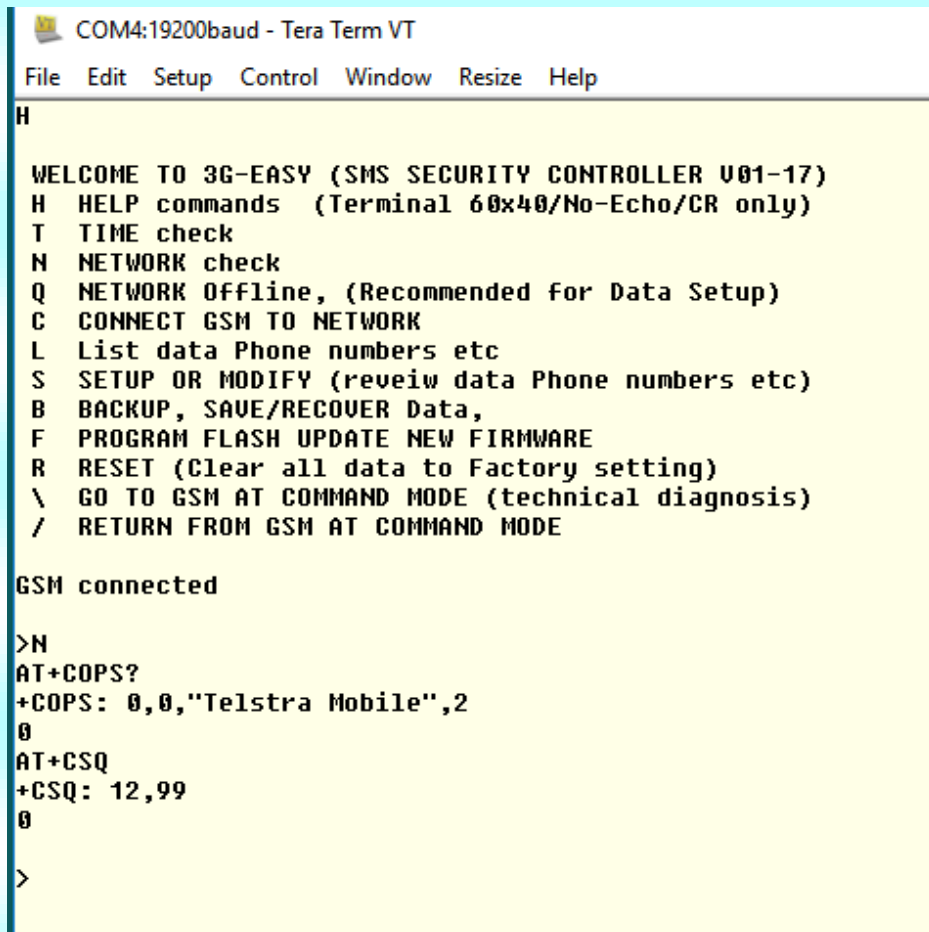# Technical: for advanced option installers using Computer

PROGRAMMING THE 3G-EASY MODULE By Computer using USB

The USB cable from power adaptor can be plugged into a PC and a serial terminal program will display the menu self-generated by the module firmware this allows an alternative method of Setup programming using a PC or laptop also you can monitor or diagnose all SMS and AT commands working.

Note this cable also supplies 5volt for module operation. **Free computer software is available See**

