INSTALLER'S MANUAL PAGER TVM 800





Lock the connector to the terminal by positioning the lever as shown in the figure.

WARNING: make sure that the connector is inserted and locked to the terminal in the correct way. Fig.4

Connect the connectors

to the terminal



INSTALLATION AND PROGRAMMING INSTRUCTION MANUAL

Pager

TVM 800

This manual describes the steps that should be followed in order to install this product correctly.

This procedure has been designed in order to guarantee a rapid and reliable installation; therefore, we strongly recommend you follow these instructions carefully.

WARNING

- Please follow the instructions in this manual thoroughly

• Personnel in charge of installation are not authorised to remove the guarantee seals and/or access the interior of the product and the accessories

 \cdot Personnel in charge of installation are not authorised to make any modifications and/or adaptations to the product and the relative accessories

The manufacturer is not liable for any damage or injury caused by the incorrect installation of the product and the relative accessories

Important:

The product enables SMS communication using GSM technology. Therefore, a SIM card is required, for it to function properly (not supplied by MetaSystem). <u>MetaSystem recommends the exclusive use of contract-based SIM cards</u> to ensure optimum operation of the product

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QUESTIONNAIRE FOR THE VEHICLE'S OWNER

The questionnaire below should be filled in to ensure that the configuration of the device complies with the owner's preferences.

٩P

	nber and its release PIN number? lested if supplied by the owner!)	SIM PIN	1 : :
What numbers are to	be added to the phonebook? (exp	plain about the Golden Numb	ers!)
Pos N° Pos N°	Pos N° Pos N°	Pos N° Pos N°	Golden number Pos 81 N°
Configuration of the of THEFT ALARM List CH1 Pos:For: CH2 Pos:For: CH3 Pos:For: CH4 Pos:For: CH5 Pos:For:	BATTERY ALARM List BATTERY ALARM List CH1 Pos: For: CH2 Pos: For: CH3 Pos: For: CH3 Pos: For: CH4 Pos: For: CH5 Pos: For:	Ad format) SPEED WARNING List CH1 Pos: For: CH2 Pos: For: CH3 Pos: For: CH4 Pos: For: CH5 Pos: For:	LOW BATTERY List CH1 Pos: For: CH2 Pos: For: CH3 Pos: For: CH4 Pos: For: CH5 Pos: For:
CAR ALARM List CH1 Pos: For: CH2 Pos: For: CH3 Pos: For: CH4 Pos: For: CH5 Pos: For:	PERIODIC List CH1 Pos: For: CH2 Pos: For: CH3 Pos: For: CH4 Pos: For: CH5 Pos: For:	Abbreviations used: S = SMS V = VOICE S+V = SMS+VOICE V/S = VOICE/SMS	
	v transmission?		YES N
If YES, how often de	o you want this to take place?		

CONFIGURATION PROCEDURE

- The steps described below must be followed after all the cabling on the vehicle has been completed according to the enclosed installation manual.

- Unblock the SIM card after it has been switched on by keying in the release PIN number if necessary.
- Connect a Sat Programmer as described in the following pages.

- Enter INSTALLER level and complete the steps for configuration by following the instructions given in the descriptions of the menus.

Important:

The product enables SMS communication using GSM technology. Therefore a SIM card is required (not supplied by MetaSystem) for it to function correctly. <u>MetaSystem recommends the exclusive use of contract-based SIM cards</u> to ensure optimum operation of the product.

Complete programming according to the steps described below to safeguard correct installation

CHECKING AND CONFIGURATION FOR INSTALLATION

- Check the GSM signal (enter PIN if requested)
- Complete the SIM initialisation procedure (this is a very important step and must be carried out before any other programming!)
- Complete the battery check
- Check the GPS signal
- Complete programming of the maximum number of alarms for VOL1
- **C** Complete programming of the immunity against external alarms
- Complete programming of the delay before starting GSM calls
- Check the inputs in the "Display I/O" menu; the inputs are:
 - Ignition signal
 - □ VOL1 signal (vehicle alarm)

When the above has been completed correctly, the device can be installed permanently and any parts that were taken off the vehicle can now be replaced.

