

**TCX-EasyControl Lite**  
**TCX-EasyControl Pro**

**Instructions manual V 2.1**

This manual refers to TCX-Easycontrol with software version 2.1

This page intentionally left blank

## Table of Contents

Product description.....	5
Advantages of EasyGate function.....	5
Hardware description.....	7
I/O circuit description.....	8
How to connect this board for various uses.....	9
Standard EasyGate connection.....	9
Electro-mechanical counter connection.....	9
Clean contact connection.....	9
Installation.....	10
How to use the TCX-EasyControl.....	11
Easygate function.....	11
OUTPUT Activation by SMS.....	11
Alarm input.....	12
INPUT timing specifications.....	13
Alarm SMS specifications.....	13
TCX-EasyControl Programming.....	14
Programming by means of SMSs.....	14
TCX-OS commands.....	15
#PWD.....	16
#WHL.....	16
Adding Numbers to the List.....	16
Using the Catchall character [?]......	17
Erasing numbers.....	17
Checking list entries.....	17
#WHC.....	17
#ACM.....	18
#AMS.....	18
#ATC+CSQ.....	18
#CAP.....	19
#END.....	19
#GOT.....	19
#INI.....	19
#MDX.....	20

#MHD.....	21
#MUT.....	22
#NOA .....	22
#OUT.....	22
#RTC.....	23
#SCT.....	23
#TEL.....	23
#WHO.....	24
Commands Specific of the TCX-EasyControl PRO.....	25
#XHL.....	25
Most common problems and solutions.....	26
APPENDIX A.....	27
Programming with PC.....	27

## **Product description**

TCX-EasyControl consists in an electronic board manufactured by DPS-Promatic that links to a Siemens MC55/MC55i GSM module, supplied with it. It is the evolution of the TCS-Micro, that we have manufactured for many years. This new version has the same features plus some improvements.

This device has 1 Output and 1 Input.

Output can be activated with a call made by an authorized number (EasyGate function) or by means of an SMS.

Input is Opto-Coupled and triggers with pulses as short as 25ms. It is useful to send alarms via SMS to the phones programmed with the TEL command.

To use the EasyGate function the output relay contacts (normally COM and N.O. ) need be connected in parallel with the button which opens the gate. The numbers that are enabled to open the gate should be then programmed in the White List.

When the TCX-EasyControl will receive a call, it will check to see if the calling number is in the list. If it is in the list it will reject the call (so there will be no charge, at least with today's charging procedures) and click the relay momentarily.

## **Advantages of EasyGate function**

- 1- Safe: nobody can clone your phone as easily as they can do with a standard remote control
- 2- Flexible: you can add or remove anybody number in a minute with an SMS
- 3- Cheap: you don't need to buy a remote control for each member of your family
- 4- Convenient: no matter if you change car, or if you have different gates to open. Your phone will always be with you all the times your remote controls were somewhere else!



