



Vehicle Security System 'Upgrade'

Model: **MAP70**

INSTALLATION & PROGRAMMING

GENERAL

- The Mongoose MAP70 vehicle security system is designed for connection to specific CANBUS equipped vehicles.
- This product must be installed by suitably qualified persons according to AS/NZS3749.2 1997 Installation Standards.
- Connection of this product by any other means other than those supplied by Mongoose may make this product inoperative and will void any warranties.
- Before installing this product, the negative battery terminal must be disconnected to prevent any short circuits and/or possible damage to the vehicles electronics. If for some reason disconnecting the battery is not possible, the wiring harness of this product must not be connected to the alarm module until all correct connections have been made.
- +12v, negative ground vehicle only.

What is CANBUS ?

CANBUS is a balanced multiplex 2-wire interface running over either a Shielded Twisted Pair (STP), Un-shielded Twisted Pair (UTP), or Ribbon cable.

CANBUS is used to connect several vehicle microcontrollers to establish a network. Each controller which is connected to the network is called a "node". CANBUS uses a bus-topology which means that every node is connected to a common single two wire and is able to communicate with all the other nodes connected to the network.

The connection to the vehicle is realized with two wires: CAN-HIGH and CAN-LOW. All nodes are able to simultaneously read the data from the bus however only one node at a given time has write access to the bus.

The vehicle alarm system inputs are connected to the CAN-HIGH and CAN-LOW wires and these signals control the alarms functions.

The alarms outputs are the same as conventional alarm systems.

PROGRAMMING – Basic description

If not already pre-programmed for the correct vehicle type and option selection when purchased, the system can be programmed during installation for various functions and options.

- Individual programmes are selected by turning the ignition on and off after entering programme mode.
- Programme selection is confirmed by LED flashes:-
eg: 3 flashes for programme # 3
- The value of each programme is changed by pressing the PA button
- Each press increases the value by 1 (2 LED flashes)
- To decrease values, press the PA button for 3 seconds
- Each press of the PA button now decreases the value by 1 (1 LED flash)
- When the LED ceases to flash, this means you have reached the upper or lower limit of the values available
- Lowest limit is always 1
- To exit programming, turn the ignition on and press the PA button for 3 seconds – siren chirps once to confirm.

TO ENTER PROGRAMMING MODE

1. Turn the ignition on and off twice quickly
2. The LED will fast flash for 5 seconds
3. When the LED is flashing, press the PA button quickly 5 times (within 5 sec's)
4. If correct, the LED will flash once to confirm you have entered programming mode and are in programme #1
5. If, for example, you wish to modify programme #5 (ignition door locking), turn the ignition on/off 4 times. LED flashes 5 times to confirm.

TO EXIT PROGRAMMING MODE

Turn the ignition on and press the PA button for 3 seconds – siren chirps once to confirm.

PROGRAMME #1 Selection of vehicle type – sets CanBus/vehicle language

If not already pre-programmed for the correct vehicle type, this programme sets the alarm system to the language of the CanBus system.

If this programme is not set correctly, the alarm will not function.

Programme #1 is default after entering programming mode above – no need to select programme number. Default level is 3

See the vehicle list for the appropriate LV value of the vehicle to which the alarm is to be installed. Values range from 1 to 56.

EXAMPLE: Ford Focus, the LV is '8'.

The value therefore needs to be increased by 5 as the factory default is 3.

- Enter 'programming mode'
- Press the PA button 5 times – each press flashes the LED twice
- This sets the value to '8' (default of 3 + 5)
- Exit programming.

Confirm alarm operation by locking and unlocking the doors with the factory remote control. The LED shows armed status.

PROGRAMME #2

Adjusting ultrasonic sensitivity

Number of sensitivity values = 10
Default value = 5

Set a value between 1 and 10 where 1 is the lowest and 10 is the highest.

With this programme selected, the ultrasonic sensor is being continuously tested. The detection movement is confirmed by siren chirps. Do not set too sensitive as false alarms may occur.

PROGRAMME #3

Engine immobilisation

<u>Value</u>	<u>Function</u>
1	Engine immobilises only when alarm armed (default)
2	Automatic 25 seconds after ignition off
3	Anti-hijack – triggered by pressing PA button
4	Anti-hijack – triggered by opening the drivers door
5	No function

60 seconds after the anti-hijack is triggered, the indicators will start flashing and the siren will start chirping. 10 seconds later, the engine will immobilise. The siren sounds then fully sounds for 30 seconds and the indicators flash until the alarm system is disarmed.

PROGRAMME #4

Central locking and electric window roll up

This programme sets the time to wind-up of the electric windows if they have been left open when arming. Factory default partially winds up the windows for 1 second, otherwise do not connect yellow/brown wire.