**A Menu is displayed once fully working on the network. The terminal is in monitor mode
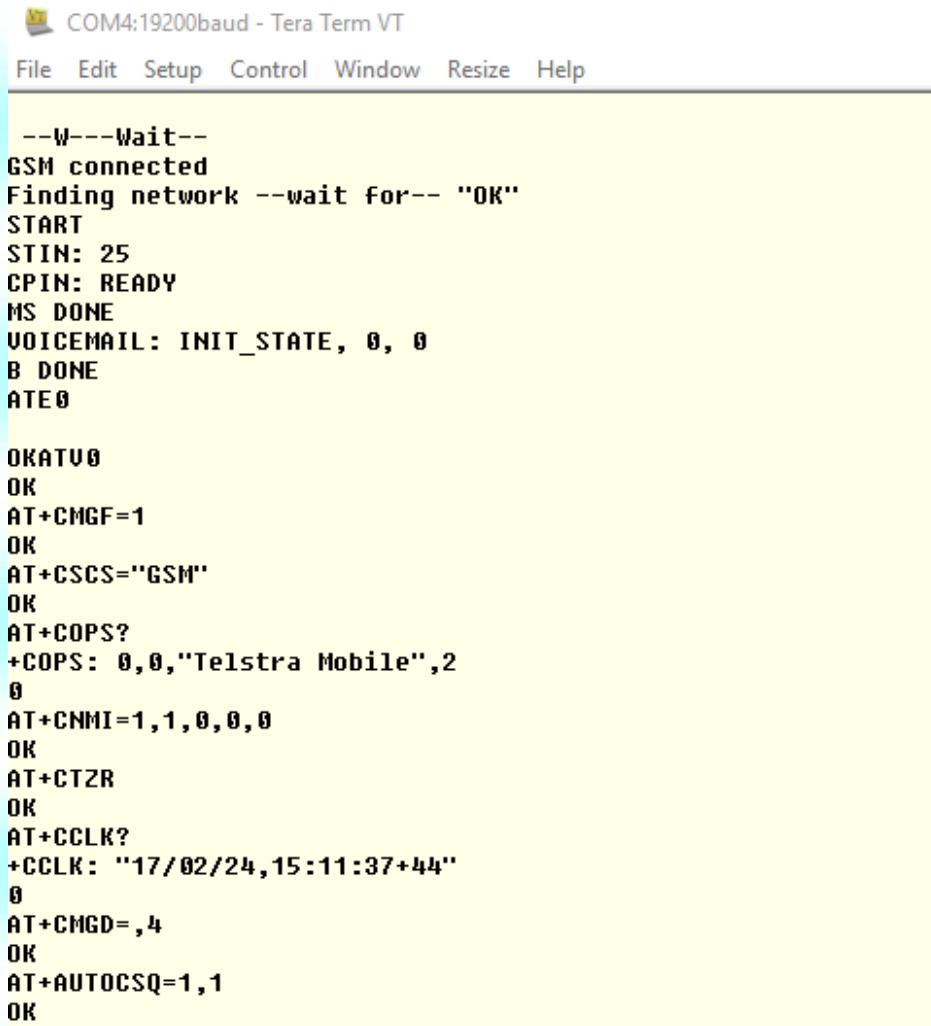and all traffic and automatic commands will be displayed.**

```
COM4:19200baud - Tera Term VT

File   Edit   Setup   Control   Window   Resize   Help

H

 WELCOME TO 3G-EASY (SMS SECURITY CONTROLLER V01-17)
 H   HELP commands   (Terminal 60x40/No-Echo/CR only)
 T   TIME check
 N   NETWORK check
 Q   NETWORK Offline, (Recommended for Data Setup)
 C   CONNECT GSM TO NETWORK
 L   List data Phone numbers etc
 S   SETUP OR MODIFY (reveiw data Phone numbers etc)
 B   BACKUP, SAVE/RECOVER Data,
 F   PROGRAM FLASH UPDATE NEW FIRMWARE
 R   RESET (Clear all data to Factory setting)
 \   GO TO GSM AT COMMAND MODE (technical diagnosis)
 /   RETURN FROM GSM AT COMMAND MODE

GSM connected

>N
AT+COPS?
+COPS: 0,0,"Telstra Mobile",2
0
AT+CSQ
+CSQ: 12,99
0

>
```

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At the startup AT commands are generated automatically by software and start off with waiting signal until network is connected, this progress can be monitored for diagnostic observation.

```
COM4:19200baud - Tera Term VT
File  Edit  Setup  Control  Window  Resize  Help

 --W---Wait--
GSM connected
Finding network --wait for-- "OK"
START
STIN: 25
CPIN: READY
MS DONE
VOICEMAIL: INIT_STATE, 0, 0
B DONE
ATE0

OKATV0
OK
AT+CMGF=1
OK
AT+CSCS="GSM"
OK
AT+COPS?
+COPS: 0,0,"Telstra Mobile",2
0
AT+CNMI=1,1,0,0,0
OK
AT+CTZR
OK
AT+CCLK?
+CCLK: "17/02/24,15:11:37+44"
0
AT+CMGD=,4
OK
AT+AUTOCSQ=1,1
OK
```

SETUP   Press S and you will be asked to select List or Program/Modify

The program data is arranged in the following order for List or Template Entry.
During *Program/Modify* existing data can be *skipped by Esc key* before any character is typed.
For phone security, recovery code should be changed.
Entering Setup data by PC Terminal allows template data entry to eliminate errors

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```
COM4:19200baud - Tera Term VT                                    —

File   Edit   Setup   Control   Window   Resize   Help

Edit-Number, OR Type Esc=SKIP OR D to Delete
MEMBER PHONE NUMBERS              61402739915
                                 61400000061
Enroll a new member Phone number 614xxxxxxx Y/N?

