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GSM



EL.MO.
GLOBAL SECURITY SOLUTIONS

Telephone Diallers TRH Series USER MANUAL

FOREWORD

FOR THE INSTALLER:

Please follow carefully the specifications relative to electric and security systems realization further to the manufacturer's prescriptions indicated in the manual provided.

Provide the user the necessary indication for use and system's limitations, specifying that there exist precise specifications and different safety performances levels that should be proportioned to the user needs. Have the user view the directions indicated in this document.

FOR THE USER:

Periodically check carefully the system functionality making sure all enabling and disabling operations were made correctly.

Have skilled personnel make the periodic system's maintenance. Contact the installer to verify correct system operation in case its conditions have changed (e.g.: variations in the areas to protect due to extension, change of the access modes, etc...)

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This device has been projected, assembled and tested with the maximum care, adopting control procedures in accordance with the laws in force. The full correspondence to the functional characteristics is given exclusively when it is used for the purpose it was projected for, which is as follows:

Telephone Diallers

Any use other than the one mentioned above has not been forecasted and therefore it is not possible to guarantee its correct operativeness.

The manufacturing process is carefully controlled in order to prevent defaults and bad functioning. Nevertheless, an extremely low percentage of the components used is subjected to faults just as any other electronic or mechanic product. As this item is meant to protect both property and people, we invite the user to proportion the level of protection that the system offers to the actual risk (also taking into account the possibility that the system was operated in a degraded manner because of faults and the like), as well reminding that there are precise laws for the design and assemblage of the systems destined to these kind of applications.

The system's operator is hereby advised to see regularly to the periodic maintenance of the system, at least in accordance with the provisions of current legislation, as well as to carry out checks on the correct running of said system on as regular a basis as the risk involved requires, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. The user must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Design, installation and servicing of systems which include this product, should be made by skilled staff with the necessary knowledge to operate in safe conditions in order to prevent accidents. These systems' installation must be made in accordance with the laws in force. Some equipment's inner parts are connected to electric main and therefore electrocution may occur if servicing was made before switching off the main and emergency power. Some products incorporate rechargeable or non rechargeable batteries as emergency power supply. Their wrong connection may damage the product, properties and the operator's safety (burst and fire).

Your dealer:

1. USER INTERFACE

The TRH-series telephone diallers user interface consists of one LCD display, several signalling LEDs, a 20-key keypad, and a buzzer for acoustic signalling.

1.1 The LCD display

During normal operation the LCD display shows the TRH model, the internal clock time and the dialler arming status. When a new event is generated, the display shows the event information for one minute, then the normal status visualization is restored.

The LCD display has also an integrated backlight, which can be turned on by pressing any key and is automatically turned off after one minute has elapsed with no key pressed.

1.2 Status LEDs

TRH has 4 LEDs for status signalling located near the LCD bottom left corner. These LEDs give information on: arming permission (green LED), anomaly status (yellow LED), alarm status (red LED) and GSM registration status (red LED).

- **Arming permission LED**

The first LED (green) shows the TRH arming permission and can take three different states with the following meaning:

- turned ON - arming permission granted (all zones on idle)

- turned OFF - arming permission denied (at least one alarmed zone outside entry/exit path)

- BLINKING - arming permission granted (all zones outside entry/exit path on idle, at least one alarmed zone in entry/exit path)

Use the quick access menu to check for alarmed zones.

- **Anomaly LED**

The second LED (yellow) shows the anomaly status and can take the following states:

- turned ON - no anomalies

- BLINKING - at least one anomaly (or anomaly memory)

Use the quick access menu to check for anomalies.

- **Alarm LED**

The third LED (red) shows the dialler alarm status and can take the following states:

- turned on - no alarm or alarm memory

- SLOW BLINK - alarm memory

- FAST BLINK - communication in progress

Use the quick access menu to check for alarm memories.

- **GSM registration LED**

The fourth LED (red) shows the GSM registration status and can take the following states:

- turned OFF - GSM registered and ready

- SLOW BLINK - GSM registered and ready, low signal strength

- turned ON - GSM not registered on the network (off-line)

Use the quick access menu to check the GSM signal strength.

1.3 RF level signalling LEDs (TRH/Plus only)

On the right of the status LEDs (on the TRH/Plus model only) there are three LEDs that show the RF signal level received from sensors and remote controls. The LEDs colors are red, yellow and green and they turn on when an RF communication is detected showing the RF signal strength (respectively: low level, medium level and high level).

