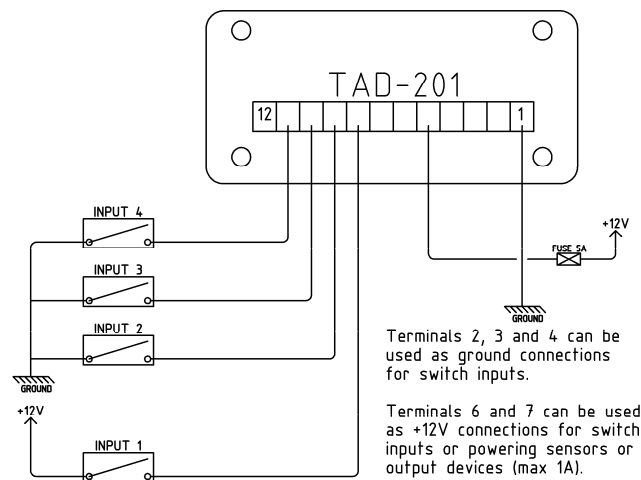


# TAD-201 Installation Instructions

## 1 – Connect Power and Inputs to unit

The TAD-201 connector should be wired up as shown in this diagram.



## 2 - Install SIM Card

It is a good idea to first fit the SIM card into a mobile phone to ensure that it is registered and can successfully send text messages. Ensure that no PIN code is set on the SIM (the phone should not ask for a PIN after being turned on). Voice mail should also be disabled. After testing the card can be installed into the unit. If using a prepay SIM card it is a good idea to use one whose balance can be checked and topped up over the internet. Vodafone offer this service on their prepay SIM cards.

Remove the four screws from the antenna end of the case and slide the board out. A SIM card (either prepay or contract) should be inserted into the holder. When reassembling the unit ensure that the cables are not pinched, the board is in the correct slot and the panel is installed in the correct orientation.

## 3 - Mount unit

The TAD-201 is not water proof so it should be mounted in a protected location where it will not get wet. It can be mounted with screws or adhesive foam pads. If using screws the supplied mounting brackets must be slid into the sides of the case with the panel removed.

## 4 - Mount GSM Antenna

The TAD-201 is supplied with either a rubber antenna which screws directly onto the end of the case or an external antenna. For best results, ensure that the antenna is mounted away from large metal objects.

## 5 - Configure unit

There are various configuration options which can be set in the TAD-201. These can be set using SMS text messages or the optional PC Configuration Kit (TAD-201/PCC).

Most of the commands sent to the TAD-201 must contain the correct password. Throughout this manual it is assumed that the default password has not been changed.

The TAD-201 will reply to all messages sent to it with the correct password. Nothing sent to the unit (including the password) is case sensitive. The default password is *SECRET*, if you have changed it use your password instead.

### 5.1 - Change the Password

The password is set to *SECRET* by default and should be changed. Send this message to change the password to *BICYCLE*:  
*Secret, password, bicycle*

### 5.2 - Configure Automatic Status Reporting

The TAD-201 can be configured to send status messages to a certain phone number at a frequency you can define (in minutes, maximum 60000). It is important that this is enabled and configured to send messages at least once every 14 days in order to keep the SIM card registered (after long periods of inactivity SIM cards are disabled by the network). The unit will send a message to this number after power up, and then the counter begins. This is also a useful feature to receive notifications of power up.

To set the reporting frequency to 14 days (14 x 24 x 60 = 20160 minutes) and the warning number to +447754123456, send this message:  
*Secret, auto, 20160, +447754123456*

To disable automatic status reporting (NOT RECOMMENDED), send this message:  
*Secret, auto, disable*

### 5.3 - Configure the Low Voltage Warning

If the power supply to the TAD-201 drops below a preset limit for more than 2 minutes a low voltage warning is sent to a phone number you can designate.

To set the limit to 10.5V and the warning number to +447754123456, send this message:  
*Secret, voltage, 10.5, +447754123456*

To disable the low voltage warning, send this message:  
*Secret, voltage, disable*

### 5.4 - Configure the Input Channels

For each of the four input channels two messages and up to three phone numbers can be configured. These messages are sent to all three phones when the input switch is opened or closed. It is not necessary to configure both open and close messages if only one edge is of interest. The messages can each be up to 60 characters in length.

To configure the messages sent when IN1 opens or closes or to check the messages currently set, send these messages:

*Secret, in1, open, Input 1 has opened.*  
*Secret, in1, close, Input 1 has closed.*  
*Secret, in1*

To configure the three phone numbers associated with IN1 or to check the numbers currently set, send some of these messages:

*Secret, in1, phone, 1, +447754123456*  
*Secret, in1, phone, 2, +447754234567*  
*Secret, in1, phone, 3, +447754345678*  
*Secret, in1, phone*

To delete one of the phone numbers or messages used by IN1, send one of these messages:

*Secret, in1, phone, 1, delete*  
*Secret, in1, phone, 2, delete*  
*Secret, in1, phone, 3, delete*  
*Secret, in1, close, delete*  
*Secret, in1, open, delete*

All of the example messages above have used IN1 but they can all be used for any of the four input channels (IN1 – IN4).