<u>Value</u>	<u>Timing</u>	
	<u>Lock</u>	<u>Unlock</u>
1	1 sec	1 sec (default)
2	3 sec	3 sec
3	2 sec	1 sec
4	3 sec	1 sec
5	5 sec	1 sec
to	to	
31	30 sec	1 sec

PROGRAMME #5

Ignition safety door lock

Value

- | | |
|---|---------------------------------------|
| 1 | Ignition door locking off – (default) |
| 2 | Ignition door locking on |

When enabled, the doors will automatically lock 8 seconds after turning the ignition on.

Only operates if brown and brown/yellow wires have been connected.

PROGRAMME #6

Light flash configuration

The alarm provides 2 yellow wires which normally flash the indicators.

In some vehicles, the connection is difficult due to electronic separation of the front and rear lamps of the CanBus system (BMW, Mercedes, Citroen, Peugeot).

For these vehicles, light flash can be achieved by the hazard lights by a negative pulse on the violet wire or in some Mercedes vehicles, information is sent to the vehicles CanBus where no connection is necessary.

Value

- | | |
|---|---|
| 1 | Standard / Perimeter mode (default) |
| 2 | CanBus trigger mode – some Mercedes vehicles only |

When value 1 is selected.

During installation, you can choose to flash the lights via the hazard circuit using the violet wire (negative signal), or directly to the indicator circuits using the yellow wires (positive signals).

When value 2 is selected.

The hazard lights are controlled on by the vehicles CanBus. No need to connect any light flash wires.

PROGRAMME #7

Siren chirp confirmation

The audible arm and disarm siren chirps can be programmed on or off.

Value

- | | |
|---|-------------------------------------|
| 1 | Silent arm/disarm (default) |
| 2 | Chirps on (1 for arm, 2 for disarm) |

PROGRAMME #8

Alarm activation memory

This programme is for the installer to check the reason why the alarm has been activated. This assists in diagnosing possible installation or vehicle faults. The reason for the trigger is shown by the LED flash codes.

The alarm memorises the last three activations, A (oldest), B & C (last).

Enter programming mode and select programme #8.

The last activation, 'C' is shown.

Press the PA button once, siren chirps once – shows activation 'B'

Press the PA button again, siren chirps once – shows activation 'A'

(Further presses of the PA button cycles the activations C-B-A-C-B-A)

Press and hold the PA button for 3 seconds to clear the memory – 3 chirps confirm erasure.

<u>Number of flashes</u>	<u>Reason</u>
0	No triggers
1	Passenger doors
2	Drivers door
3	Bonnet
4	Boot
5	Ultrasonic sensors
6	Optional sensor
7	Ignition

PROGRAMME #9

Optional Mongoose remote and anti-hijack transmitters

WARNING: THIS PROCEDURE RESTORES ALL PROGRAMMES BACK TO FACTORY DEFAULTS.

ALL PROGRAMMES, INCLUDING VEHICLE TYPE, HAVE TO BE RE-SET.

Do not enter this programme unless you wish to learn new remote transmitters as entering this programme automatically erases any previous remotes.

To avoid accidental erasure, turn the ignition on within 2 seconds of the LED flashing its confirmation of the programme number.

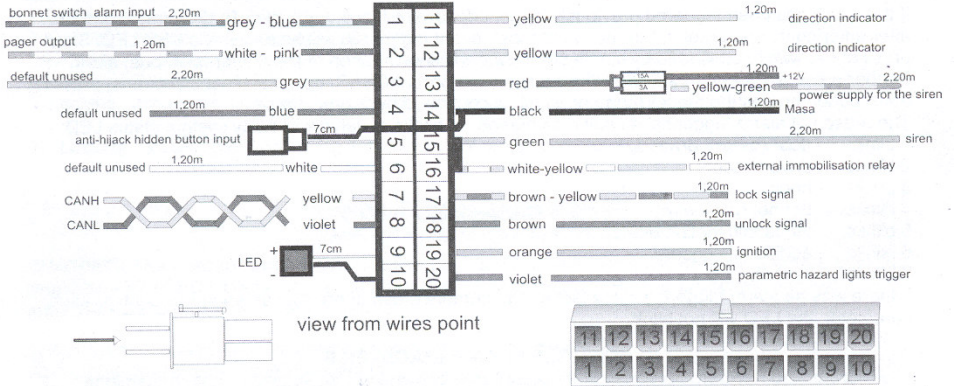
To memorise 2 remote transmitters:

1. When LED lights, press upper button on the remote transmitter
2. The LED goes off – 1st remote is memorised
3. When LED lights again, press upper button on next remote
4. The LED goes off – 2nd remote is memorised

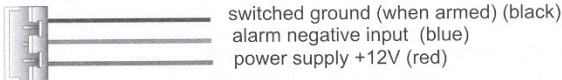
To memorise an anti-hijack transmitter:

5. Carry out remote procedure 1 ~ 4 above
 6. Press and hold PA button until LED lights (do not use any remote transmitter)
 7. Press anti-hijack for 5 seconds until LED lights
 8. Wait till LED goes out
- System now automatically exits the learning mode