2. THE QUICK ACCESS MENU

The quick access menu can be used to check the dialler status without having to insert the user code.

To enter the quick access menu, press the up-, or down-arrow keys when the dialler is in the normal visualization mode. When TRH is displaying an event on the LCD press STOP to switch back to the normal visualization mode.

Once entered the quick access menu, the display shows the "GSM SIGNAL" writing followed by the menu browsing keys (up-arrow, down-arrow, OK, STOP).

The quick access menu has 5 sub-menus that can be selected with the arrow keys: GSM SIGNAL, ALARM MEMORY, ANOMALY MEMORY, ZONE STATUS, SYNOPTIC STATUS. Press OK to enter the selected menu.

During the visualization of the quick access menu the status LEDs blink fast and show the selected option (the anomaly LED for anomaly memory, the alarm LED for alarm memory and the GSM LED for GSM signal strength).

Press STOP to exit the quick access menu and switch back to the normal visualization mode.

2.1 GSM signal

This sub-menu allows to check the received GSM signal strength. The signal strength is displayed as a series of # characters growing from left to right. An indication equal to, or less than 4 positions corresponds to a low signal strength.

Press OK to exit or press STOP key to switch back to the quick access menu.

2.2 Alarm memory

The alarm memory sub-menu allows to check such memories, if any. If more than one alarm memory is present use the arrow keys to scroll all the memories.

Press OK to delete all alarm memories.

Press STOP to switch back to the quick access menu without deleting the memories.

2.3 Anomaly memory

Anomaly memories can be checked from anomaly memory sub-menu. The memory checking procedure is the same as the one seen above for alarm memories.

Press OK to delete all anomaly memories.

Press STOP to switch back to the quick access menu without deleting the memories.

If it is not possible to delete a memory then the anomaly cause is still present.

2.4 Zone status

The zone status sub-menu allows the user to check for alarmed zones. If more than one zone is alarmed, use the arrow keys to scroll all alarmed zones.

Press OK to switch to normal visualization.

Press STOP to switch back to the quick access menu.

2.5 Synoptic status

From the synoptic status menu is possible to check the status of all zones simultaneously. The upper row displays the zone number (from 1 to 16), while the lower row shows the actual status for each zone. The zone status is shown using a single character:

' - ' means that the zone is on idle

' A ' means that the zone is on alarm

' M ' means that the zone is on tamper

Press OK to switch to normal visualization.

Press STOP to switch back to the quick access menu.

3. THE USER MENU

TRH has a configuration area reserved to the user and called User Menu. To access the user menu enter the 6-digit user code and press the asterisk key. The factory value for the user code is "111111", so, to access the user menu, type:

1 1 1 1 1 1 *

WARNING: typing the user code followed by OK is used to arm and disarm the dialler (see below).

NOTE: if the dialler is in Panel Mode and armed it is necessary to disarm the dialler before entering the user menu.

The user menu has 8 sub-menus that can be selected with the arrow keys in the same way as seen for the quick access menu: EVENT HISTORY, CLOCK SETUP, ANOMALY BEEP, OUTPUT CONTROL, AIR TIME BALANCE, "FOLLOW ME" NUM., USER CODE, REMOTE CTRL CODE.

3.1 Event history

The event history is an internal archive where TRH stores all the events generated during the normal functioning. The event history can store up to 256 events, when the history log is full, older events will be deleted to make room for new events.

Events are stored in the history log according to the order they are generated, and progressive numbers ranging from 1 (for the oldest event) to 256 (for the latest event) will be associated to each of them. It is necessary to use the arrow keys to scroll all events stored into the history memory.

Events are displayed on two rows: the upper row shows the event description while the lower row contains either the event parameter or information about the event number and generation time. The asterisk (*) and hash (#) keys can be used to switch the visualization between the parameter and the number/time information. Events with no parameters are always shown with number and time information.

Since TRH has a 24 hour clock, a "New Day" event is generated every midnight. To know how many days have passed since a certain event happened, it is necessary to count all new day events generated after the relevant event.

Press STOP to exit the menu.

3.2 Clock setup

From this sub-menu it is possible to set-up the internal clock, it is sufficient to enter the desired value and press OK to confirm or STOP to cancel. The S1 and S3 keys can be used to move the cursor to the left or to the right.