TCX-EasyControl KIT



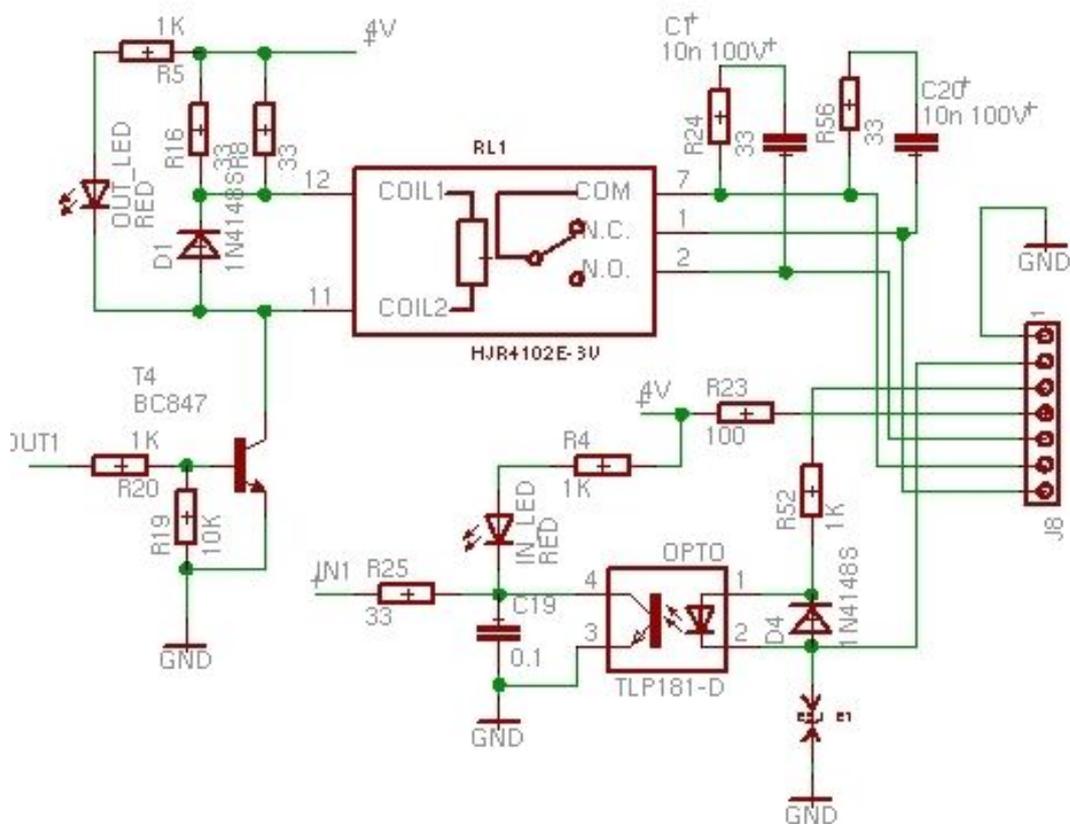
TCX-Easycontrol Connections

## Hardware description

The TCX-EasyControl board has the following connectors and signaling leds:

1. I/O connector: allows connection to the button who normally activates the gate. Relay contacts on pins 5,6,7 can stand max 48V and 0.5A
2. INPUT LED: it will light up when Input is active
3. POWER: plug here the power adapter.
4. GSM Activity Led: it is the GSM module LED. When the unit is switched on it will blink faster and will start blinking slower, with a short pulse, after a short while, as soon as the unit registers to the GSM network.
5. SIM HOLDER: Insert here the GSM SIM (it will not work with an UMTS USIM), after having removed the PIN code request.
6. SERIAL INTERFACE: this is a serial interface available to connect to a PC for faster programming of the unit or to read in real-time the numbers of who is opening the gate. You need to buy a special level shifter cable from us in order to use this interface
7. STATUS LED: It will blink fast in the beginning and will start blinking slowly (1 short blink every second) when the unit is ready to receive calls or messages.
8. OUTPUT Led: will light up when the output is activated

## I/O circuit description

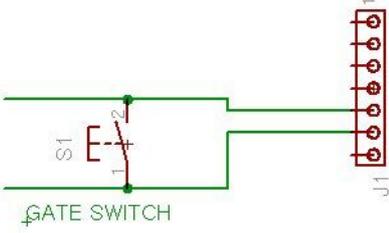


I/O circuit inside the PCB1041 board.

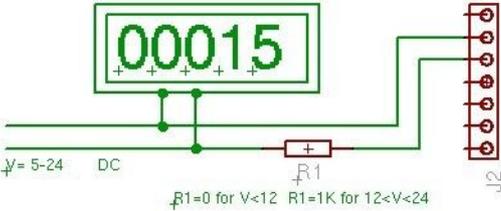
As you can see in the picture, the following signals are available in the I/O connector:

- 1- GND
- 2- Opto-coupler Led cathode
- 3- Opto-coupler Led Anode
- 4- Power for the Opto-coupler anode in case you need to use it with a clean contact and not with a current source.
- 5- Relay N.O.
- 6- relay COM
- 7- relay N.C.

