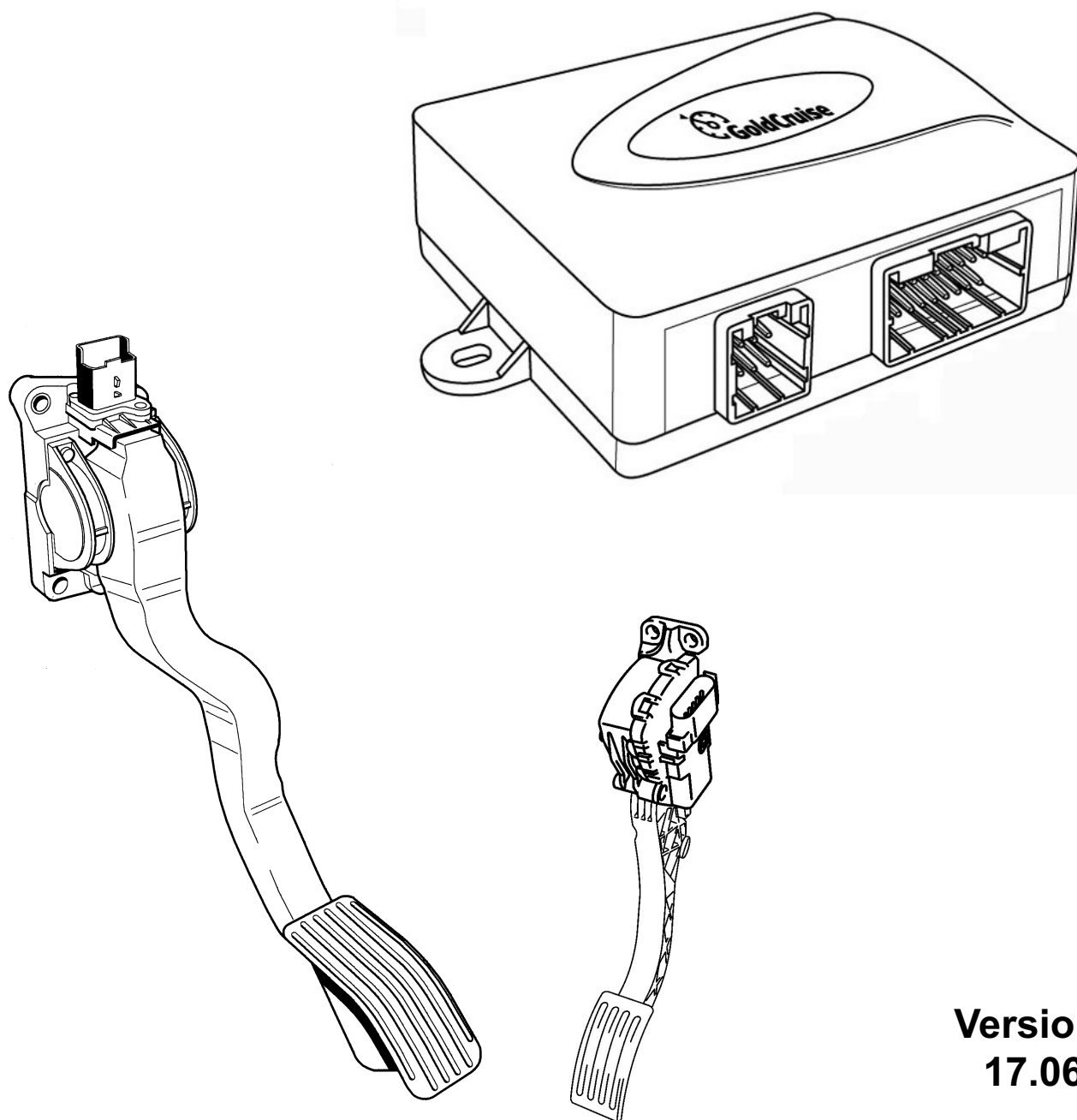


Installation Manual

GC90c



Version:
17.06D

1

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2

Introduction

The GC90 GoldCruise is a modular product that consists of two separate parts:

The universal part consists of:

- ECU
- Universal wiring harness
- General installation manual

The specific part consists of:

- Specific wiring harness
- Specific installation manual

The general installation instructions are described in this manual (Part A).

