

# TWIG PROTECTOR

## Configuration Guide

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### 1. Installing software and drivers

You can find latest Protector software and necessary drivers in the support pages in [www.twigworld.com](http://www.twigworld.com) as instructed in the quick guide under support section. Connect Protector to your computer with Mini USB cable. The operating system will notify you of finding new device, and prompt for installing necessary drivers. Select to install drivers manually, and then browse for drivers in your local folder where you downloaded the drivers from support web site.

Note that since Protector uses two ports, the system will prompt for drivers twice. When this happens, repeat the manual installation of drivers. After the installation is done, you may need to restart and reconnect Protector before changes take effect.

To install Protector Configuration software, download the compressed software file (configure.exe) from the support pages and save it in your

computer. The configuration software is ready to be used without separate installation. Make sure the needed dll-files are located in same directory as the main program.

### 2. Opening connection

Once the software and drivers are installed, you can establish a connection between Protector and your computer.

Note that Protector must be connected to computer when using the configuring program.

Connect Protector to your computer with Mini USB cable attached to the charging adapter ( AUG81) or programming station ( AGP81).

Note that the TWIG Desktop charger CTA81 is not supported for USB connection.

Then open the configuration software by double-clicking Configure.exe-file on your computer.

Protector connects automatically to the right COM port and connection is indicated with "Connected to device"

text in the user interface left lower corner.

The connection between Protector and PC is established, and existing Protector settings are displayed in configuration settings fields.

### 3. Device information

The Info box displays details on your Protector , including the Serial no, IMEI (International Mobile Equipment Identity) code as well as software version and GSM module numbers.

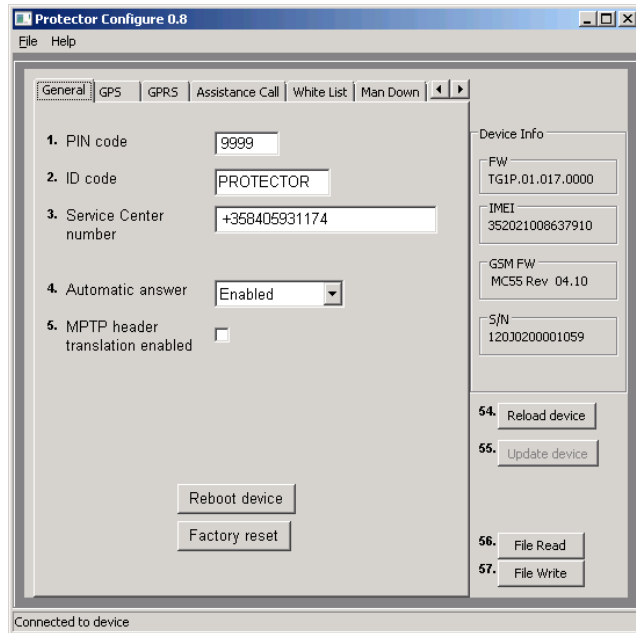
You can open various settings from the top tab row of Protector configure software. Click the desired tab, and the available settings will open in the software main view.

Note that Protector settings are case sensitive. If there are wrong characters, or other invalid values set in the configuration field, those are ignored and default value is taken into use.

Settings are transferred to unit using the Update device button.

## 4. General configuration settings

Connect Protector to your PC. You can edit and define several settings, including security settings and available connections, to be used with your Protector.



Reboot device button will restart the unit and reload automatically the new settings if they are stored. Reboot is needed after changing parameters. Factory reset will clear all settings from the unit.

Reload device button will read all the settings from the device since last save.

All current settings in the PC program will be overwritten.

Update device will save the current settings in the PC program to device.

If any setting is invalid, they will be cleared in device reboot.

File read will read configure\_save.bin file from the Configure.exe working directory and show them on PC program.

File write will write the current settings in the PC program to configure\_save.bin in the working directory.