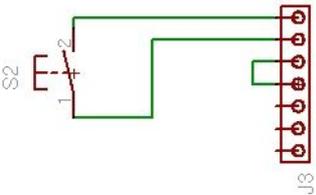
## How to connect this board for various uses

	<p>To open an electric gate, connect the COM and N.O. contacts in parallel with the existing low voltage push button that opens the gate (max 48V 0,5 A).</p>
---	---

## Standard EasyGate connection

	<p>To connect to a machine to read the electro-mechanical counter, connect to the optocoupler LED. Put a 1K resistor if voltage in the counter is above 12V (max 24V). Connect only DC sources here.</p>
--	--

## Electro-mechanical counter connection

	<p>To connect a Clean Contact and not a current source to the input, you need provide the power the the Led Anode connecting pins 3 and 4</p>
---	---

## Clean contact connection

## Installation

To install the TCX-EasyControl you need to connect the 2 wires of the relay contact in parallel with the gate opening button. The relay contact can stand **48V 0.5A maximum**, this is enough for its operation but **don't try to switch higher voltages or currents.**

You also need to provide the power by means of 12-24 VAC or 12 to 35 VDC. The power supply must be able to stand 1A. We supply a proper AC adapter but according to the version you have bought you may or may not ordered it. If you are not using our AC adapter, make sure the power supply can erogate 1A. Don't use telephone battery chargers! Most of them rely on the phone battery and are unable to supply the power needed.

You should install the TCX-EasyControl in a place where there is GSM signal coming from the operator you want to use. Check it with a phone before proceeding with the installation. If you need to install the device in a place with little signal, you may consider using an external antenna that we may supply as an option to be purchased separately with 2.5mt cable.

You should then insert the SIM of the operator you want to use and program in the White List the numbers enabled to open the gate using the command WHL.

**!Note! : You must remove the PIN request from the SIM before inserting it in the unit**, otherwise the device will not work. In order to do so, insert the SIM in a phone and disable the PIN request (usually there is a security menu that enables you to do so). If you don't do it, and switch-on the unit more than 3 times you will have to reset the PIN using the PUK!!

# How to use the TCX-EasyControl

## Easygate function

To use your unit to open the gate (i.e. activate the output) when a number that is in the White List calls:

- 1- connect it to the low voltage (<48V) push button of your gate
- 2- insert a valid SIM with **NO** PIN request
- 3- connect it to power
- 4- Send a Clock synchronizing message (command #SCT) to sync the date and time with the operator clock. This is not necessary to open the gate, but it is recommended if you then will want to check who opened the gate with the #WHO command.
- 5- program the ACM to be 0 if you want to open to everybody that calls or 2 if you want to use with the white list. We recommend to use 2. The option 0 can be useful for low security entrance barriers with a lot of people accessing it. Check how it is programmed sending the command #pwd123456#acm?
- 6- Start programming the numbers to which you want to give access using the command #WHL

## OUTPUT Activation by SMS

The TCX-Easycontrol can activate the output by SMS using the OUT command.

## **Alarm input**

If you want also to use the Alarm input function, you need to specify to which phone(s) the alarms should be sent.

To do this you need to program the phone numbers with the #TEL command and then enable the alarms with the #MDX command.

Note that even if you program numbers in the WHL list, they have nothing to do with TELEphone numbers to which alarms will be sent. If you want telephone 5551234567 to open the gate and receive an alarm, you need program it in both WHL list and TEL list.

The TEL list has space for 8 entries (TEL01 – TEL08), maximum 15 digits including the + and country code.

You can program the numbers to which you would like to send alarms, and then decide if sending them or not, changing the MDX enable list.

For example if you want to program 3 telephones but then send only to 2 messages (may be the third one is a spare number used only in special cases) you will program TEL01, TEL02 and TEL03, but then you will enable only 1 and 2 with the MDX command. See specific commands for more explanations.

## **INPUT timing specifications**

The Input is active low. This means that will be activated if a current is applied to the opto-coupler led, or if the pin 2 will be pulled to zero (connected to pin 1) provided that a bridge has been made between pin 3 and 4.

See the schematics in the previous pages for a clear explanation.

Input will generate an alarm if it has been low for at least 15 ms or more and then high again for another 15 ms or more.