The make/model specific instructions of the installation are described in Part B, which is supplied with the specific wiring harness.

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General introduction

The GC90 GoldCruise is a product distributed by Gold Automotive b.v. which has been designed with great care and precision. The installer of the GC90 needs to have accurate technical knowledge of modern cars and experience with working on modern cars.

To prevent problems during installation, read these manuals completely before starting installation. Should any uncertainties or questions arise during the installation, please contact your local supplier

4

Working principle

The GC90 GoldCruise consists of a compact ECU, which is connected between the accelerator pedal and the engine ECU. The interface “manipulates” the engine ECU and therefore regulates the relationship between vehicle speed and throttle valve position and injection time. This manipulation is done by varying the accelerator pedal output voltages. This means that the engine ECU remains intact, not interfering with factory settings and warranty. The so-called ‘learning’ of output voltages occurs through a simple learning procedure. To guarantee 100% safety the GC90 has been subjected to the latest and heaviest tests, common in the automotive industry. The GC90 has both E1, KBA (ABE), and TÜV certificates.

The GC90 has a predictable regulating character and will always forward the accelerator pedal signals when the GC90 is disengaged or disabled.

5

Safety first

Symbol explanation:



Hazard!

This symbol indicates a (possible) hazardous situation. The hazardous situation may cause (serious) injuries or death, damage to the car, damage to the product itself or harm the environment.



Caution!

This symbol indicates a strong and important advice to the installer. Neglecting this advice may cause damage to the engine or the GoldCruise-system itself.

5

Safety first



Caution: Car is equipped with 12V power supply and ground body.

Caution: The brown wires have to be connected in a way that on one wire there is a 12V feed from the brake fuse and a ground through the brakelights (with the brake pedal released)

Caution: If the brakelight system is equipped with a relay, the brown wire has to be connected to the wire connected to the wire that runs to the brakelights.

Caution: Cut wires to required length, do not wind too long wires on a roll, but tie them together backwards and forward.

Following terminal designations are used in vehicle wiring:

“+30”
“- 31”
“+15”

Permanent feed, battery plus
Ground, recirculation from battery ground
Ignition switched feed



Hazard!

Never change, manipulate or open any part of the GoldCruise. This can effect the functioning of the GoldCruise seriously, and will cause the warranty to become void.



Hazard!

Installation of the GoldCruise by an unqualified person can cause serious injuries and/or damage to the car, the product or the environment.



Hazard!

To avoid damage to the GoldCruise and the vehicle, use a multimeter or a LED-tester when performing measurements to the electrical system.



Hazard!

Always disconnect the negative terminal of the battery before working on the electrical equipment of the vehicle. The disconnection of the negative terminal may cause loss of volatile memories of the comfort-electronics.



Caution!

To secure the connection between two electrical wires, Gold Automotive advises to solder and then insulate the connection, using self sealing tape..



Hazard!

In case no clutch protection is installed, always notify the end user that the GoldCruise will not disengage when the clutch is pressed.

E-approval
TS-16949

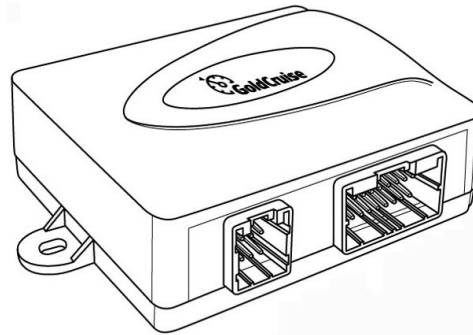
rai

KEMA CERTIFICAAT
ISO 9001

6

Mounting ECU

Mount the ECU and interface underneath the dashboard, away from extreme heat and moisture. Secure the ECU with ty-strings, doublesided tape or screws.



Caution !