### Config 1: PIN Code

PIN code (4 digits) is used to unlock Protector's SIM card, unless you are using a SIM card in which the PIN code is disabled. Default value for PIN code is 0000. Replace the value with your own PIN code, or leave the field blank if the PIN code has been disabled. If the PIN code is defined incorrectly, you won't be able to turn on your Protector. After three failed attempts, the SIM card will be blocked. If your SIM card gets blocked, you need a PUK code (8 digits) to open it. Remove the SIM card for Protector and install it into a phone compatible with your SIM card. When trying to

open the phone, it will prompt you for the PUK code. After entering the PUK code, key in a new PIN code. You can then install the SIM card back to Protector. If you fail to key in the correct PUK code 10 times in a row, your SIM card will be permanently blocked. If this happens, contact your network operator to get a new SIM card.

### Config 2: ID

You can define identification for your Protector. This code may contain both numbers and letters, and it is case sensitive. Default value for the ID code is: Protector. Config 3: Security code Security code is used when configuration Protector and activating its different features. The security code consists of 4 digits. Default security code is 0000.

### Config 3: Service Center Number

Defines the number where generic Mobile originated messages like low battery or docking & undocking are send. It also defines the number allowed to make remote configuration via SMS.

### Config 4. Automatic answer

Allows restricting incoming calls as well as allowing automatic answer for incoming call. As default all incoming calls are allowed and they ring.

**Note if white list is in use handling calls or calls and SMS's it will override this setting.**

#### Config 5.Translate header

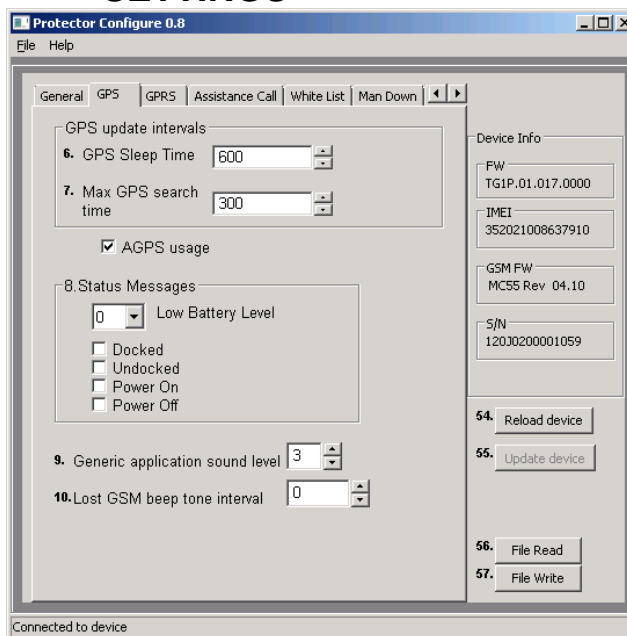
Translate header defines whether special characters (? and !) in the beginning of SMS based MPTP messages are replaced by letters or not. The replacement is necessary with some mobile phone operator systems (e.g. Russian and China). If Translate header is set active the question mark (?) in the beginning of MPTP requests is replaced by the letter Q. The exclamation mark (!) in the beginning of MPTP updates and replies is replaced by the letter E.

Unselecting restores the original settings for MPTP messages. Question mark (?) is used in the beginning of requests, and exclamation mark (!) is used as the start character for replies and updates.

Default value for Translate header is inactive. Note that to use Protector with

TWIG Discovery Pro, or some other back-end devices, you need to make sure that Translate header is configured correspondingly also in the other device. If MPTP message start character is configured differently in the other device, sending and receiving MPTP messages from Protector is not possible.

## 5. GPS & STATUS MESSAGING SETTINGS



#### Config 6 GPS Sleep time

You can define how frequently GPS is updating position while not controlled by other processes like tracking. Time

interval can be set to: 1...65535 seconds (18:12:25 hrs) Default value is 600 (ten minutes).