3.3 Anomaly beep

TRH can be programmed to generate an acoustic signal when an anomaly is detected. In this case TRH plays a short beep every 15 seconds. By disabling the anomaly beep the user can stop the possible disturbance in case of persistent anomalies.

To switch between "yes" and "no" options, press OK. Press STOP to exit the menu.

3.4 Output control

From this sub-menu the user can control TRH programmable outputs. Press the arrow keys to select the desired output, then press OK to flip the output state.

Press STOP to exit the menu.

3.5 Air time balance

TRH can read the air time balance for prepaid SIM cards. This functionality is only valid for Italian Vodafone and TIM cards. TRH shows the ??? writing when the air time balance is not available.

Press STOP to exit the menu.

3.6 "Follow me" number

From this menu the user can change the "follow me" telephone number (corresponding to the first entry in the phonebook programmed by the installer). As an example, this functionality can be used to change a telephone number when the user leaves his house to go to a vacation place. By changing the "follow me" number TRH will call the appropriate number following the user's movements.

The "follow me" number has a maximum length of 20 digits.

TELEPHONE NUMBER EDITOR	
Key	Description
0, 1... 9	Inserts the specified digit under the cursor. A number can't be longer than 20 digits.
*, #	Inserts the asterisk and hash characters.
↑	Inserts a 2-second pause ' P '.
S1	Moves the cursor to the left.
S3	Moves the cursor to the right.
S2	Switches between the insert and overwrite modes.
S4	Deletes the character under the cursor.
OK	Stores the number into the internal memory.
STOP	Cancel any modification.

NOTE: to completely delete a number, move the cursor to the left and press the S4 key several times.

3.7 User code

To change the user code enter this menu and type the new 6-digit user code twice.

Press STOP to cancel the operation.

3.8 Remote control code

To change the remote control code follow the same procedure used to change the user code. The remote control code is used to validate the user for SMS (text message) remote control and interrogation.

NOTE: setting the remote control code to 000000 disables all remote control and interrogation functionalities.

4. CHANGING THE ARMING STATUS

The installer has to enable the specific option to allow arming status changes.

4.1 Changing the arming status from keypad (TRH/Combi e TRH/GSM)

To change the TRH arming status from the keypad the user must type the user code followed by OK, if the dialler is disarmed it will be armed, if the is armed it will be disarmed.

WARNING: typing the user code followed by the asterisk key will allow user to enter the user menu as previously explained.

4.2 Changing the arming status from keypad (TRH/Plus)

To change the TRH arming status from the keypad the user must type the user code followed by OK. If the dialler is armed it will be disarmed. If the dialler is disarmed it will be armed after the user specifies the desired sectors.

When TRH/Plus is armed from the keypad, the "Select Sectors" message will display asking the user to select the sectors to be armed. The sectors to be armed are selected or deselected by pressing the S1, S2, S3, S4 keys; pressing a key select a sector if it was deselected, conversely, the sector is deselected if it was selected.

The arming command can be confirmed by pressing OK, otherwise TRH will execute the arming command after 5 seconds are elapsed without any key being pressed.

To cancel the arming procedure press STOP.

4.3 Arming from remote control (TRH/Plus)

A Taurus-type remote control can be used to arm/disarm the dialler, if previously configured by the installer.

The total arming key arms all and only the sectors associated to the remote control.

The disarming key disarms all and only the sectors associated to the remote control.

The partial arming-1 key arms only the first sector associated to the remote control.

The parial arming-2 key arms only the second sector associated to the remote control.

5. DIALLER STOP

Dialler activity (calls in progress) can be stopped entering the user code followed by OK key (in the same way as the arming procedure), if any calls are in progress TRH will not arm and the active call and all pending calls will be cancelled.

On TRH/Plus the user can also stop the dialler by pressing the disarm button on the Taurus remote control.

5.1 Stopping the dialler when called

The user can stop the dialler when receives a call if his telephone supports multi frequency (DTMF) tones.

The dialler can be stopped in two ways: Recall stop and Stop-all-calls.

5.1.1 Recall stop

With the Recall stop function the user tells TRH to stop calling him for communications related to the same event that generated the call. TRH will proceed and call other users. This function is useful when TRH is programmed to call the same user several times for each event.

To activate the Recall stop function, press the key 5 on the telephone device during the recorded message playback. If the command is accepted, TRH plays 4 confirmation beeps and cuts the communication off.