Never mount the ECU and interface in the engine bay, where heatsources, vibrations and moisture exist.

7

Command modules

The GC90 GoldCruise can be supplied with one of these command modules:

CM-7; Dashboardpanel command module

CM-3; Steering column stalk

CM-4; Steering column stalk with 2 memorybuttons

CM-5; Steering column stalk with 3 memorybuttons

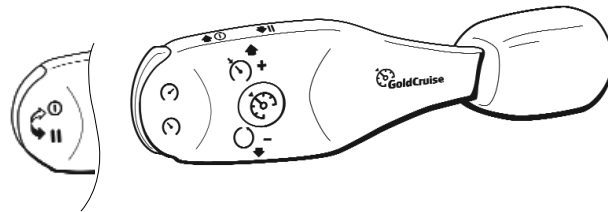
CM-12; Gearknob command module

CM-15; Infrared command module

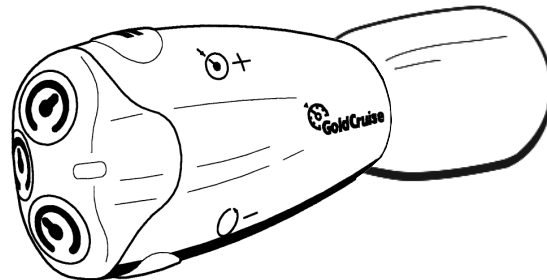
CM-8; 3-Memory command module, to be combined with: GC-1, GC-3, GC-GK of GC-IR.

Refer to the installation manual of the command module for mounting instructions.

CM-3 & CM-4



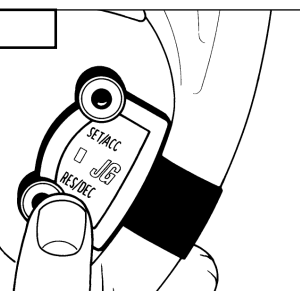
CM-5



CM-12



GC-15



Programming 2 or 3-Memory in GC-4, GC-5 or CM-8:

The Memory can be programmed in 4 steps :

- 1.) switch GoldCruise ON
- 2.) drive desired speed
- 3.) activate GoldCruise
- 4.) press button 1,2 or 3 until 2 beeps are audible

8

Wiring harness

Connections universal connections

Orange wire: Connect the orange wire to an ignition switched feed (+15), Preferably right after the ignition switch.

Twisted pair: (Blue&Blue/white) These wires are connected to the CAN lines of the car, usually on the OBD connector. Connect blue to pin 6 of the OBD connector (CAN High), connect blue/white to pin 14 of the OBD connector (CAN Low).
In this case other connections are not necessary

Twisted pair: (Brown&Brown/white) The brown wires are connected to the brake switch. If the brake switch has more than two wires, use a voltmeter to detect the correct wires.



Beware!

The brown/white wire should be a permanent feed or ignition switched feed. The brown wire should read the battery voltage (+12V) when brake pedal is depressed and zero voltage (0V) when released.



Beware!

In case the brakelight circuit is equipped with a relais, connect the brown wire to the wire leading straight to the brakelights.

2-pin connector: Connect the purple wire to an O.E. clutch switch. The wire of the clutch switch, which connects to ground when the pedal is depressed, is the correct wire.
In this case do not connect the green/white wire.
Alternatively, connect an optional clutch switch to the 2-pin connector.

Yellow and green wire: Do not use these wires; cut off and insulate carefully.

Blue wire: Connect the blue wire to the VSS of the vehicle. Insulate the black wire carefully.
Please refer to the electrical diagrams of the vehicle to locate a suitable speed pulse signal. If no diagrams are available, try one of the following places:

- a 3-pin connector on the gearbox, near the differential
- radio ISO-connector, chamber 3 pin 1 or 5
- the ABS computer, engine ECU, electronic speedo or diagnostic connector often provide a suitable speed pulse

If the vehicle has no suitable speed pulse signal, install a speed pulse generator, in this case, connect the blue wire and connect the other pin to a ground point.

8-pin connector: Connect the 8-pin connector to the command module.