## **Alarm SMS specifications**

Once the Alarm has been generated, the unit will bip and proceed to send the SMS message 'ALARM: INPUT 1' to the telephone(s) that are pointed by the MDX list.

If the MDX list points no number or if it points a non valid number, no message will be sent.

The Alarm SMS will be sent with the name of the TCX device. This name can be programmed using command MHD.

If there is not enough signal or if the network will not accept the message, the message will not be sent again. Though this is not common, still can happen.

There is a maximum number of messages allowed daily, that is 40.

This is a protection because if you by chance connect the input in a way to generate continuous pulses, it could send over 1000 messages in a day!!

Because of this protection, it can happen that because you are testing the device sending many alarms, all of a sudden you realize that is not working anymore... If this happens, remember the ceiling of 40 messages!

## TCX-EasyControl Programming

You can program the TCX-EasyControl with SMS commands using your phone. It is safe to do so because in addition to the fact that other people may not know the number of the SIM inserted in it, we also use a Password that makes it impossible for anybody, who doesn't know it, to access the system by chance.

It is also possible to program the device by means of a PC using any communication program like Hyperterminal or Zterm. In order to do so you need to buy a special level shifting cable from us. More details about PC programming in Appendix A.

### Programming by means of SMSs

This is the easiest and most common way to program this device. It is very convenient because you don't need to access it or open the box and you can change its features (i.e. remove or add a number in the white list etc) even being far away from it.

Every command SMS must start with a valid password or the rest of it will be ignored.

Every 3 letters command must always have the # sign in front of it, in order to be recognized.

Every message should end with an #.

You can mix more commands in the same message, up to 160 characters that is 1 SMS. You cannot use multi-part sms to program this device.

SMS Once you issue a command with an SMS, you will receive a confirmation SMS with OK if everything is correct or Err if there is an Error.

The TCX-EasyControl will send only up to 40 messages every 24 hours, that is a limit set for your protection.

If you don't want to receive a confirmation message, put the #NOA command at the end of the message.

## TCX-OS commands

The TCX-EasyControl can be programmed using 3 digits commands, that are the same either if you program the device by SMS or using a PC.

Commands can be CAPITAL or Lower case letters. Or a mix of both: PWD=pwd=Pwd. Don't add spaces or any other character if not indicated.

These are the 2 most common commands that you will certainly use:

**#PWD:** Password

**#WHL:** White List (add or remove numbers). Works up to 64 numbers

There are other commands that you may also wish to see

**#ACM:** Access Mode

**#ATC+CSQ:** check signal quality

**#AMS:** Program alarm SMS text

**#CAP:** Change password

**#END:** Exit from PC programming menu

**#GOT:** Gate pulse time

**#INI:** INItialize all parameters

**#MHD:** Read/Program Message Header and serial number

**#MDX:** Enable alarm Messages Destinations

**#MUT:** mutes the buzzer

**#NOA:** Do not send an acknowledgement SMS

**#OUT:** Activate / Deactivate OUTPUT 1 for x seconds

**#RTC:** Program clock date and time

**#SCT:** Synchronize clock with incoming SMS timestamp

**#SMC:** SMS counters and 24h maximum

**#TEL:** Program the telephone numbers that can receive an Alarm SMS

**#WHC:** Check if number is in the list (64 lite/300 pro)

**#WHO:** Check who last opened the gate (last 32 lite/128 pro)

The following commands are available only in the TCX-EasyControl PRO

**#XHL:** Extended White List. Same as WHL, but works up to 300 numbers

## #PWD

*Password.* This command must always come first. Use 6 digits as a password. The standard default one, when the device comes from the factory, is 123456. You may change it, using the #CAP command.

Remember that if you change it and forget it, you will have to return the device for a total reset, and this service has a cost.

In all the following examples we will use 123456 as an example of password.

## #WHL

*White List.* This is the command that you will use most. It is used to add or remove numbers that are enabled to open the gate into the White List. You can add up to 64 numbers in the list with this command. Every position must be indicated in the command and we advise you to keep a list written somewhere to know which numbers are in and in which position.