Description of connections of vehicle security system



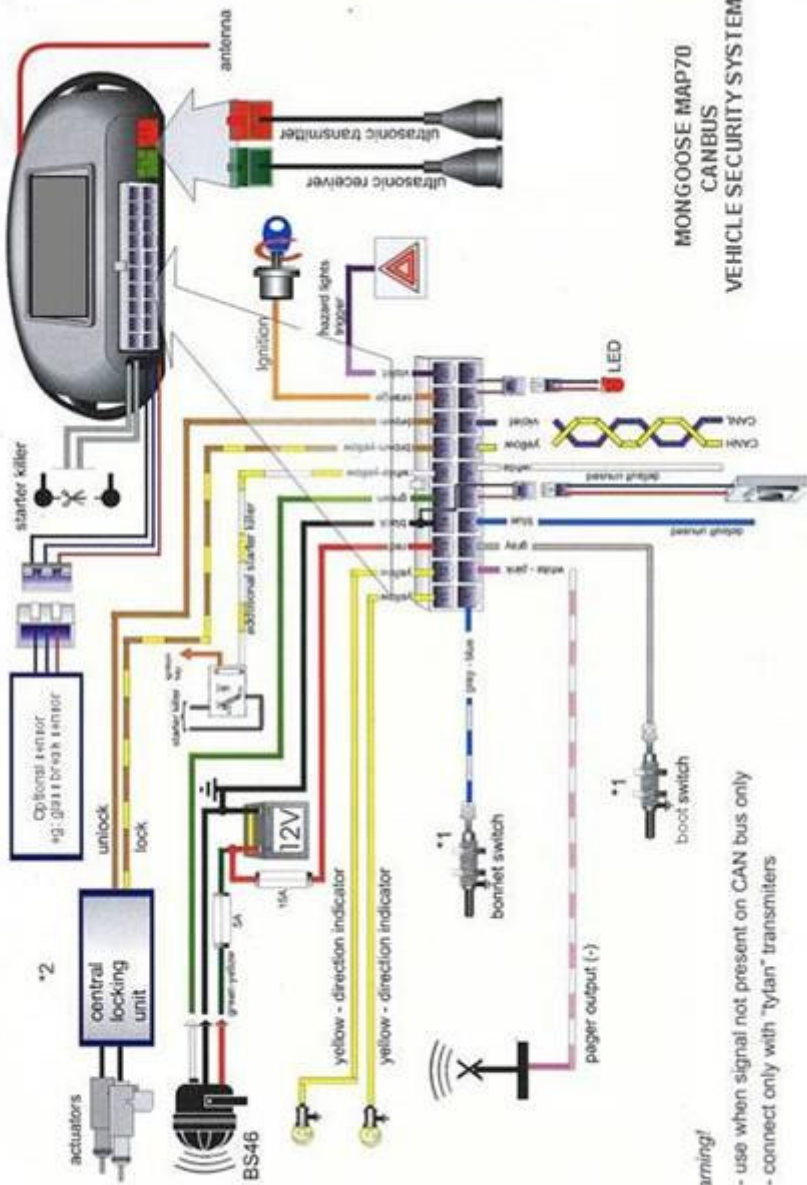
1. grey-blue wire (bonnet switch alarm input)
2. white-pink wire (pager output, short to ground during alarm state, up to 250mA)
3. grey wire default unused
4. blue wire default unused
5. anti-hijack hidden button PA input
6. white wire (+12V detection input, e.g analog hood release signal in Ford Focus II)
7. yellow wire CAN bus CANH
8. violet wire CAN bus CANL
9. status signalisation LED +
10. status signalisation LED -
11. yellow wire analogue direction indicator output (12V, up to 10A)
12. yellow wire analogue direction indicator output (12V, up to 10A)
13. red wire (positive +12V supply, protected by 15A fuse)
- yellow-green wire power supply for battery back-up siren, protected by 5A fuse
14. black wire ground
15. green wire alarm positive output for audible warning device, 12V up to 1A
16. white-yellow wire alarm negative output for external immobilisation relay
17. brown-yellow wire central door locking control negative output (ground) lock signal (up to 250mA)
18. brown wire central door locking control negative output (ground) unlock signal (up to 250mA)
19. orange wire ignition signal alarm input
20. violet wire perimeter hazard lights trigger alarm negative output, up to 250mA



connect to for additional sensors (tilt sensor, microwave, ...)

TECHNICAL DATA

- | | |
|--------------------------------------|-------------|
| 1. Power supply | 9-16V |
| 2. Current consumption when disarmed | 13.2 mA |
| 3. Current consumption when armed | 19.3 mA |
| 4. Operating temperature range | -40C - 85C |
| 5. Alarm signalisation time | 30 seconds. |



**MONGOOSE MAP70
CANBUS
VEHICLE SECURITY SYSTEM**

Warning!

- *1 - use when signal not present on CAN bus only
- *2 - connect only with "titan" transmitters

PA - anti hijack button