

# uplink<sup>®</sup> 4500EZ

**4G UNIVERSAL CELLULAR  
ALARM COMMUNICATOR**

## **INSTALLATION & USER'S GUIDE**



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# 4G UNIVERSAL CELLULAR ALARM COMMUNICATOR

## **TABLE OF CONTENTS**

Table of Contents .....	1
Warranty & Limitation of Liability .....	2-3
Technical Support .....	4
Description .....	4
Installation .....	5-7
Unit Wiring .....	8-10
Antenna Specifications .....	10
FCC & Industry Canada Regulatory Compliance .....	11
FCC RF Exposure Information .....	12

# **WARRANTY & LIMITATION OF LIABILITY**

## **Standard 12-Month Limited Warranty**

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## TECHNICAL SUPPORT

Technical Support is available **Monday through Friday, 8:00 AM to 8:00 PM EST** excluding holidays. Before calling or emailing Technical Support please ensure you have read the entire installation guide.

To be able to help you, Technical Support will need you to provide:

- **Login name**
- **Password**
- **Serial number of the unit**

### **UPLINK Technical Support**

3330 Cumberland Blvd. Suite 700

ATLANTA, GA 30339

1-(888) 9-UPLINK, 1-(888)-987-5465

Fax 1-(888)-542-9105

Log in: <https://login.uplink.com>

For Customer Support, call **1-888-9-UPLINK**, or visit [www.uplink.com](http://www.uplink.com)

## DESCRIPTION

The Uplink 4500EZ is an “always on,” multi-purpose, FCC-certified device capable of sending and receiving alarm signals or other data over the GSM Cellular Network. When connected to an alarm system, the 4500EZ will send alarm signals over the cellular network to Uplink’s alarm processing center, that will forward the signals to the appropriate monitoring station and/or selected email addresses.

The 4500EZ can be connected to an alarm system using up to four inputs on the 4500EZ. Each of these inputs can be set up to send a selected signal to the monitoring station. Contact ID, SIA, Modem IIe/IIIa<sup>2</sup> and Pulse 4/2 (:20 PPS) formats are supported.

The 4500EZ also has two configurable relay outputs to send signals to alarm panels or control other devices.

# 4G UNIVERSAL CELLULAR ALARM COMMUNICATOR

## INSTALLATION STEPS

**Before beginning installation:** If you are not yet an Uplink dealer, register by visiting [www.uplink.com](http://www.uplink.com) and click on the “new dealer account” tab.

**Step 1.** Activate the system. The Uplink 4500EZ operates “out of the box” with most commercial panels. No additional programming or equipment is required. To activate with default functions, go to [www.uplink.com](http://www.uplink.com) (or [ex.uplink.com](http://ex.uplink.com) for web-enabled mobile phones), or call 1-888-987-5465. Consult the Quick Installation Guide included with the 4500EZ.

**Step 2.** Install the antenna on the top of the unit.

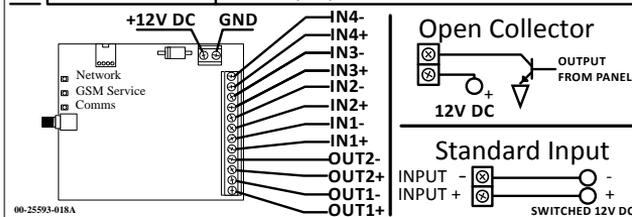
**Step 3.** Position the unit for maximum signal strength. Connect the unit to a 12V DC, 500mA power supply. Be sure the area is dry and free from interference of metal objects and obstructions.

**Step 4.** Determine network availability and signal strength.

a) GSM signals strength should be -100dB minimum. Relocated the unit or install a high-gain antenna if necessary.

TABLE 1: LED INDICATIONS

COM	LED	ON	Sending SMS Message
	LED	OFF	Not sending SMS Message
SERVICE	LED	OFF	RSSI <= -101dBm
	LED	Slow Blink	RSSI BETWEEN -100dBm and -91dBm
	LED	Fast Blink	RSSI BETWEEN -90dBm and -81dBm
NETWORK	LED	ON	RSSI >= -80dBm
	LED	SOLID ON	Unit in error
	LED	FAST BLINK	No network available
	LED	SLOW BLINK	GSM/SMS network available
	LED	NOTE	If after waiting for at least three minutes and this LED is Flashing FAST, call Uplink customer support at 1-888-987-5465 to check for network availability in your area.