We advise to put always a # at the end of the last number to close the SMS.

Only in the Pro version, you can program up to 300 numbers using the XHL command

### **Adding Numbers to the List**

To add a number, the syntax of the command is the following:

**#PWD123456#WHL01=5551234567#**

(You can write also #PWD123456#WHL015551234567# without the = sign)

Where 01 is the position in the list (can be 01 to 64) and 5551234567 is the number enabled. Please note that it is possible to program up to a maximum of 10 digits for a number. If it has more digits you should use the rightmost ones. For example, if your number is 65551234567 you should program 5551234567.

If your number appears as +395551234567 you should not program the country code (+39). If your number has only 9 digits or less, it is not a problem. The important thing is that you don't exceed 10 digits.

In case your number is less than 10 digits you will read F characters as Filling digits. For example 1234567 will be stored as FFF1234567.

### Using the Catchall character [?]

It is possible to use the Catchall character [? ] to enable a digit to all characters 0-9.

For example if you want to give access to all number from 1234560 to 1234569, you have to program 123456?

The catchall character will be shown as an A (All) in the number, so, if you program 123456? and you read this entry you will read 123456A instead.

### Erasing numbers

To erase a number use **#PWD123456#WHL01=000000000#**

(or you can write over it another number you wish to add)

### Checking list entries

To check which number is in a specific position of the list:

#PWD123456#WHL01?

You will receive a message as the following:

#WHL015551234567, where 5551234567 is the number that was programmed in the list.

Please note that if the number you programmed was shorter than 10 digits, the device will automatically add F (Fill) to it. So, in case you number were 1234567, you will read now FFF1234567.

Also, if you had programmed a number with the *catchall* character [?] in it, you will now read A (All) in place of that character. So if you programmed 555123456?, you will now read 555123456A.

### #WHC

White List Check. This command allows you to check if a specific number is in the White List. It is useful to check if a specific number is already there, avoiding to program it twice. It is also useful in case somebody says that he could not open, allowing you to check if the entry is in the list or not.

This command works up to 64 numbers in the Lite version and 300 numbers in the Pro version.

#PWD123456#WHC555123456#

Will send back the following:

WHC-OK:555123456=01, if it is stored as entry 01

WHC-OK:555123456=NO, if such number is not in the list

## #ACM

*Access Mode.* This command allows you to open only to people that are in the white list or to anybody calling the SIM number.

The syntax of the command is the following:

**#PWD123456#ACM0** (it is a zero)

**Warning!** with the above command you allow free access to anybody calling!

## #PWD123456#ACM2

with the above command you allow only people that are in the **white list**. This is the standard and recommended option.

To check how it is set:

**#PWD123456#ACM?**

## #AMS

*Alarm MeSsages.* This option allows you to program the test for the alarm SMS. Maximum size of the message is 40 characters.

To program an alarm message, issue the command **#AMSxx=text** where xx is the alarm identifier, same as used in MDX. For example, for Input 1 Alarm, use AMS01. The = is optional.

To check a specific Alarm message, send the command **#AMSxx?**.

Please note that some characters (i.e. @ or ! Or \*) are sometimes interpreted/filtered by operators so the unit can behave differently if you use any of those character. Sometimes operators use these characters to send e-mail or faxes, if they appear in the beginning of the message.

## #ATC+CSQ

*Check Signal Quality.* This option lets you check the signal strength that your unit is receiving.

Example: **#ATC+CSQ**

Answers: 15.99

Maximum signal level is 32, minimum is 0.

If signal is below 10 the unit may not work properly. In this case it is better to change operator or to connect an antenna with a cable in order to put it in a more suitable location.

## **#CAP**

*Change Password.* Use this command to change the password with a new one that you will chose for your device (don't forget it, or you will have to send the unit back to us to reset it, and this has a cost!)

The #CAP command must be issued 2 times to be sure you don't digit a wrong one. Of course it must be preceded by the old password.

For example, to change the password 123456 into the new password 333444 you need to send the following SMS:

**#PWD123456#CAP333444#CAP333444#**

You will receive a confermation with PWD OK and CAP OK if you wrote correctly or an Error message if you made a mistake.