#### Config 7: Max GPS search time

You can define for how long GPS is trying to get a refreshed position after receiving a position request. If the refreshed position is not acquired within that time, Protector sends position update using the previously stored position. Valid values for GPS search time are between: 120... 600 (seconds). Default value is 300 (five minutes).

AGPS usage will determine whether AGPS service is used. ( future option)

#### Config 8: Status messages

You can define if the Protector is sending a message to Service Center number from various events.

Protector can alert you when its battery level is declined under certain level. You can define the alarm level at **25**, **50**, or **75** percentage of full battery charge. If the value is set to **0**, it means that the alarm is deactivated. Default value for the alarm is 0.

Note, that battery levels can vary substantially when using the device. This may cause wrong or repeating Low battery alarms.

Docked message is sent when Protector is placed to charging station While undocked message is sent when picking up the device from charger station.

Power on message can be sent when device is started and Power off when user turns off the device or it turns itself off due to low battery.

Config 9: Generic application sound level.

Defines the volume level, that is used to play warning, notification & incoming call tones. Value can be set from 1..5, if 0 is used, tones are not used at all. Default value is 3.

Config 10: Lost GSM beep tone interval.

You can define the interval for BEEP tone if the roaming GSM network has been lost. You can set the interval between 20...65534 seconds. If you set 0, the tone will never be played. Default value for this setting is 0.

## 6. GPRS SETTINGS

Protector Configure 0.8

File Help

General GPS GPRS Assistance Call White List Man Down

11.ID 3584009012

12.APN internet

13.Port: 8484

14.IP address 192.83.5.99

15.DNS 1 127.0.0.1

16.DNS 2 127.0.0.2

17.User Name

18.Password

19.GPRS Service Number  Service Number usage

20.Connection mode when in charger

21.Reconnect interval 600

22.  GPRS usage

23.  International roaming blocking

Device Info

FW TGIP.01.017.0000

IMEI 352021008637910

GSM FW MCS5 Rev 04.10

S/N 120J0200001059

54. Reload device

55. Update device

56. File Read

57. File Write

Connected to device

Config 11 ID

User ID is a number used in identifying your phone in server. Usually this is the phone number that your Protector device is using.

To use TWIG Web Finder service with your Protector, make sure that Protector is configured with the same phone number as you have defined in Web Finder.

Config 12: APN

The Access Point Name used for GPRS communication.

Define the entire APN value in the field. The values typically can be left empty or replaced with "internet". You can get the correct APN from your GSM operator.

Config 13 port : GPRS port number

A port number is required for GPRS communication. The value can be set between 0...65535. As default, TWIG Web Finder service port 8484 is used. Note that it may be prevented to use other than Default 8484.

Config 14 GPRS IP address

Key in the IP address that is used in GPRS communication. As default, TWIG Web Finder IP address 192.83.5.99 is used. Note that it may be prevented to use other than Default IP address.

Config 15 & 16: GPRS DNS 1-2

Some GPRS networks require that primary domain name server (DNS1) is specified. Define the DNS as an IP address. Maximum length for DNS1 name is 16 characters. Default value for

DNS1 is **127.0.0.1** and for DNS2 **127.0.0.2**.

Config 17: GPRS user name

If the GPRS network in use requires a user name for GPRS log-in, define the name here.

Config 18: GPRS password

If the GPRS network in use requires a password for GPRS log-in, define the word here.

Config 19: Service Number

Number to use for SMS telematics if GPRS connection is not available and mode is set to use SMS if GPRS is not available.

Some functionality changes or limitations may apply. E.g. on-time tracking is not possible via SMS

Note that it must be separately approved with the tick box to use the SMS back up in order to avoid high SMS transmission cost.

Config 20: GPRS Connection mode

Defines how the GPRS connection to server is kept active.

0=only reconnect mode is used,  
1=when connected to in charger  
2=always,  
Default=1.