CUSTOMISATION

Complete any customisation of the device using the "Questionnaire for the vehicle's owner"

- **Complete programming of the phonebook**
- Enter the vehicle's number plate
- Complete programming of the calls lists (we recommend programming the CAR ALARM list first as configuration is always necessary if present and connected to an external alarm).
 - CAR ALARM (must always be set)
 THEFT ALARM (only if required)
 BATTERY ALARM (only if required)
 SPEED WARNING (only if required)
 LOW BATTERY (only if required)
 - PERIODIC
 PERIODIC
 Only if required)
- **D** Set vitality transmission (the default setting is 'not active')
- Set the speed limit

THE SAT PROGRAMMER

The system must be checked by means of the dedicated 'Sat Programmer' interface



SWITCHING ON

MESSAGE ON THE DISPLAY	DESCRIPTION
TVM800 OK In maintenance	• Connect the Sat programmer. The display appears as shown opposite, indicating that the device is in maintenance mode.

SOLVING PROBLEMS WHEN SWITCHING ON

PROBLEM	SOLUTION
Does not switch on	 Check electrical connections especially connections to the power supply Check connection of the SAT Programmer to the device. Contact the Help Desk if the problem persists

HOW TO ACCESS MENUS (ACCESS LEVELS)

Access to menus is structured in levels that are entered by keying in the relative passwords.

These must be changed once the system has been installed.

All the menus needed to complete the configuration of the product are present at INSTALLER level. As you go down the various levels, only certain utility menus will remain accessible. The structure in levels prevents the possibility of parameters being altered by unauthorised personnel.

It is possible to scroll through all the menus available after a level has been reached using the ($s\ t$) arrows.

MODES OF ACCESS TO THE VARIOUS LEVELS



NB

The initial display may show "ACCESS DENIED.... INSERT CODE" instead of "DEACTIVATED(IN MAINTENANCE)": this appears when the module is no longer being maintained!

PROGRAMMING MENUS

From INSTALLER level, it is possible to display all the menus required for the configuration of the product. It is possible to scroll through the various menus using the (st) arrow keys. For a more rapid display of each menu, it is possible to enter the relative <u>quick command</u> directly followed by **OK** (the quick commands are shown in the boxes next to the menus).



CHECK GSM STATUS 365

•Warning: if the device realises that the SIM requires unblocking when the menu is accessed, the PIN must be entered to release it. In this case, press the + key and key in the PIN when the relevant screen appears, then confirm by means of the OK key.

• This menu confirms the quality of the current GSM signal and is shown both as a percentage and in a chart format.

• Other information provided:

NO GSM = this means that no GSM signal has been captured. Possible causes: Incorrect connection of the aerial or failure of internal GSM module. **GSM module in low power mode** = this means that the GSM is in low consumption mode. The ignition key is probably switched off.

GSM signal too low = the signal must be at least 20%. Take the vehicle outside; check the connection of the GSM aerial; check the cables; change the place where the GSM aerial is installed; the signal from the telephone service provider may be weak.

GSM module status Undefined

GSM module not answering..

Error SIM card not found:

Should one of the above messages appear, exit the menu and enter 999; press OK and wait The device will reset after a few seconds. Try again 2 or 3 times; if the problems persist, contact our Help Desk

INITIALISE SIM 393



This step is very important!

• This step is <u>necessary</u> the <u>first time</u> the product is switched on after the SIM card has been inserted or if it has been <u>replaced</u> at a later date. This function must be launched in order to download data onto the SIM card itself.

• When this is done, reconfiguration is also required for all the calls lists, as they will have been deleted..

• Always use <u>SIM cards whose phonebook is empty</u>; otherwise, its first twenty positions will be deleted as these are used by the device for its operating data.

• MetaSystem recommends the exclusive use of contract-based SIM CARDS.

CHECK BATTERIES 370



• This menu displays the status of the batteries: the device's own internal emergency battery, and the external battery of the vehicle.

- If the voltages are within the limits set by the software, a small " ${\bf ok}$ " sign will appear next to the reading for the external battery.

• If the battery is disconnected, a small "off" sign will appear next to the reading for the external battery.