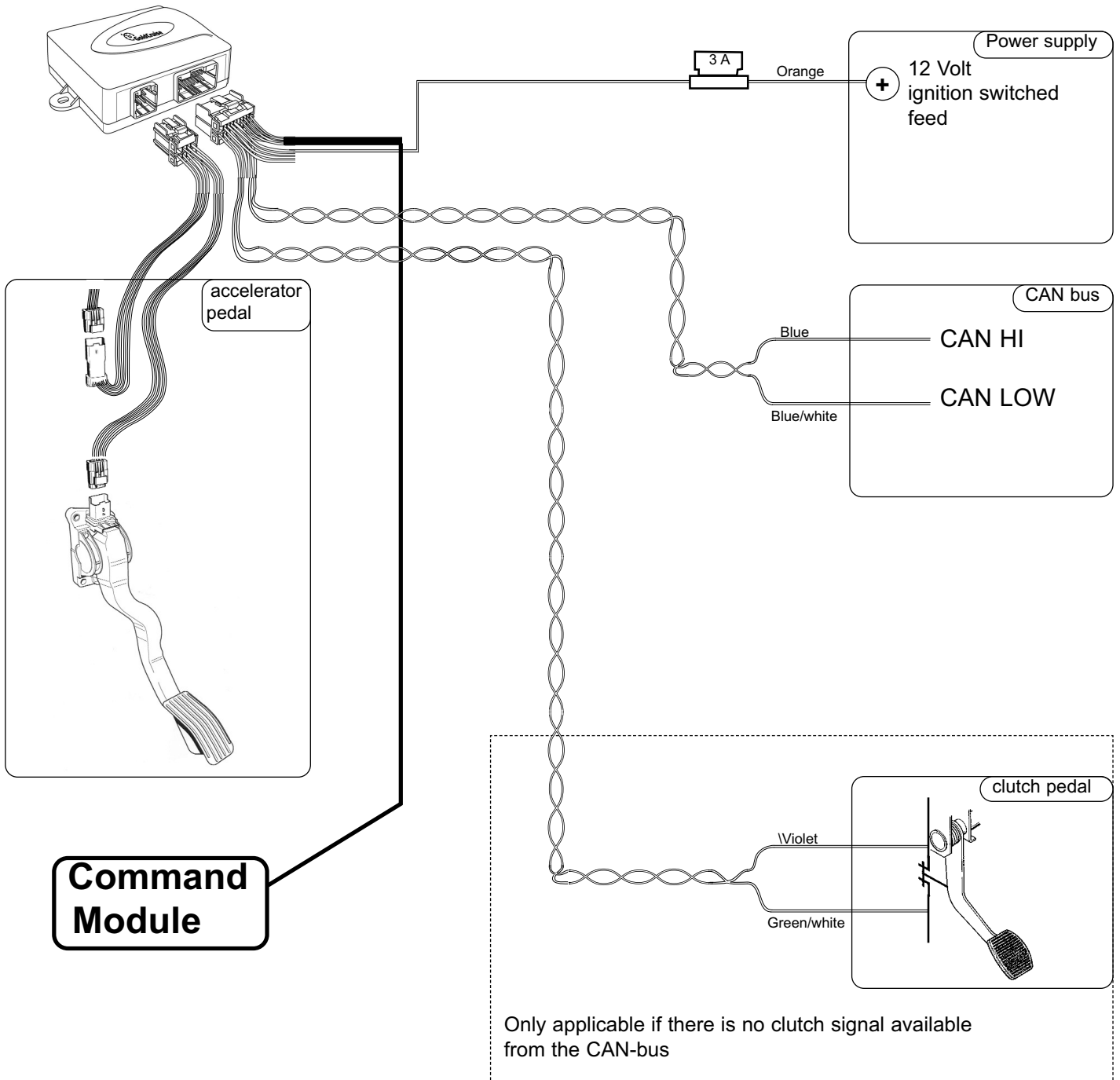


Specific connections:

The specific wiring harness for the accelerator pedal comes with a specific installation manual for most models it is suitable for. Follow the specific instructions from that manual and carry on with the content of this manual.

