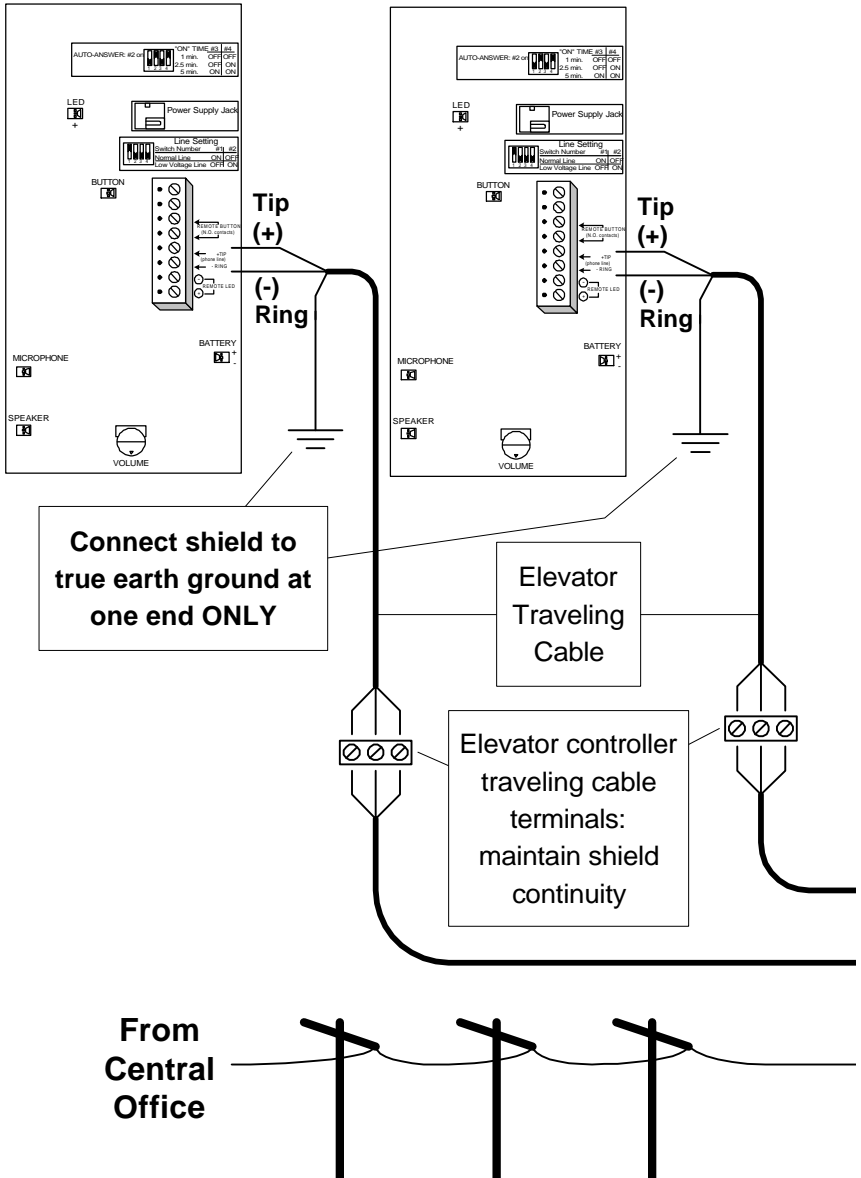
# WIRING

We **strongly recommend** that the wires used to supply the telephone line to the K-Tech Emergency Speakerphone(s) be **20 AWG shielded, twisted pair**. This shield should be continuous from the K-Tech Emergency Speakerphone(s) through the traveling cable to the incoming telephone line termination. Make sure the shield is connected to a **true earth ground at ONE end ONLY!** This will minimize interference from AC inductance and RF (radio frequency).



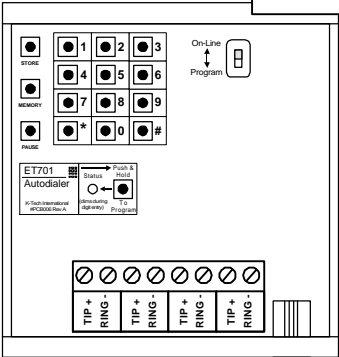
**Note: Maintain proper Tip/Ring polarity throughout the installation. Use a multimeter to verify the polarity at the phone: Tip is (+); Ring is (-).**