• If the battery drops below the acceptable level, a small "**nok**" sign will appear next to the reading for the external battery.

CHECK GPS STATUS 366



•This menu shows how many satellites are visible at that time in a numerical and chart format. Explanation of descriptions:

■ ■ ■ ■ _____ = Portrayal in chart format of the number and intensity of satellites.

4sv = This means 4 satellites are visible

4 = Data not for consumer use!

current fix = This means the GPS fix is taking place correctly

105 = Numerical counter (not for consumer use!)

Other messages possible:

previous fix = This means this is not a current GPS fix. Wait for a new fix to be established.

fix not avail. = This means a GPS fix has never been established. Wait for a fix to be established.

GPS OFF = This means the GPS is in low consumption mode. The ignition key is probably switched off.

NO GPS = this means the GPS has not been located. Possible causes: Incorrect connections or GPS failure.

• NB: <u>Always take the vehicle outside</u> for testing; should you encounter problems, check the connections of the aerial and the cabling. Should the problems persist, try installing the aerial elsewhere.

MAX NUMBER OF VOL1/2 ALARMS 427



• To cancel and exit, press C

EXTERNAL ALARM IMMUNITY 429



• This menu is used to set the time that must pass before the device will rearm and so can accept a new alarm signal. It will not place any calls during this set time.

• The counter is reset when the ignition key is switched off and on again.

- Possible selections: 0 ÷ 15 (minutes)
- To modify the setting, press + o -.
- To confirm and exit, press **OK**
- To cancel and exit, press \boldsymbol{C}

DELAY TO ACTIVATE GSM CALL 341



• The number represents the pause after which the alarm call will be placed. Taking the example given opposite, the call will be placed after the device has detected the alarm signal for at least 3 seconds.

- Possible selections: **0** ÷ **254** (seconds)
- To modify the setting, press + o -.
- To confirm and exit, press **OK**
- To cancel and exit, press C



DISPLAY I/O 447

- This menu is used to view the wired inputs and the system status:
- Each signal or status is displayed by means of a letter:
- K = signal for ignition key switched on
- R = Device in self-management mode
- A = Device in service mode (not maintenance mode)
- 1 = Vehicle alarm signal (VOL1).
- 2 = Tilt sensor signal (VOL2)
- H = Sat Programmer data access blocked



PHONEBOOK 205

- \bullet This menu is used to store the telephone numbers, including those which will be called in case of alarm.
- The phonebook holds up to 90 numbers.

• These 90 numbers include ten **Golden Numbers** (from 81 to 90), i.e. telephone numbers that are able to interact with the vehicle by means of commands entered on the mobile phone. If control via mobile phone is required, the relative telephone number must be stored in one of these positions.

• After you have entered a position in the phonebook, the message >> **available** << will appear if it is vacant.

• If the position is occupied, the number stored there will appear; you can replace the old number by writing over it with a new number. Otherwise, press the – key followed by **OK** to clear the position.

- \bullet Use the s and t keys to select the next positions in the phonebook.
- If you make a mistake when entering in numbers, simply press the key.
- \bullet To confirm, press $\mathbf{OK}.$ You will hear a long beep without seeing any change in the display.
- To cancel and exit, press C

Important: the international country code must always be entered when keying in telephone numbers (e.g. **+39** or **0039** for Italy).

VEHICLE NUMBER PLATE 307



• The number plate can be composed of maximum 8 digits.

 \bullet To enter a letter, press the relevant key on the Sat Programmer repeatedly until it is displayed

• To confirm and go on to the next digit, press the **+** key; a dot " • " will appear on the display next to the digit you have just entered.

- Press the key to delete the digit you have just entered
- To confirm and exit, press **OK**
- To cancel and exit, press ${\bm C}$

CAR ALARM CALLS LIST 353



· IThis menu is used to programme the calls that will be placed should the vehicle's alarm be triggered.

• The maximum number of calls is 5. It is possible to send the message to 5 different telephone numbers.