## **#END**

Exit from PC programming menu. This is not an SMS command.

## **#GOT**

*Gate pulse time.* This command is useful in case you need to keep the button pressed longer. The standard time is 0,3 seconds (300 ms). You can change it with the GOT command. The allowed range is 100-65000 ms.

NOTE: We advice that you don't change this paramenter unless you are sure of what you are doing.

The syntax of the command is the following:

**#PWD123456#GOT500**

With the above command the opening time has been set to 500 ms (0,5 seconds).

You can check what the current pulse time is with the command:

**#PWD123456#GOT?**

## **#INI**

INItialize parameters to default settings. This command will erase all the eeprom and reinitialize to factory settings.

**IMPORTANT!:** all your numbers and other settings will be erased!!!

Password will be reset to 123456.

After issuing this command, wait at least 2 minutes before sending other commands to the unit.

## #MDX

*Message Destinations.* Use this command to enable the delivery of SMS to phones numbers that have been programmed using the TEL command.

When the unit is delivered the MDX setting is 1, allowing delivery to the telephone programmed in TEL list in position 1.

MDX lists have a reference number to identify them, because in different version of TCX devices they can associate numbers to various alarm function. For example MDX01 refers to input 1, MDX09 refers to Temperature alarm and MDX10 refers to Power down alarm. In devices that have these features. The TCX-Easycontrol only has 1 input alarm so the only available alarm is Input 1, and the only MDX list is MDX01.

You can put up to 8 phone pointers in the MDX list.

If you want to send alarms to all the 8 phones, you will program:

```
#PWD123456#MDX01=12345678#
```

If you want to send more alarms to the same phone (somebody likes to do it because they are afraid ne SMS only could be lost, though very unlikely to happen) you should send

```
#PWD123456#MDX01=11#
```

that will send 2 message to the same phone.

If you really want to make the telecom company happy you can send up to 8 SMS to your phone, with #PWD123456#MDX01=11111111#

even if hopefully nobody will never do it!

To program the device so it will send a message to TEL 01 and 02, you should send the following command:

```
#PWD123456#MDX01=12#
```

To check what the current MDX value is, you should send

```
#PWD123456#MDX01?
```

## #MHD

*Message HeaDer.* This command allows you to program the message header (default is TCX) and the serial number of the message.

Every message is sent by the unit in a format similar to the following:

```
TCX-0001  
ALARM INPUT 1
```

Where TCX is the name of the device, that can be programmed with MHD, 0001 is the serial number (continuously incremented) of the SMS and then the following text that is the real information sent with the SMS and that varies according to the reason why the SMS was generated (i.e. ALARM, Command answers etc.).

With the command MHD you can program the Name and the serial number, if you want. If you program only the name, you need to use up to 10 characters and close with a #, as in the following example:

```
#PWD123456#MHD=my tcx#
```

If you want also to program the serial number, make sure you are programming the header using exactly 10 characters and then, after a comma, program a 4 digit serial number. For example:

```
#PWD123456#MHD=my tcx.....,0001
```

To check what the current header and serial number is, you can send the message: #PWD123456#MHD?

## **#MUT**

*Mute Buzzer.* You can use this option to mute completely the buzzer of the device. Factory setting is 0, that means : not muted.

#MUT0: buzzer is NOT muted (factory default setting)

#MUT1: buzzer is muted

To check what the current MUT setting is: #MUT?

## **#NOA**

*NO Acknowledgement.* Use this command if you don't want the device to answer to your SMS command with another SMS.

## **#OUT**

*Activate / Deactivate OUTPUT 1 for x seconds.*

This command allows to activate the OUTPUT 1 (the only available) using an SMS. The output can be activated or deactivated forever, or can be activated for a programmable amount of time (from 1 to 65535 seconds).

If power fails, output will return off anyway, even if it were programmed for a longer time.