**Step 5.** Disconnect the unit from the power supply before wiring. The standard configuration for the Uplink 4500EZ is to leave DIP switches S3 and S4 set to “OFF” (Input 1 triggered by 9V DC to 12V DC or an open collector). For detailed wiring instructions and alternative configurations, see pages 8-9.

CAUTION: Do not connect the unit to a receptacle controlled by a switch.

CAUTION: Improper connections at the power connector may result in damage to the unit.

**Step 6.** Configure the unit. Set the DIP switches on the front panel of the unit according to the following table:

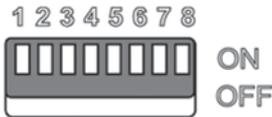


FIGURE 1:  
Detail of Dip Switch

TABLE 2: DIP SWITCH SETTINGS

DIP SWITCH Functionality	S8	Off = Input 4 Normal Operation On = Input 4 Neg Pulse causes reset		
	S7 and S6	Reserved (set to OFF)		
	S5	Off = Controllable output via website On = Normally closed trouble output		
	S3 and S4	S3 OFF OFF ON ON	S4 OFF ON OFF ON	Input 1 Type Standard Input Pulse Counter Timed Bell Sampled Siren
	S2 and S1	Reserved (set to OFF)		

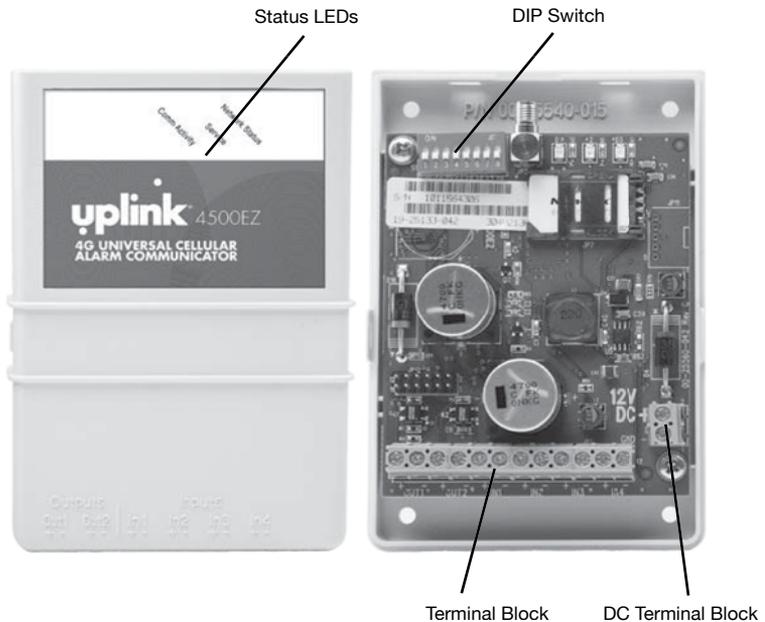
(INSTALLATION STEPS continued next page)

# 4G UNIVERSAL CELLULAR ALARM COMMUNICATOR

## INSTALLATION STEPS (cont.)

**Step 7.** When you have finished wiring and configuring the unit, wait at least two minutes then test the connection to the central station by creating an alarm from the panel.

FIGURE 2:  
MODEL 4500EZ



## UNIT WIRING

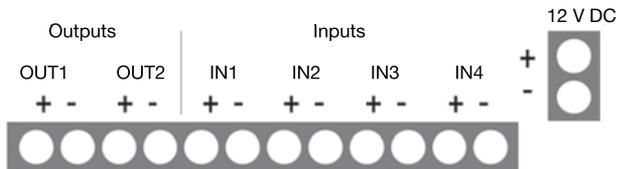


FIGURE 3: DETAIL OF CONNECTIONS

### Input 1 (Selectable Via DIP Switches)

**A. Standard Input** - (DIP switches S3 OFF, S4 OFF) This mode configures the unit to be tripped from a DC voltage ranging from 9 V DC to 12 V DC or an open collector.

**B. Timed Bell** - (DIP switches S3 ON, S4 OFF) This mode configures the unit to be tripped from a DC voltage ranging from 9 V DC to 12 V DC. The unit reads a pulsed voltage as a fire signal and a steady voltage as a burglary signal. It may be necessary to place a 1K Ohm resistor in parallel to prevent false alarms when using panels with supervisory voltage on the bell circuit. Some panels with supervised bell circuits may require a 1K Ohm resistor in the circuit. Contact Technical Support for further details.