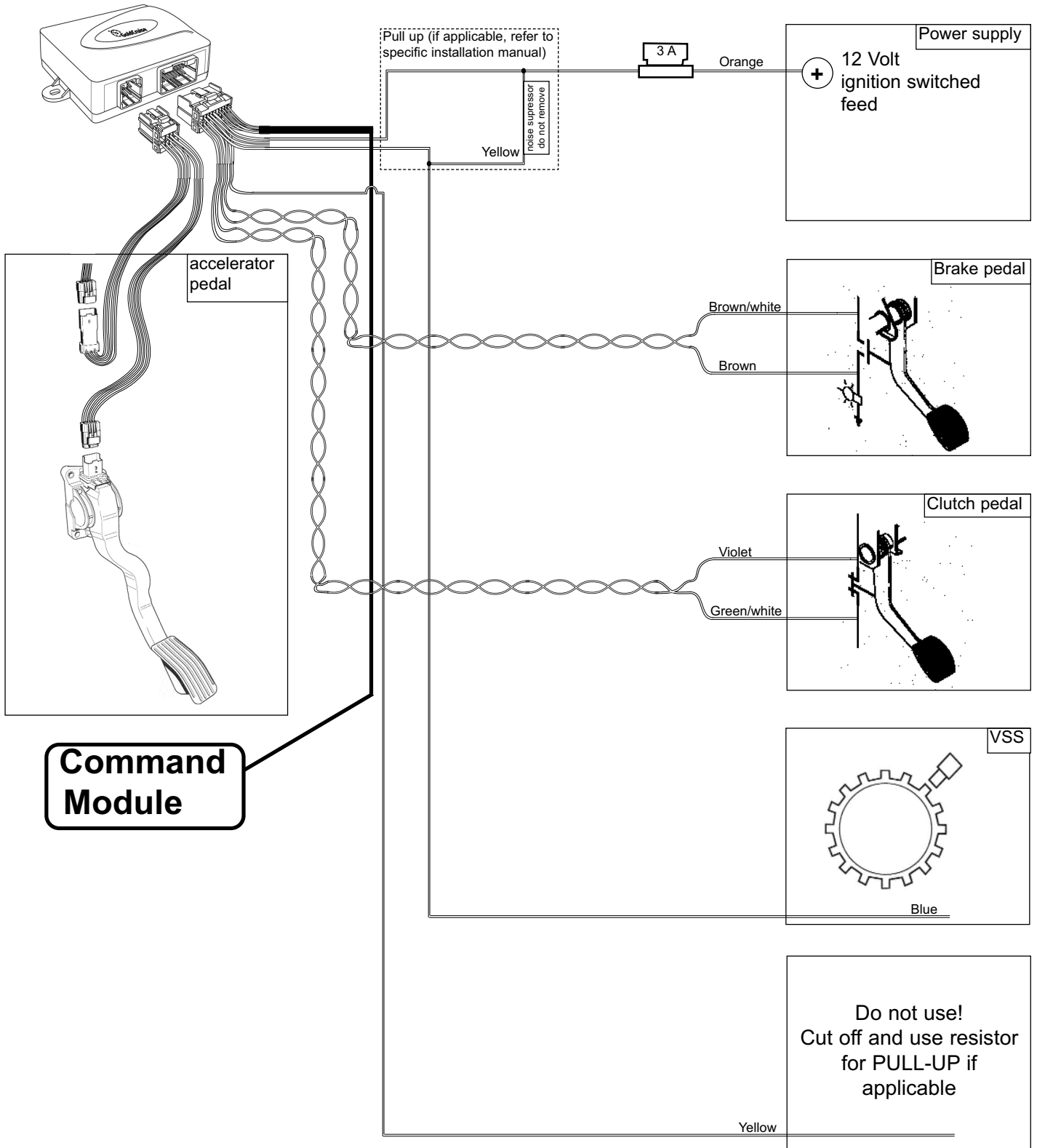
9

Wiring overview CAN



9

Wiring overview Analogue



10

CAN search

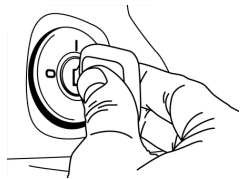
This procedure is required to learn the CAN of the car to the module. Only perform this procedure if the blue twisted pair are connected.