Config 21: Reconnect interval

Reconnection messages are in used id only reconnect mode is used. The device sends reconnection messages to server to check the server status and incoming messages possibly pending in server. You can set the sending interval for heartbeat messages between **00.02.00** (hh.mm.ss) and **23.59.59** (hh.mm.ss). Default value is **00.30.00** (thirty minutes).

Note that if the value is set to **0** (zero), reconnection interval is not in use.

Config 22: GPRS usage

Defines if GPRS is used or not. 1 is enabled and 0= disabled. Default=0.

Config 23: GPRS international roaming blocking

If international roaming block is selected, GPRS connection cannot be used during international roaming. If the value is not selected GPRS connection is available also during international roaming.

Default value for international roaming blocking is inactive. The value is checked every time when creating GPRS connection.

## 7. ASSISTANCE CALL

	Assistance call numbers	Assistance SMS numbers
1	+3582233658	
2	+358277400	
3	+35840123456	
4	365898941	

Connected to device

FW  
TG1P.01.004.0000

IMEI  
35202100697268

S/N  
????????????????

Update device

Automatic

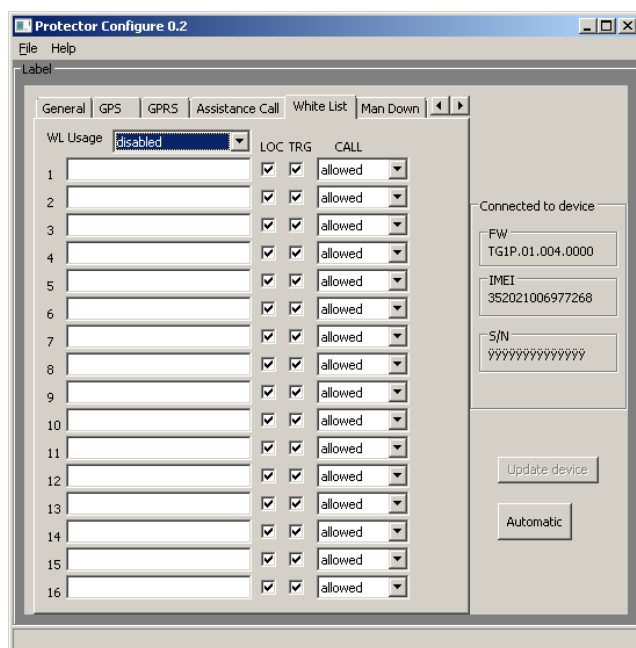
Config 24: Assistance numbers

Here you define the action when the assistance numeric keys are pressed. If

you program only one number per button the action is either call or SMS depending on which is configured.

If both numbers are defined both actions are done.

## 8. WHITE LIST



White list is defining authorization of incoming SMS and/or voice call to perform automatically actions. If Authorization is in use, numbers must

be listed, otherwise the messages and call will be rejected.

WL Usage defines to what functions and how the white list is used.

Disabled, the list is not used for checking numbers. If SMS is selected all incoming MPTP SMS messages are processed. If CALL is selected only incoming calls are processed via the list. Both option can be on at the same time.

Each number can have separate setting if the number is authorized to perform location request and/or tracking activation.

Incoming calls can be processed also automatically. Separate numbers may be blocked or automatically answered.

- blocked, calls from this number are blocked
- allowed, calls from this number are allowed to ring
- auto answer, calls from this number are automatically answered
- hf answer, calls from this number are automatically answered in Speaker Phone mode.