**C. Sampled Siren\*** - (DIP switches S3 ON, S4 ON) This mode configures the unit to be tripped from a siren driver or a panel with a built in siren driver. The unit reads a steady tone as a fire signal and a yelping tone as a burglary signal.

**\*NOTE:** The input assumes that a speaker is connected to the panel. If you are not using a speaker we recommend using a Timed Bell instead of Sample Siren. This is an option on most panels.

**Input 4** (DIP switch S8 ON) A trigger of INPUT 4 from high-to-low and back-to-high causes the 4500EZ to reset. The high-to-low-to-high must be held for at-least 100 msec.

(UNIT WIRING continued next page)

## UNIT WIRING (cont.)

**\*Inputs 2, 3, and 4 (and Input 1 if Standard Type)**

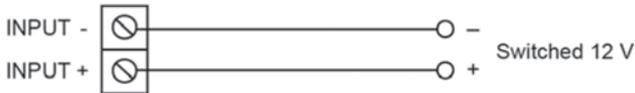


FIGURE 4: Wiring example for voltage trip

**Voltage Trip** - Inputs 2, 3, and 4 (and 1 if set for standard input) can be tripped by applying 12 V to the + input and 0 V to the - input. A signal must be continuously present for 500 ms.

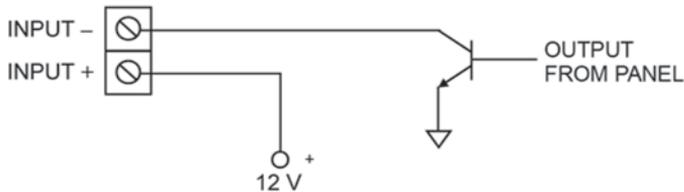


FIGURE 5: Wiring example for open collector trip

**Open Collector** - Inputs 2, 3 and 4 (and 1 if set for standard input) can be tripped by applying 12 V to the + input and the Open Collector output of the panel to the - input. A signal must be continuously present for 500 ms.

**Outputs** - Outputs can be used to signal communication trouble to the alarm panel or can be used to control other devices at the installation site. Outputs 1 and 2 are dry contact relays rated for a maximum of 100 mA at 24 V DC, and are in the normally closed condition (selectable to NO).

**Power Supply** - The customer-supplied 12 V DC power supply/battery charger should be capable of supplying 500 mA peak for brief high current demands of the radio during transmission.

## **ANTENNA SPECIFICATION**

The following types of antennas should be used with this unit:

Antenna type: External Dual Band ¼ wave antenna (included with unit)

Maximum Antenna Gain: 3.0 dBi

Antenna connector: SMA

Antenna type: External Dual Band ¼ wave antenna Magnet mount (available separately)

Maximum Antenna Gain: 3.5 dBi

Antenna connector: SMA

Cable length and loss: 3 meter, RG-174, total loss 2.8 dB

## FCC & INDUSTRY CANADA REGULATORY COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it can cause harmful interference to radio communications. Interference may occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that which the receiver is connected to.
- Consult the dealer or an experienced technician for help.

## **FCC RF EXPOSURE INFORMATION**

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this unit complies with the FCC guidelines and these international standards. For more information about RF exposure, please visit the FCC website at [www.fcc.gov](http://www.fcc.gov). THE TERM "IC:" BEFORE THE CERTIFICATION/REGISTRATION NUMBER ONLY SIGNIFIES THAT THE INDUSTRY CANADA TECHNICAL SPECIFICATIONS WERE MET.

THE EXTERNAL ANTENNAS USED FOR THIS UNIT MUST PROVIDE A SEPARATION DISTANCE OF AT LEAST 20 CM FROM ALL PERSONS AND MUST NOT BE CO-LOCATED OR OPERATED IN CONJUNCTION WITH ANY OTHER ANTENNA OR TRANSMITTER.

# 4G UNIVERSAL CELLULAR ALARM COMMUNICATOR

## UPLINK 4500EZ 4G UNIVERSAL CELLULAR ALARM COMMUNICATOR INSTALLATION, OPERATION AND PROGRAMMING GUIDE

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