MASTER PHONE NUMBER              61413005427
MOBILE RECOVERY CODE             R12345
ENTRY CODE (1 day temporary)     000000
ENTRY HOURS                      0800-1800
LATCH Pulse 1to9 secs, 0=ON      3

INPUT1 Triggers (Loop/Terminated/Break/Off)
TRIGGER  Type         L/T/B/O    L
INPUT delay           secs       01
RESTORE REPORT                   N
ALARM1 CALL                      61413005427
ALARM1 MESSAGE-                  PUMP1 FAIL

INPUT2 Triggers (Loop/Terminated/Break/Off)
TRIGGER  Type         L/T/B/O    L
INPUT delay           secs       01
RESTORE REPORT                   N
ALARM2 CALL                      61413005427
ALARM2 MESSAGE-                  PUMP2 FAIL

ADDRESS                          18 Country Place,
                                 SMALLTOWN
                                 2478.

MEMBER PHONE NUMBERS             61402739915
                                 61400000061

SAVE CHANGES   Y/Esc/N?
```

SETUP DATA STORE   *International number code*
Required for incoming caller ID

Master Phone Number	614xxxxxxx	614 = AU code master phone call ID.
Recovery Code	R12345	R + 5 digit pin, default=R12345
Member Phone Number	614xxxxxxxxx	[Press Esc key to SKIP] (614 = AU code).

Enrol a new member Phone number Y/N?   [or press Esc]

Entry Code	xxxxxx	(optional) 4 to 6 digits for temporary access.
Entry Hours	xxxx xxxx	(optional) members restricted entry time window.
DOOR/GATE pulse time	3	(optional) 1 to 9 secs 0=latching

ACCESS and Alarm DATA STORE		**INPUT triggers are L=Loop/ B= Break/ T= Terminated**
INPUT1 Trigger	O	**default is O =Off**
TIGGER1 delay	xx1	(default 1sec) 001 to 255 seconds.

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ALARM1 Call	614xxxxxxxx	Required if **input 1** triggered (national mobile 614 dialed).
ALARM1 Message	cccccccccccccccc	Up to 16 alpa-numeric characters.
INPUT2 Trigger	O	**default is O =Off**
TIGGER2 delay	xx1	(default 1sec) or 001 to 255 seconds.
ALARM2 Call	614xxxxxxxx	Required if **input 2** triggered (national mobile 614 dialed).
ALARM2 Message	cccccccccccccccc	-- Esc saves if less than 16 characters entered.
REPORT	N,N	Default is No, **Y** for first entry, **Y** for exit

Reports (E + address).

ADDRESS   ccc- 40 char –ccc   Address of Premise can be appended to
The Alarm message.   Enter key will split address into lines, (enter counts as a as 1
character), Esc completes entry before 40 chars.

Firmware updates are done by usb serial cable, in the terminal monitor mode just follow menu prompts *Free computer software is available See* [Appendix A](#)

 The current Flash firmware version is contained on CD, file **3G V0217.s19**, any new update may be received by EMAIL and can be dragged to be used in a easy to reach location on the desktop and there is no harm in a practice run at the Flash update. The **V0217** is month and year of the version.

 User sent message text (OPEN) Operates relay or Latch or Gate entry. We are in pc monitor mode

```
COM4:19200baud - Tera Term VT                          -
File  Edit  Setup  Control  Window  Resize  Help
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 \   GO TO GSM AT COMMAND MODE (technical diagnosis)
 /   RETURN FROM GSM AT COMMAND MODE