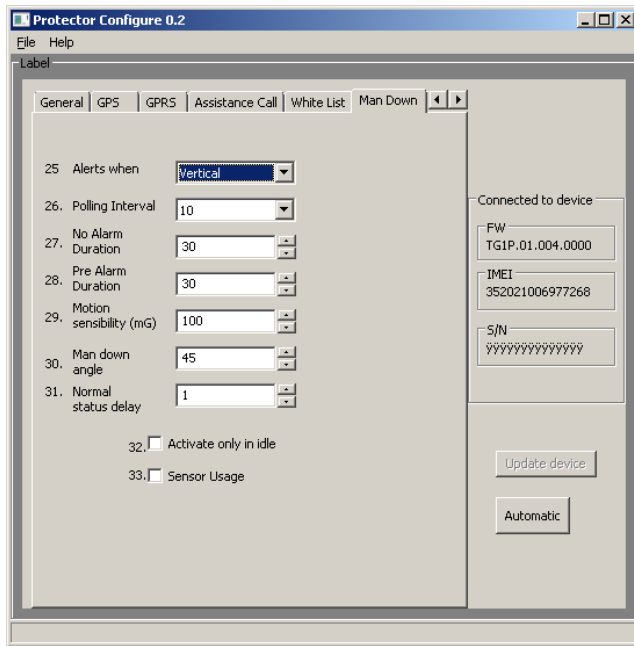
Note that Speaker phone mode is very loud and must be carefully planned if it is used or not.

Automatic answer setting in General settings is overwritten when call or call and SMS is selected. A mix of allowed and blocked numbers can be defined, but if list has only blocked calls it blocks all calls.

GPRS messaging is not controlled via this list. That is controlled by the programmed GPRS settings

Note that regardless of this setting the device can be reset with special commands knowing details of the device.

## 9. MAN DOWN ALERT



Config 25: Alerts when

Set the orientation which causes the sensor to launch Twig SOS. When Horizontal is selected, the sensor launches Twig SOS when its orientation from the absolute upright position changes more than 45 degrees.

In Vertical state, the sensor launches Twig SOS when its orientation from the absolute upright position differs less than 45 degrees.

The default value for this setting is Horizontal.

The alerting is combined with Vertical/Horizontal setting with the movement factor. Its sensitivity is defined in config 29. If the only criteria for alarm is tilt angle, then the value in config 29 should be 999.

If the setting is Movement, that only the movement is controlled and device orientation has no effect.

Config 26: Polling interval

Polling interval determines the rate at which the status of the sensor is checked when it is in normal mode i.e. no alert is ongoing. The interval can be set to 1-65535 seconds. The default value is 10 seconds.

Config 27: No alarm duration:

When the sensor notices alarm-triggering status (vertical/horizontal by definition), this setting defines a period during which the sensor is waiting for the normal status to be restored, before actually triggering the alarm. This is useful to prevent unnecessary alarms e.g. in cases where the user has fallen down but is able to get up quickly. The no alarm period can be

set to 1-65535 seconds. The default value is 30 seconds.

Config 28: Pre-alarm duration:

Once Verticality sensor has noticed an alarm-triggering orientation and the no alarm period has passed, the sensor enters into pre-alarm period. During this state the sensor is alarming the user by using the defined sound and volume settings. When pre-alarm period is over, and normal orientation is not restored, the sensor launches Twig SOS application. The pre-alarm period can be set to 1-65535seconds. The default value is 30 seconds.

Config 29 Motion sensibility:

This settings defines the amount of sensibility needed to indicate that the phone is moving. You can set the value between 1mg - 999mg. Default value is 100mG

Config 30: Man Down Angle

Defines the tilt angle the phone must fall, before the mode is detected as "fallen" Default 45 degrees

Config 31: Normal status delay.

Normal status delay defines a period for which the sensor needs to be back in the normal orientation before normal status is restored. The normal status delay period is useful to prevent restoring the normal status and cancelling Twig SOS alert by accident. The normal status delay can be set 1-65535 seconds. The default value is 1 second