# K-Tech Emergency Speakerphones

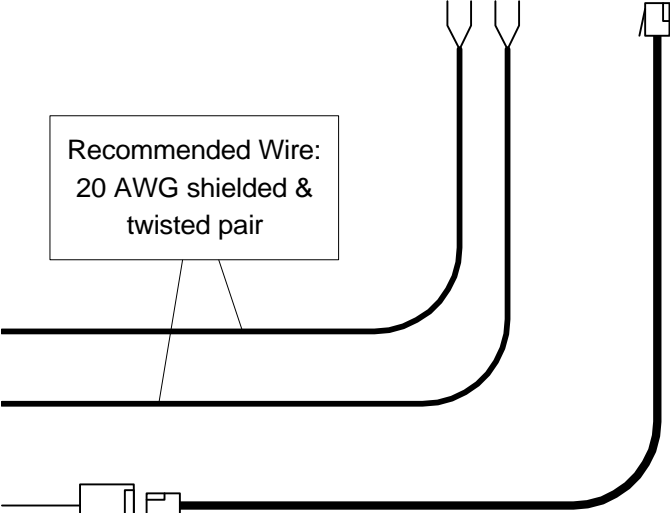


**IMPORTANT:**  
maintain proper TIP and  
RING polarity throughout  
installation  
**TIP is (+) Ring is (-)**

**New Wave™  
(ET701)  
Emergency  
Dialer**



Recommended Wire:  
20 AWG shielded &  
twisted pair



RJ11C  
jack

14 ft. modular cord

## DESCRIPTION/INSTALLATION

### Sentry (ET501A)

- steel enclosure and faceplate mounts in existing phone box
  - one-touch activating push-button with visual indicator
  - emergency label with raised and Braille lettering
  - coarse and fine grills for protection of microphone and speaker
  - vandal resistant screws
  - dimensions: 9<sup>1</sup>/<sub>2</sub>" (24.1 cm) H x 4<sup>3</sup>/<sub>4</sub>" (12.1 cm) W x 2" (5.1 cm) D
1. Use the <sup>3</sup>/<sub>32</sub>" Allen wrench (provided) to unscrew the fasteners and remove the rear enclosure
  2. Using the rear enclosure as a template, mark the mounting screw hole locations
  3. Drill holes for the #8 screws (included)
  4. Mount the rear enclosure placing the Ground Lug under one of these mounting screws
  5. Proceed to *FEATURE SELECTION* on page 10
  6. Program the New Wave™ (ET701) Emergency Dialer
  7. Connect the battery and proceed to *TESTING* on page 10

### Fortress (ET1001A)

- stainless steel (or optional bronze) brushed #4 faceplate with enclosure mounts over phone box (door removed) or similar wall cut-out
  - one-touch activating push-button with visual indicator
  - emergency label with raised and Braille lettering
  - coarse and fine grills for protection of microphone and speaker
  - vandal resistant screws
  - dimensions:
    - faceplate: 12<sup>1</sup>/<sub>2</sub>" (31.8 cm) H x 10" (25.4 cm) W x <sup>1</sup>/<sub>8</sub>" (0.4 cm) D
    - enclosure: 9<sup>5</sup>/<sub>8</sub>" (24.5 cm) H x 6<sup>1</sup>/<sub>2</sub>" (16.5 cm) W x 2<sup>1</sup>/<sub>2</sub>" (6.4 cm) D
1. Determine the mounting location and cut out a 10" H x 7" W opening to allow for the enclosure
  2. Using the faceplate as a template mark the mounting screw hole locations
  3. Drill holes for the #8 screws (included)
  4. Remove the enclosure by removing the two nuts that secure it
  5. Proceed to *FEATURE SELECTION* on page 10
  6. Program the New Wave™ (ET701) Emergency Dialer
  7. Re-mount the enclosure placing the Ground Lug under one of the nuts that secure it
  8. Connect the battery and proceed to *TESTING* on page 10

## Commander (ET501A-OEM)

- mounts to studs on back of COP behind existing grill pattern
  - requires remote activating push-button and visual indicator (PSB type LED included)
  - fine grills for protection of microphone and speaker
  - dimensions: 9<sup>1</sup>/<sub>2</sub>" (24.1 cm) H x 4<sup>3</sup>/<sub>4</sub>" (12.1 cm) W x 1<sup>3</sup>/<sub>4</sub>" (5.1 cm) D
1. Using the faceplate as a template, mark and install the mounting studs
  2. Align the microphone and speaker with the grill pattern and mount the faceplate tightly against the back of the COP to avoid feedback between the microphone and speaker
  3. Connect the Normally Open contacts of the remote push-button to the terminal labeled *REMOTE BUTTON*
  4. Connect the remote visual indicator to the terminals labeled *REMOTE LED* taking care to follow the correct polarity
  5. Proceed to *FEATURE SELECTION* on page 10
  6. Program the New Wave™ (ET701) Emergency Dialer