GSM connected

>F

WARNING: THIS WILL ERASE MAIN PROGRAM
DATA MODELS AND TOTALS WILL BE PRESERVED
HAVE NEW PROG.S19 FILE READY.   CONTINUE N/Y
```
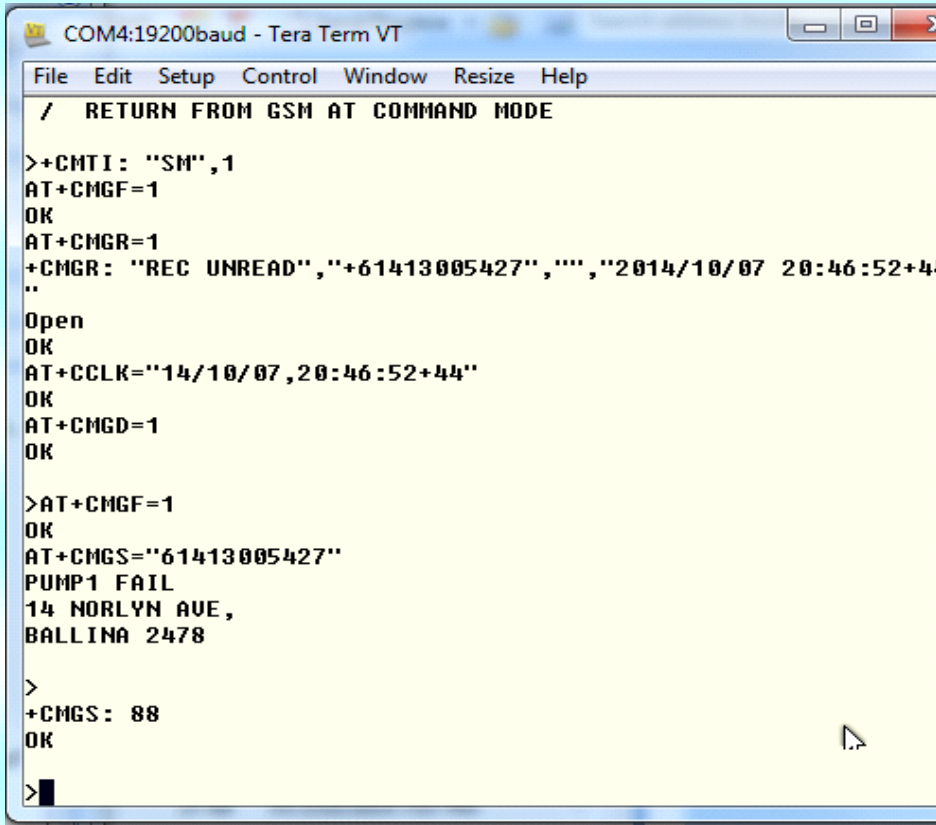
Technical: for advanced option installers using Computer


```
COM4:19200baud - Tera Term VT

File  Edit  Setup  Control  Window  Resize  Help

/  RETURN FROM GSM AT COMMAND MODE

>+CMTI: "SM",1
AT+CMGF=1
OK
AT+CMGR=1
+CMGR: "REC UNREAD","+61413005427","","2014/10/07 20:46:52+4
..