5.1.2 Stop-all-calls

Issuing a Stop-all-call command, the user tells TRH to stop all calls to all users for the same event that generated the call.

To activate the Stop-all-call function, press the key 0 on the telephone device during the recorded message playback. If the command is accepted, TRH plays 4 confirmation beeps and cuts the communication off.

WARNING: in this way it is possible to stop all and only the calls related to the same event. Other calls, related to different events, will not be stopped unless the user presses again the key 0 when receives one of such calls.

6. REMOTE CONTROL AND INTERROGATION

TRH diallers can be remotely interrogated and controlled via SMS (text messages).

WARNING:
remote control and interrogation are disabled if the remote control code is set as 000000.
to be enabled to remote control the sender telephone number must be listed into the TRH
phonebook.

6.1 SMS syntax

Remote control and interrogation SMS (text messages) are case insensitive and must obey some syntax rules in order to be accepted by TRH.

All remote control and interrogation messages must start with the writing:

C.XXXXXX

Where XXXXXX is the remote control code. The remote control code must always be followed by a space.

Available commands are:

I.ON	to arm
I.OFF	to disarm
A.outputname	to activate an output
D.outputname	to deactivate an output
R.I	to receive a zone report
R.U	to receive an output report
R.C	to receive a dialler report
R.T	to receive a full report

NOTE: it is possible to send multiple commands with the same message as long as all commands are separated by spaces.

EXAMPLE:

C.123456 A.Output 1 D.Output 4 I.ON R.T

The above command activates the output named "Output 1", deactivates the output name "Output 4", arms the dialler and asks for a full report.

6.2 Arming command - I.ON

The "I.ON" command arms the dialler, starting the exit time if necessary. The sender receives a confirmation SMS containing the "TRH armed" text.

This command is valid only if TRH is working in Panel Mode otherwise the command is simply ignored. If the command SMS does not contain any valid commands the sender receives an SMS containing the "INVALID COMMAND!" text.

NOTE: this command arms all TRH/Plus sectors.

6.3 Disarming and dialler stop command - I.OFF

The "I.OFF" command disarms TRH, stopping any outgoing calls if necessary. The sender receives a confirmation text message containing the "TRH disarmed" text.

If TRH is not configured in Panel Mode, this command stops all outgoing calls but does not disarm the dialler. In this case the sender receives a confirmation SMS containing the "TRH stopped" text.

NOTE: this command disarms all TRH/Plus sectors.

6.4 Output activate command - A.outputname

The "A.outputname" command activates the output named "outputname". The sender receives a confirmation SMS containing the "outputname activated" text.

6.5 Deactivate output command - D.outputname

The "D.outputname" command deactivates the output named "outputname". The sender receives a confirmation SMS containing the "outputname deactivated" command.

If the specified output is not configured as a state output, the command will be ignored.

6.6 Zone report command - R.I

This command allows the user to remotely interrogate TRH about zone status. TRH will reply sending one or more SMS containing the available information.

The TRH reply is a list of "zonename zonestatus" writings separated by commas.

The zone report is sent only for configured zones and, in case of RF zones, only for alarm/restore or 24h sensors.

EXAMPLE:

El.Mo. TRH: Zone 1 on idle, Zone 2 on alarm, Radio 9 on tampering, Radio 10 on flood alarm.

6.7 Output report command - R.U

This command allows the user to remotely interrogate TRH about output status. TRH will reply sending one or more SMS containing the available information.

TRH will reply with is a list of "outputname outputstatus" writings separated by commas.

EXAMPLE:

El.Mo. TRH: Output 1 active, Output 2 not active, Output 3 not active, Output 4 on pulse

6.8 Dialler report command - R.C

This command allows the user to remotely interrogate TRH about dialler status. TRH will reply sending information about arming status, air time balance, external power status, dialler battery status, phone line status, supervision status for radio sensors, battery status for radio sensors and fault status for radio sensors.

The arming status is sent only if the dialler is working in Panel Mode, the air time balance check is supported only for italian Vodafone and TIM prepaid cards.

EXAMPLE:

El.Mo. TRH: TRH armed, mains power ok, battery ok, low radio battery

6.9 Full report command - R.T

The full report command "R.T" requests all above listed report commands. TRH will reply sending one or more SMS containing all requested information for zones, outputs and dialler status.

7. NOTE

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