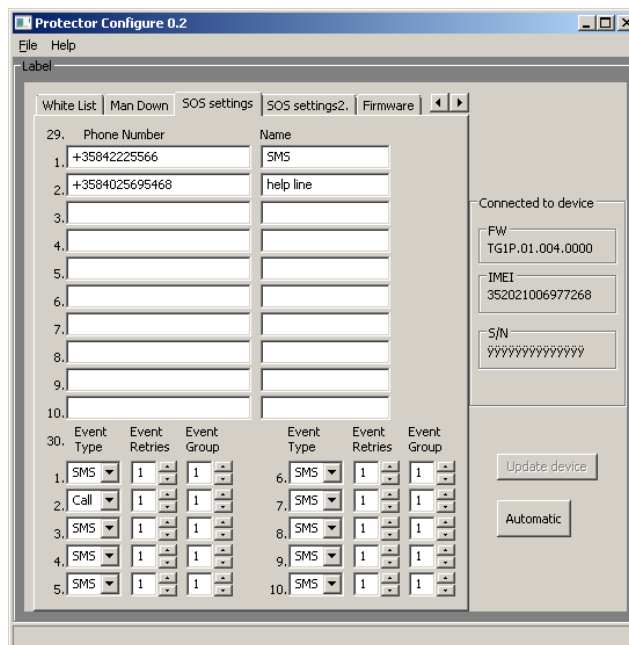
Config 32: Activate only in idle

CURRENTLY NOT USED SETTING

Config 33: Sensor usage

Defines if the Man Down Alert is active or inactive.

## 10. TWIG SOS SETTINGS



Config 29. Phone number and name

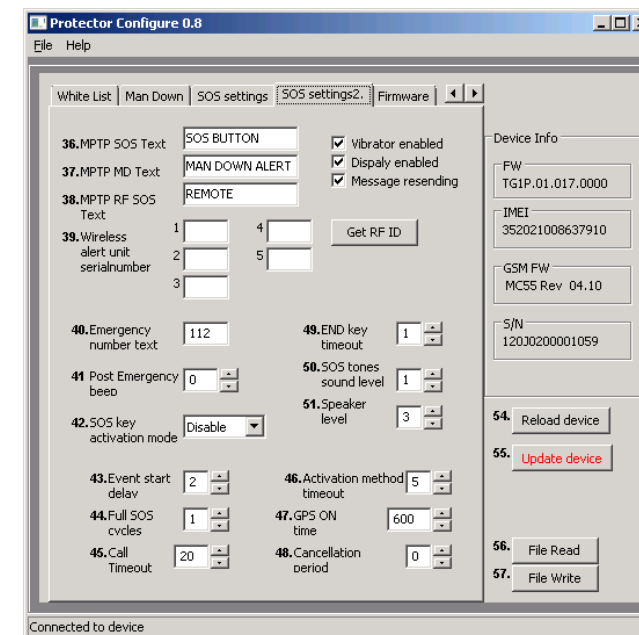
Define the number and name to be shown on device screen during the event. Select at the same time the config 30 for the function of the event.

The events, which are needed to be performed in SAME process, need to be in same group. If there is e.g. need for SMS and Call they need to be put so, that SMS is first in list and then the call. Both need to be in same group. If GPRS is defined, alarm is also sent before making call. This does not delay the call more than few seconds.

If GPRS connection is not possible, call will be established.

As GPRS data and voice call are not possible at the same time, it is recommended to always use also SMS for SOS message.

## 11. TWIG SOS SETT. 2



Config 36: MPTP SOS Text

Defines the text, that is added to the data field on EMG message when TWIG SOS is sent from SOS key. Default is SOS BUTTON

Config 37: MPTP MD Text:

Defines the text, that is added to the data field on EMG message when TWIG SOS is sent from Man Down Alert.  
Default= MAN DOWN ALERT

Config 38: Defines the text to be added when wireless alert button is pressed

Note that texts defined in 36-38 are 15 characters long. They can only have characters 0-9, A-Z and a-z. No special characters are allowed.

Config 39: Wireless alert unit serial number

Defines the Wireless alarm unit serial number, that is paired with the unit. Maximum 5 can be defined

In EMG message when TWIG SOS is sent from Wrist Alert key the data will have text defined in Config 38 followed by position number of the remote button.

Press the Get RF ID button to activate learning mode. Once in the mode press the alarm button in the Wrist alarm button. LED on the button will start in red and turn in green once paired.