## Liberator (ET501A-LP)

- steel enclosure and faceplate mounts on flat surface or in existing phone box
  - one-touch activating push-button with visual indicator
  - emergency label with raised and Braille lettering
  - coarse and fine grills for protection of microphone and speaker
  - vandal resistant screws
  - dimensions: 9<sup>1</sup>/<sub>2</sub>" (24.1 cm) H x 6<sup>5</sup>/<sub>8</sub>" (17.5 cm) W x 1" (2.6 cm) D
1. Use the <sup>3</sup>/<sub>32</sub>" Allen wrench (provided) to unscrew the fasteners and remove the rear enclosure
  2. Using the rear enclosure as a template, mark the mounting screw hole locations
  3. Drill holes for the #8 screws (included)
  4. Mount the rear enclosure placing the Ground Lug under one of these mounting screws
  5. Proceed to *FEATURE SELECTION* on page 10
  6. Program the New Wave™ (ET701) Emergency Dialer
  7. Connect the battery and proceed to *TESTING* on page 10

# FEATURE SELECTION


## “ON” TIME

Switches #3 and #4 control how long the K-Tech Emergency Speakerphone stays on once activated (1, 2<sup>1</sup>/<sub>2</sub>, or 5 minutes). “On” Time factory default is 2<sup>1</sup>/<sub>2</sub> minutes.

AUTO-ANSWER: #2 on		"ON" TIME	
		1 min.	OFF OFF
		2.5 min.	OFF ON
		5 min.	ON ON

## LINE SETTING

For most installations, leave this setting for *Normal Line* as shown. Under certain circumstances, you may be directed by Customer Support to change this setting.

	Line Setting	
	Switch Number	#1   #2
	Normal Line	ON OFF
	Low Voltage Line	OFF ON

## TESTING

1. **Press the activating push-button.** The visual indicator will turn on, dial tone will be heard for a few seconds, then the automatic dialing will commence.
2. **When the call is answered, verify two-way communication.** Adjust the volume control to a satisfactory level.
3. **Have the called party press the pound key (#) on their telephone to cause the visual indicator to start to flash; have them press zero (0) on their telephone to cause the visual indicator to stop flashing.**
4. **Have the answering party hang up.** The K-phone will automatically shut-off via the telephone line disconnect (CPC) signal. If this signal is not present on the line, it will shut off via the automatic timer (see “ON TIME” setting).
5. **Have the answering party call back the K-phone.** It will automatically turn on, dial, and the visual indicator will turn on.
6. **Mount the faceplate** into the rear enclosure and/or elevator panel using the vandal resistant screws, then re-test.

**Note: Make sure wiring does not interfere with components when finalizing installation.**

**Note: This equipment should be tested on a periodic basis.**

## TROUBLE SHOOTING

1. **When the activating push-button is pressed, there is no response from the K-Tech Emergency Speakerphone (i.e. no dial tone is heard, the visual indicator doesn't light).**
  - Check the connections to the MICROPHONE, SPEAKER, LED, and BUTTON (N.O. contacts).
  - Check that the 9V NiCad battery is connected and properly charged. This battery supplies power during the emergency call, and is recharged by the telephone line.
  - Check that there is a "live" telephone line connected. Connect a multimeter across Tip and Ring; you should read at least 42 VDC on-hook.
  - If there is no telephone line voltage in the elevator car, check for line voltage in the machine room and verify the connection.
2. **When the K-Tech Emergency Speakerphone is activated dial tone is heard, but the emergency number is not dialed.**
  - Check the New Wave™ (ET701) Emergency Dialer for proper programming and operation.
3. **When the called party hangs up the K-Tech Emergency Speakerphone stays on.**
  - Check to see if the telephone line connected to the K-Tech Emergency Speakerphone supplies a disconnect (CPC) signal. If this signal is not present on the line, it will shut off automatically by the internal timer (see "ON TIME" setting).
4. **The K-Tech Emergency Speakerphone shuts off (the visual indicator turns off), but does not release the telephone line.**
  - Check the polarity on each K-Tech Emergency Speakerphone with a multimeter. Tip is positive, Ring is negative.
5. **The K-Tech Emergency Speakerphone false activates and calls out when the elevator moves, when the doors open/close, when the floor buttons are pushed, etc.**
  - The K-Tech Emergency Speakerphone should be installed on shielded, twisted pair. The shield wire should be continuous from the elevator through the controller and grounded to a true earth ground at one end only.

**For Technical Support call:  
800-993-9399 or 860-489-9399**

## SPECIFICATIONS

<b>Power Requirements</b>	Unit is powered by a NiCad battery (8.4 VDC, 120 mAH), which is recharged by the telephone line.
<b>“On” Time</b>	Selectable 1, 2 <sup>1</sup> / <sub>2</sub> , or 5 minute internal timer, or auto shut-off with disconnect (CPC) signal (if provided)
<b>Connection</b>	Parallel - Tip and Ring (screw terminals)
<b>Circuit Protection</b>	Varistor lightning suppressor and full wave polarity guard
<b>Auto Answer</b>	Automatically activates on incoming ring signal
<b>Visual Indicator Activation</b>	Called party presses pound key (#) on their telephone
<b>FCC Registration #</b>	10MUSA-18075-MT-E

## CODE COMPLIANCE

K-Tech has taken great care in ensuring that our telephone equipment meets all code requirements. There are, however, additional requirements that have to be met in order for the installation and operation to pass code. We will attempt to list requirements pertaining to the installation of our telephone equipment. The ultimate responsibility, however, is yours. Consult local codes to be sure your installation complies.