• The telephone numbers for these calls are selected by entering the position in the phonebook where they have been stored previously

- The only format available for the calls is the SMS
- To select the phonebook position, simply enter its number.
- The call will not be placed if a phonebook position (Pos. --) is not keyed in.
- For the two dashes, press the "0" key until " - " appears..
- To programme the format used to place the call, use the s and tkeys.
- To programme in the number of the call, use the + and keys.
- To confirm and exit, press **OK**.
- To cancel and exit, press C

NB:

If this is the first list to be programmed in, the request "Copy this to all call list?" will appear when you press OK to exit.

If you press **OK**, the settings you have just made for this list will also be stored in all the other lists.

An interim display will appear: "Function active. Please wait" If, however, you do not want the configuration of all the lists to be the same, simply press **C** and then programme each list individually.

THEFT ALARM CALLS LIST 345

This menu is used to programme the calls that will be placed when rhe vehicle is moved at key off. In order for the call to be placed, you must indicate the phonebook position where the warning message will be sent. The method for programming is the same for all calls lists; therefore, please refer to the instructions given for the "CAR ALARM CALLS LIST" menu

BATTERY ALARM CALLS LIST 347

This menu is used to programme the calls that will be placed should there be a battery failure (if the cables have been disconnected or cut). In order for the call to be placed, you must indicate the phonebook position where the warning message will be sent.

The method for programming is the same for all calls lists; therefore, please refer to the instructions given for the "CAR ALARM CALLS LIST" menu.

SPEED WARNING CALLS LIST (350)

This menu is used to programme the calls that will be placed should the set speed limit be exceeded. In order for the call to be placed, you must indicate the phonebook position where the warning message will be sent and the format to be used for this.

The method for programming is the same for all calls lists; therefore, please refer to the instructions given for the "CAR ALARM CALLS LIST" menu

LOW BATTERY CALLS LIST 351

This menu is used to programme the calls that will be placed should the voltage of the vehicle's battery drop below 10 Volt for more than 5 minutes. In order for the call to be placed, you must indicate the phonebook position where the warning message will be sent.

The method for programming is the same for all calls lists; therefore please refer to the instructions given for the "CAR ALARM CALLS LIST" menu

PERIODIC CALLS LIST 357

This menu is used to programme the calls that will be placed should regular transmissions be activated, as established in the appropriate menu. In order for the call to be placed, you must indicate the phonebook position where the warning message will be sent.

The method for programming is the same for all calls lists; therefore please refer to the instructions given for the "CAR ALARM CALLS LIST" menu



DISPLAY-ONLY MENUS

DISPLAY	WHAT IT MEANS	QUICK COMMAND
SN (read only) 801.0.00464.0132	This is the serial number of the device. It always differs from product to product (the number shown opposite is by way of example!)	(206)
Software release PAA118 02.13.4	This is the version of the device's software. This menu is used to verify its update status. (the number shown opposite is by way of example!)	207)
GPS Position? ok 44' 42' 47" N 010' 36' 57" E [OK]	Press OK to enter and exit the menu! This menu displays the coordinates of the place where you are located. They are provided in the format: DEGREES- MINUTES-SECONDS. It is possible to identify the exact position of the vehicle by means of the mapping system provided on the website www.meta-sat.com . If the coordinates all appear as zeros, check the GPS module and the relative connections (see section on "Check GPS status")	(446)

HIDDEN MENUS CALLED UP BY QUICK COMMANDS

The menus shown below can only be called up by using the quick commands. These menus are not usually displayed because they should not be needed for standard installation purposes. They are, therefore, "hidden" and can be called up should this be necessary. In order to display them, enter INSTALLER Level, enter the relevant quick command and press OK. The menu will be concealed once again after you have exited it.