### 5.5 - Configure the output

Channel 4 of the TAD-201 is normally an input, but can be configured as a user controlled output or a siren output if required. It is an open collector (switch low) FET output, capable of sinking up to 500mA.

To enable or disable the output, send one of these messages (you must enable it before you try to switch it on):

*Secret, out, enable*  
*Secret, out, disable*

To configure the output as a siren, send the following:  
*Secret, out, siren*

If the output is configured as a siren it will switch on for 30 seconds whenever any input is triggered.

To switch the output on or off, send one of these messages:  
*Secret, out, on*  
*Secret, out, off*

To check the status of the output, send this message:  
*Secret, out*

### 5.6 - Configure the input inhibit time

The inhibit time is the number of seconds for which an input will be ignored after it has been triggered once. By default it is set to 10 seconds which should be suitable for most applications.

To set the inhibit time to 5 minutes (300 seconds) send this message:  
*Secret, inhibit, 300*

## 6 - Operation

This section describes the operation of the TAD-201 after it has been installed and configured.

### 6.1 - To query the status of the TAD-201

If *Status* is sent to the unit it will reply with a message detailing its current supply voltage, along with the current status of the inputs and output and GSM signal strength. If you phone the unit from any of the registered phones then hang up (it will not answer) it will send you a status text message.

To query the status of the unit, send this message:

*Secret, status*

### 6.2 - To Query the Credit of the SIM Card

The *Credit* command is used to set the USSD string used to request the credit remaining on a prepaid SIM card. This is network specific. For O2 in the UK set it to *\*#10#*. For Vodafone set it to *\*#1345#*. If the number is omitted the unit will return the credit remaining on the SIM.

To set the USSD string for Vodafone, send this message:

*Secret, credit, \*#1345#*

To check the credit remaining on the SIM, send this message:

*Secret, credit*

### 6.3 - To Arm or Disarm the system

In most applications where the TAD-201 is being used an add-on connected to a master alarm system or other system to be monitored it will always be left armed. Disarming is only necessary in stand alone use.

To arm or disarm the system, send one of these messages:

*Secret, arm*

*Secret, disarm*

### 6.4 - To Reset the TAD-201

To reset the system to factory settings, send the following message:

*Secret, reset*

## 7 - LED Operation

There is a red / green LED on the TAD-201. The LED flashes red a number of times then green a number of times every few seconds.

The number of green flashes indicates the GSM signal strength (1 is no signal, 6 is maximum strength).

The number of red flashes indicates which inputs are currently turned on. 1 flash for IN1, 2 flashes for IN2, 3 flashes for IN3, four flashes for IN4, 5 flashes for low voltage. The unit will cycle through all of the inputs which are currently turned on.

## 8 - Support

Should you have any problems installing or configuring the TAD-201, please contact your distributor or email [support@tad-electronics.co.uk](mailto:support@tad-electronics.co.uk) for assistance.

Should you forget your unit password, it can be reset using the TAD-201/PCC. If this is not available, please contact your distributor or email [support@tad-electronics.co.uk](mailto:support@tad-electronics.co.uk) to have your password reset remotely.

## 9 - Default Settings

Unless otherwise stated, the TAD-201 will be supplied with the following default settings:

IN1, CLOSE, INPUT 1 CLOSED.  
IN1, OPEN, INPUT 1 OPENED.  
IN2, CLOSE, INPUT 1 CLOSED.  
IN2, OPEN, INPUT 1 OPENED.  
IN3, CLOSE, INPUT 1 CLOSED.  
IN3, OPEN, INPUT 1 OPENED.  
IN4, CLOSE, INPUT 1 CLOSED.  
IN4, OPEN, INPUT 1 OPENED.

Output disabled.  
No phone numbers registered.  
Password set to secret.  
Disarmed.  
Credit number set to *\*#10#*.  
Inhibit time set to 10S.

## 8 – Electrical Specifications

Operation of the TAD-201 outside of these specifications is not advised and may cause damage and unexpected operation.

Parameter	Min	Max	Typ	Unit
Supply Voltage	8	30	12/24	V
Supply Current @ 8V	20	1000*	25	mA
Supply Current @ 12V	16	1000*	18	mA
Supply Current @ 24V	10	1000*	12	mA
Input Voltage High	8	40	--	V
Input Voltage Low	0	1.5	--	V

\*These peak currents will only be drawn for a few mS during the transmit uplink burst.