To activate permanently:

#PWD123456#OUT01ON

TO deactivate permanently

#PWD123456#OUT01OFF

To activate for 5 seconds

#PWD123456#OUT01ON,5#

To activate for 2 minutes (120 seconds)

#PWD123456#OUT01ON,120#

## **#RTC**

*Real Time Clock.* Use this command to program a specific date and time in the real time clock of the device. You will need to have it programmed well if you want to use the feature WHO in a useful way. See also #SCT.

The command is as follows:

```
#PWD123456#RTC09/12/05,11:58:01
```

and to check you can use

```
#PWD123456#RTC?
```

```
RTC=09/12/05,11:58:01
```

## **#SCT**

*Synchronize Clock with SMS TimeStamp.* This command provides a easy way to set your device clock without needing to send the longer RTC command.

Simply send: #PWD123456#RTC and your clock will be automatically synchronized with the network. This is expecially useful during Summer or Winter time changes

## **#TEL**

*Program TELEphone numbers that will receive alarms.* Using this command it is possible to program up to 8 telephone numbers to which the Alarm SMS will be sent. The numbers must be maximum 15 digits, including the + and the country code. For example:

```
#PWD123456#TEL01+395551234567
```

```
#PWD123456#TEL015551234567
```

will send an alarm to the same number (within a country, not cross boarder).

You can program up to TEL08 in the same way.

Remember that once the number has been programmed, you need to enable it putting their pointer (1 to 8) into the MDX01 list using the command MDX.

For example if you want to send the alarms coming from input 1 to TEL 1 and TEL 2, you need to program the following:

```
#PWD123456#TEL01+395551234567#
```

and then with another SMS

```
#PWD123456#TEL02+394449876543#
```

and then with another SMS

```
#PWD123456#MDX01=12#
```

To check what a specific TEL is, use #PWD123456#TEL01? etc.

## #WHO

*Check WHO opened the gate.* This command allows you to check the last 32 numbers (Lite version) or 128 numbers (Pro version) that opened the gate. Since all numbers would not fit into a single SMS, this command must be issued in sections of 8 numbers, followed by the number of the section you wish to see (01-04 for Lite or 01-16 for Pro). Section 01 starts from the last number which has opened.

For example, if you send the command #WHO01, you will get the answer shown below. In details, you can see numbers listed in the Last if First Out sequence, where 001=1205,1302 0001 means that the last telephone to open the gate on december 5th at 13:02 was telephone listed as entry 01 (programmed with WHL01).

```
001=1205,1302 001
002=1205,1300 001
003=1205,1258 001
004=0000,0000 000
005=0000,0000 000
006=0000,0000 000
007=0000,0000 000
008=0000,0000 000
```

If you send command WHO02 to WHO04 you will get the rest of the list, up to the 32nd/128th phone who last opened the gate

**Important note:** the WHO list is in volatile memory. It will be erased if power is removed from the TCX-EasyControl

**Another important note:** the WHO list works with WHL numbers only. If you have programmed the device with ACM=0 that means that will open to everybody that calls, you will be able to see date and time in the list, but no number (000).

## Commands Specific of the TCX-EasyControl PRO

### #XHL

*eXtended wHite List*. This command is similar to WHL being the only difference the fact that WHL works from 01 to 64 and XHL from 01 to 300.

So if you purchased the TCX-EasyControl Lite, you cannot use XHL.  
If you purchased the TCX-EasyControl PRO, you can use both.

Remember that while WHL uses 2 digits, XHL uses 3 digits.  
So it is WHL01, but it is XHL001.

## **Most common problems and solutions**

### **Some phones cannot open the gate:**

Verify that they send the caller ID when calling another phone. Check that the number you see in the other phone is what you have programmed in the TCX-EasyControl

### **I have inserted the SIM but the unit doesn't work:**

Check to have removed the PIN request from the SIM. If you didn't do it and you have switched-on the unit more than 3 times, you may need to use the PUK. Check with SIM instructions for details

### **The gate opens only sometimes:**

Check that there is enough signal from the operator you are using in the TCX-EasyControl, and also from the operator that you use in the phone that is calling. Try to change operator.

### **Is it possible to open to anybody?**

Yes, you can do it using the #ACM command.