DISPLAY	WHAT IT MEANS	QUICK COMMAND
IMEI Code 520338422519442	This is the serial number of the internal GSM module. It always differs from product to product (the number shown opposite is by way of example!)	(208)
GSM mode SW Rel. REVISION 04.00	This is the version of the internal GSM module's software. This menu is used to verify its update status. (the number shown opposite is by way of example!)	209
SC SMS number +393492000200	The displays the number of the SMS service centre. The device enters this number automatically according to the SIM card that is inserted. This number must not be changed!	374)
co-ordinate mode: DEGREE.MIN.SEC	This menu is used for the configuration of the format for the display of the GPS coordinates. In addition to DEGREE.MIN.SEC, it is possible to set DECIMAL or NMEA formats. Use the + and – keys to select the format and the OK key to confirm the modification or the C key to exit without storing it.	(384)
Anticarjack: KeyLock 15sec	This menu is used to modify how much time must pass before the ignition will be immobilised by means of a remote command via SMS after the ignition key has been switched off. The default factory setting is 15 sec, but it can be programmed from 0 to 60 sec.	(424)
Stimuli filter value 40	This menu is used to modify the filter for the ignition key signal. This parameter makes it possible to compensate for any disturbance on the signal. It is possible to programme from 0 to 254 units and each unit corresponds to 16ms. A higher number corresponds to a greater filter.	(502)
VOL1 filter value 10	This menu is used to modify the filter for the alarm VOL1 signal. This parameter makes it possible to compensate for any disturbance on the signal. It is possible to programme from 0 to 254 units and each unit corresponds to 16ms. A higher number corresponds to a greater filter.	(503)
Log memory usage 000%2G2S 03H	This menu is used only to see the softwave version of the GPS. The version in this exemple is 2G2S.	(389)

VEHICLE CONSIGNMENT

CUSTOMIZING THE PASSWORDS

After completing installation, for safety reasons, you must alter the passwords to access the various levels in the Sat Programmer. This will allow the product to be used and programmed only by authorised personnel in possession of the correct access codes.

The passwords for the UNBLOCKED and UNBLOCK FUNCTIONS levels must be keyed in by the vehicle's owner alone. These passwords must remain confidential. The installer must key in his own secret password.

In this way, the user (if provided with the Sat Programmer) will only be able to access certain utility levels, such as phonebook management, but will not be able to alter any parameters that are fundamental for the correct operation of the device. In the same way, the installer cannot access the product unless it is first disarmed by the owner by means of his password.

It is possible to access all the menus for the modification of the passwords from INSTALLER level.

DISPLAY	WHAT IT MEANS	QUICK COMMAND
Unlock code>> ******	This is the UNBLOCKED level password. The default setting is 11111 but it will be displayed as asterisks at installer level for a question of confidentiality. The password can be any number with 5 to 8 digits	(200)
Function Enable code>> *******	This is the UNBLOCK FUNCTIONS level password. The default setting is 33333 but it will be displayed as asterisks at installer level for a question of confidentiality. The password can be any number with 5 to 8 digits.	(202)
Installer code>> 44444	This is the INSTALLER level password. The default setting is 44444. The number is displayed since there is no need for confidentiality since it is the installer's own number. The password can be any number with 5 to 8 digits	(300)

E.G. :



NB: The code must be a number composed of 5 to 8 digits.

SWITCHING THE DEVICE ON AND OFF

HOW TO SWITCH OFF MAINTENANCE MODE (431)

The last step required before the vehicle can be consigned to its owner, is to render the device operational. This step enables the product to be finally armed so that it can send alarm calls or warnings should a situation arise where this is necessary. To do this, enter INSTALLER Level and call up the appropriate function:



- To confirm and exit, press OK.
- To cancel and exit, press ${\bm C}$

HOW TO SWITCH ON MAINTENANCE MODE (430)

The device must enter maintenance mode again if extra work is required at a later date, or if the device needs replacing or quite simply if the vehicle's battery must be disconnected or replaced. To do this, ask the owner to access the UNBLOCK FUNCTIONS level; he must enter his secret passwords to do this and the installer can then enter his level by keying in his own password. At this stage, locate the function to activate maintenance mode and thus prevent alarm calls from being made.



- To confirm and exit, press **OK**.
- To cancel and exit, press **C**.

SWITCHING OFF THE DEVICE

In order to switch the device off correctly, it is important to first enter maintenance status and then disconnect the power supply. This ensures the product will switch off completely instead of remaining powered by means of its internal back up batteries.

Failure to comply with the above instructions will result in the device remaining operational for as long as its internal battery remains charged and battery alarm calls will be placed if configuration of the relative list was completed.