Open
OK
AT+CCLK="14/10/07,20:46:52+44"
OK
AT+CMGD=1
OK

>AT+CMGF=1
OK
AT+CMGS="61413005427"
PUMP1 FAIL
14 NORLYN AVE,
BALLINA 2478

>
+CMGS: 88
OK

>
```

Input trigger sends outgoing message to recipient mobile.
NOTE ; this process is automatic and we are in pc monitor mode.

APPENDIX A (computer applications required for usb programming)

Before connecting the USB please install the driver provided (FTDI CDM v2.12.00 WHQL Certified.exe) on the installation CD. The driver is from FTDI and can also be downloaded http://www.ftdichip.com/Drivers/VCP.htm
After the driver has been installed the module and USB can be connected.
See appendix A for Com port allocation if required.

Although other generic Terminal programs can be used I recommend **TeraTerm** as being the easiest to use.
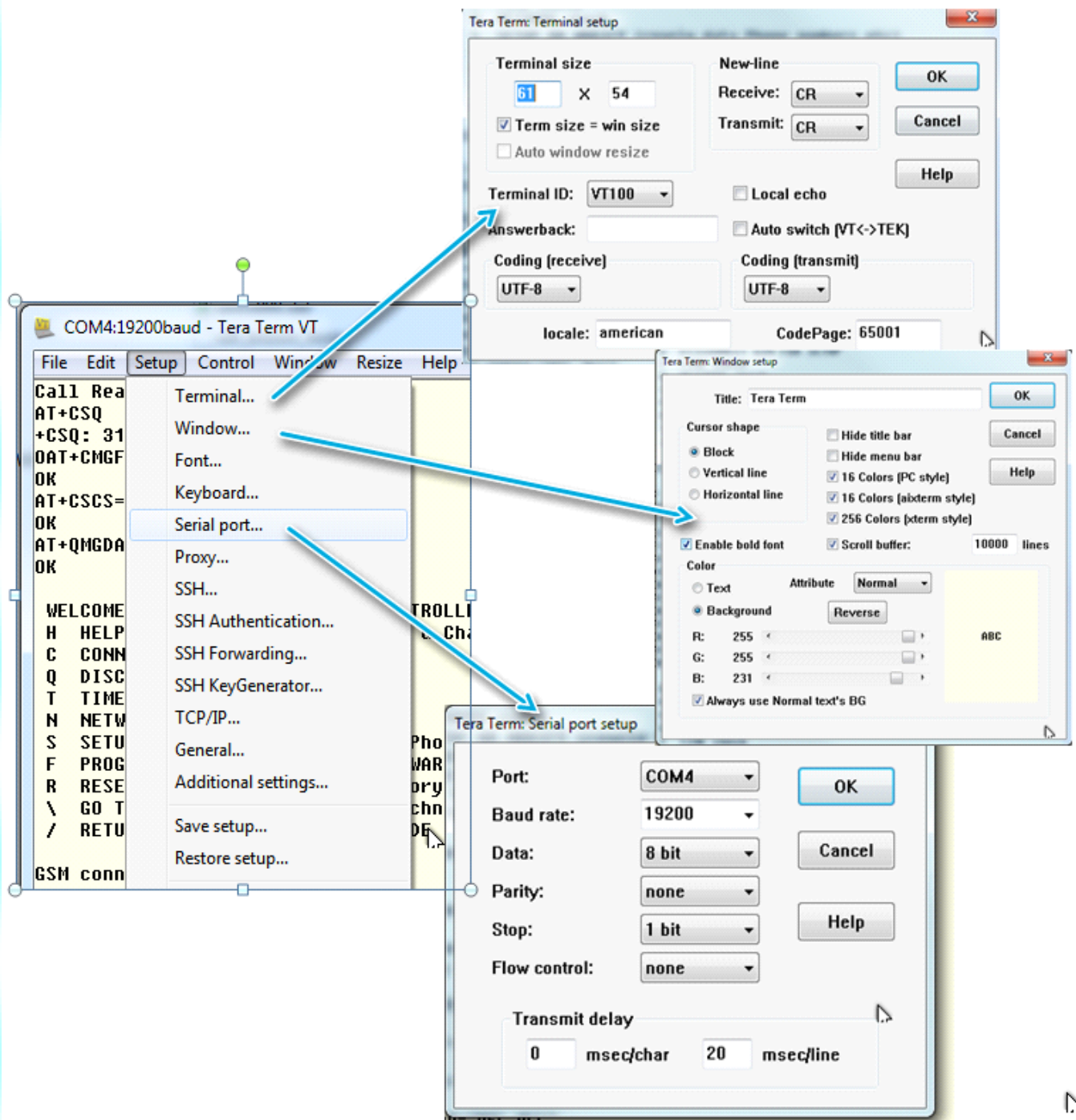https://osdn.net/projects/ttssh2/releases/
A copy of this program is ready for installation on the CD provided also including TeraTerm licence and copyright.
Only TeraTerm part of the application is required, just accept default install.

See Appendix A for Com port allocation and terminal setup
if required. (say com4)
 Com4, 19200baud, 8bit, 1stop, and no flow control. Also
set 0ms char delay and 50ms line delay to avoid overrun
during flash update if ever required.

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A better accessible serial port can be re-nominated provided it is not hardware connected to a computer device (Com1 or inbuilt modem) and even if the port is reported as being previously used two usb devices can be allocated the same com port provided they are not connected at the same time.

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