### **The Input Alarm doesn't work**

First of all check to see if the INPUT LED lights up when the event (puch button, counter etc) is activated. If not, check the circuit you have made.

If the led light up, check to have programmed a valid number with the TEL command and that there is a correct pointer to that number in the MDX list.

If you programmed a number in the TEL01 you must have MDX01=1 also.

More information is available on: [http://www.dpspro.com/tcs\\_support.html](http://www.dpspro.com/tcs_support.html)

# APPENDIX A

## Programming with PC

It is possible to program this device with a PC, using the special level shifting cable that we can supply on request. Though it is not necessary to do it, it is certainly convenient if you need to handle a big enough White List.

Setup the communication software of your PC or MAC ( Hyperterminal or Zterm work well) to communicate at 9600 baud, 8 bit, no parity, 2 stop bits.

When you switch on the TCX-EasyControl, it will output [hello] through the serial port and the status led will blink very fast for a few seconds.

During this time you can enter the programming menu by typing [menu] on the keyboard (only menu, no square brackets). Press Enter.

Alternatively, when the device is up and running and the status led blinks a little every second, and an [>] is shown on the screen, you can still enter the menu, in the following way:

Press ENTER on your keyboard.

The screen will show [hello]

Type [menu] and press ENTER.

The unit will enter the programming menu as follows:

```
>
  hello!
  >menu
  PASSWORD?
  >123456
  TCX OS v7.0, (c)1999-2009 DPS-Promatic srl
  Device name: TCX rev 1.0
  >
```

As you can see after having typed [menu] the device has requested to enter the password. Type 123456 if you have not changed it.

At this point you can enter the commands directly without needing to type the password anymore.

For example, let's check ACM value and then change it to 2.

```
>#ACM?  
ACM=0  
>#ACM2  
ACM-OK:2  
>
```

An interesting feature of using the PC interface is that the WHL ? Command can provide a complete listing of all the numbers that have been programmed.

```
>#WHL?  
01=348257202A 02=FF91832686 03=0000000000 04=0000000000  
05=0000000000 06=0000000000 07=0000000000 08=0000000000  
09=0000000000 10=0000000000 11=0000000000 12=0000000000  
13=0000000000 14=0000000000 15=0000000000 16=0000000000  
17=0000000000 18=0000000000 19=0000000000 20=0000000000  
21=0000000000 22=0000000000 23=0000000000 24=0000000000  
25=0000000000 26=0000000000 27=0000000000 28=0000000000  
29=0000000000 30=0000000000 31=0000000000 32=0000000000  
33=0000000000 34=0000000000 35=0000000000 36=0000000000  
37=0000000000 38=0000000000 39=0000000000 40=0000000000  
41=0000000000 42=0000000000 43=0000000000 44=0000000000  
45=0000000000 46=0000000000 47=0000000000 48=0000000000  
49=0000000000 50=0000000000 51=0000000000 52=0000000000  
53=0000000000 54=0000000000 55=0000000000 56=0000000000  
57=0000000000 58=0000000000 59=0000000000 60=0000000000  
61=0000000000 62=0000000000 63=0000000000 64=0000000000  
WHL-OK  
>
```

XHL works the same way, but stops every 64 numbers allowing you to decide whether continuing (pressing the Space bar) or exiting (pressing Enter).

When you have finished this programming session, just give command #END to exit.

```
>#END  
EXITING MENU...BYE BYE  
>
```



Important note: electronic devices may pollute the environment.  
Act according to your local laws when disposing this unit.



The PCB1041 electronic board complies with EMC regulation.  
The Siemens MC55/MC55i GSM engine complies with EMC regulation

This device contains a GSM modem.  
Do not keep it near you and observe precautions that should be normally observed with any mobile phone.

This is version 2.1\_en of the TCX-EasyControl instructions  
released on 10/12/2009

by

DPS-Promatic srl  
via Edison 21  
47100 Forlì Italia  
e-mail: [dps1@dps-promatic.com](mailto:dps1@dps-promatic.com)

For any update or information  
please refer to the SUPPORT pages  
on <http://www.dpspro.com>