1. Telephone equipment must be mounted at the proper height for people who use wheelchairs.
2. Make sure the called party knows how to make the visual indicator function. This signal is for the hearing impaired and means that help is on the way. (See our “Answering Phone Instructions” card)
3. Make sure the called party can determine the origin of the call without interaction from the caller. This is accomplished by a caller-ID type system, or by installing an EI-Tell Voice Location Announcer (ET-DA20) on the telephone line. This function is used when the occupant of the elevator is speech and/or hearing impaired.
4. When installing K-Phones inside an elevator phone cabinet you should install a sign with raised and Braille lettering (model LBL014) on the outside. A door handle allowing the physically impaired to open the door (model ET-TBH) should also be installed.

## **WARRANTY POLICY**

K-Tech International, Inc. warrants equipment of its own manufacture to be free from defects in material and workmanship for a period of one year from date of shipment from factory or appointed distributor to original user.

This warranty does not apply to any products which have been damaged, neglected, altered, abused, used for a purpose other than the one for which they were manufactured, repaired by the customer or any party without K-Tech's authorization, or used in any manner inconsistent with K-Tech's instructions.

K-Tech's entire obligation under this warranty shall be limited (at K-Tech's option) to repair or replacement of any parts which prove to be defective within the warranty period. Defective products must be returned by customer to K-Tech's factory in its original, unaltered form, transportation prepaid.

K-Tech will not be liable for any costs incurred by its customers in removal or replacement of defective products.

K-Tech International, Inc.'s liability under this warranty, or any other warranty, whether expressed or implied in law or fact, shall be limited to the repair or replacement of defective material or workmanship, and in no event shall be liable for consequential or indirect damages. No representative or person is authorized to assume for us any of the liability in connection with the sale of our products.

## **REPAIR POLICY**

K-Tech International, Inc. has a customer repair policy which requires that all customer repairs have a pre-assigned Return Authorization (RA) number. This system assists us in better serving our customers by ensuring accurate identification and prompt turnaround for returned product. If you need to return a product for repair, please contact our Customer Service Department at 800-993-9399 or 860-489-9399 for a Repair Authorization (RA) number. Please have the following information available when requesting authorization:

1. Bill To and Ship To addresses
2. Name and telephone number of contact person for this Repair Authorization (RA)
3. Purchase Order # for this Repair Authorization (RA)
4. Job site name
5. Quantity, model number(s), and serial number(s)
6. Brief description of problem experienced with the unit(s)

Shipping:

Please reference the Repair Authorization (RA) number on the outside of all cartons and on all paperwork enclosed with the product. Undocumented returns run the risk of being lost and are untraceable. All material must be shipped on a Freight Prepaid basis. Collect shipments will be refused.

## FCC NOTICE

This device has been granted a registration number by the Federal Communications Commission, under Part 68 rules and regulations for direct connection to the telephone lines. In order to comply with these FCC rules, the following instructions must be carefully read and applicable portions followed completely.

1. This equipment complies with Part 68 of FCC rules. A label located on an outside surface of this equipment contains, among other information, the FCC registration number and ringer equivalency number (REN). If requested, this information must be provided to the telephone company.
2. The recommended jack (USOC connecting arrangement) for this equipment is listed below.
3. The ringer equivalence number (REN) is used to determine the quantity of 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 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.
4. If this equipment causes harm to the telephone network, the telephone company will notify you in advance. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with FCC if you believe it is necessary.
5. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.
6. If trouble is experienced with this equipment, please contact the service center for repair and/or warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved. User repairs must not be made, and doing so will void the user's warranty.
7. This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. (Contact your state public utilities commission for information.) If so required, this device is hearing-aid compatible (HAC).

JACK (USOC): RJ11C  
RINGER EQUIVALENCE = 0.6B Type Z



# NOTES

Date Installed: \_\_\_\_\_

\_\_\_\_\_

Serial Number: \_\_\_\_\_

\_\_\_\_\_

Installer: \_\_\_\_\_

\_\_\_\_\_

Location: \_\_\_\_\_

\_\_\_\_\_

Phone Line Number: \_\_\_\_\_

\_\_\_\_\_

Phone Number Dialed: \_\_\_\_\_

\_\_\_\_\_

Service/Security Company Dialed: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## **K-Tech International, Inc.**

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