To delete a button clear the corresponding box and press enter. Then update device.

Vibrator enabled

Define if vibrator is used in conjunction of the TWIG SOS. The vibrator will vibrate during pressing the button and in case of Man Down Alert also in prealarm.

Display enabled.

Device if the TWIG SOS is sent without showing anything on screen. This allows discrete or hidden TWIG SOS.

Message resending

Defines if the Alarm message is resent if position is refreshed during Emergency cycle., Default 1

Config 40. Emergency number text

Defines the text to be shown when use is prompted to call network emergency number. Default text 112.

**Note that this is only text and doesn't effect on the actual call. The call will be made to public emergency service. No position is sent**

Config41: Post Emergency beep

Defines the interval on the "locate me" Beep is played. You can adjust the BEEP interval 20..300 seconds Default =0, which means the beep is disabled.

Config 49: END Key Timeout

Defines if the TWIG SOS can be ended once started. 0= can not be ended, default 1.

Config 50: SOS tones sound level

Define the warning and indication sound level, that is used when starting TWIG SOS. Same setting is used when pre-alarmed the Man Down Alert.

Config 51 : Speaker level

Define the device speaker level when making a TWIG SOS call.

**Note, that levels 4..5 are on Speaker Phone level and are too loud for normal phone use.**

### Config 42: SOS Activation mode

Defines how the TWIG SOS button is activated. If set to 0, button is not active.

You can use one long press or two presses within programmed timeout. The timeout is programmed in config 46.

### Config 43: Event Start delay

Define the delay that is used between events in TWIG SOS. Default 2 seconds.

You can define delay from 0..60 seconds depending on the possible requirement in GSM network.

### Config 46 Activation method timeout

Defines how long the SOS button needs to be pressed or within what time it needs to be pressed twice. default 5

### Config 44: Full SOS Cycles

Defines the amount of full TWIG SOS event cycles ( 1..5) to be done. Default 1

### Config 47: GPS ON time

Defines GPS on time in seconds after TWIG SOS is activated. Default 600

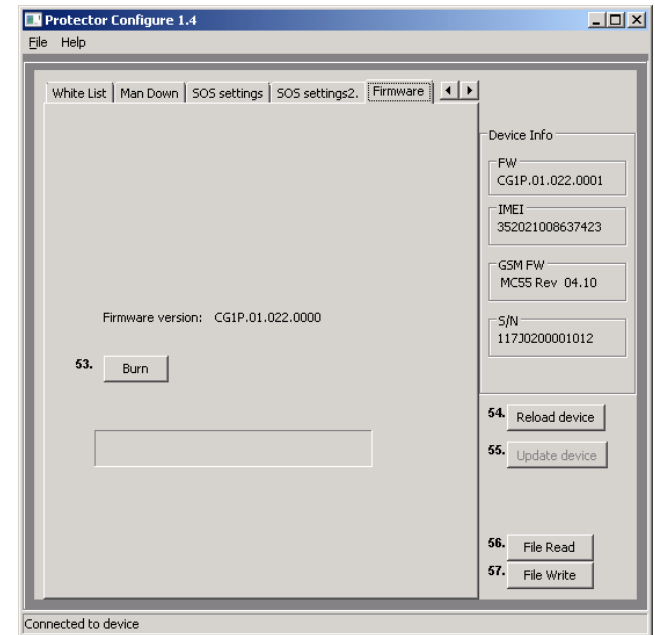
### Config 45: Call timeout

Defines the timeout to skip to next event on SOS list if no answer from B-subscriber

### Config 48: Cancellation period

Defines the period ( 0..20 seconds) when the TWIG SOS still can be cancelled if activated from TWIG SOS button. Default 0, which is disabling the cancellation possibility.

## 12. Updating software



Updating software is done in the Firmware tab. Firmware is build in to the Configure program from version 1.2 onwards. If you have older version, please download the latest. Update your existing TWIG Protector software by pressing Burn -button. A progress bar displays the status of the updating process.