step	Action	Confirmation
1	Make sure that the ignition is off	
1	Press and hold the SW1 switch	
4	Turn the ignition on	2 beeps
2	press and hold the brake pedal and clutch pedal (if applicable) and press the SET key	1 beep and LED on ECU starts flashing
	The Module is searching for CAN messages	
3	CAN search failed. return to step 2	1 long beep
4	CAN search successfull	3 beeps
5	Release brake and clutch pedal	
5	Turn the ignition off. End of CAN search	

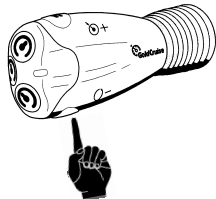
11

Pedal Setup

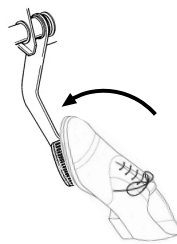
Compulsory for analogue connections
optional for CAN connection



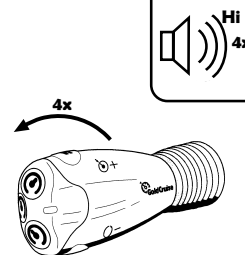
Switch ignition OFF
and then ON
(do not start!)



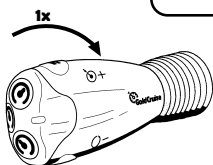
Switch the GoldCruise
ON



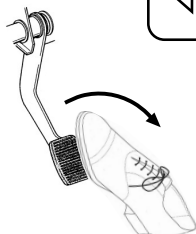
Press and hold the
brake pedal



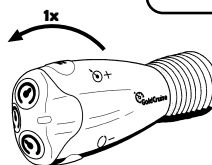
Press FIX/KM+ 4
times



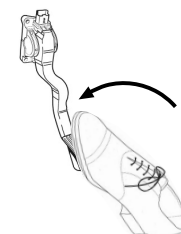
Press MEM/KM- once



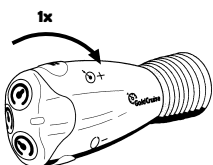
Release the brake
pedal



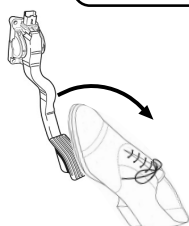
Press FIX/KM+ once



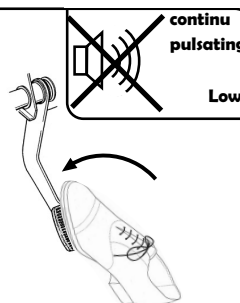
Slowly press the
accelerator pedal to
full throttle



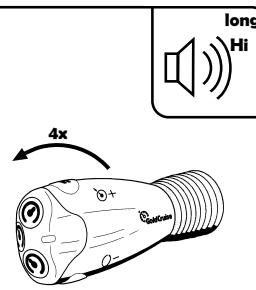
Press MEM/KM- once



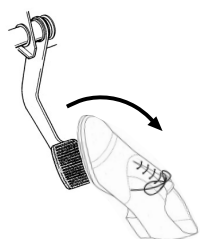
Release the
accelerator pedal



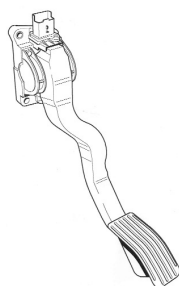
Press and hold the
brake pedal



Press FIX/KM+ 4 times



Release the brake
pedal



The End
Pedal Setup



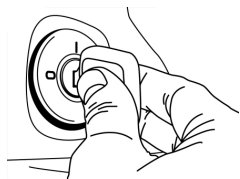
Caution!

Some accelerator pedals are equipped with a full throttle switch, causing the signals to be out of sync near full throttle.

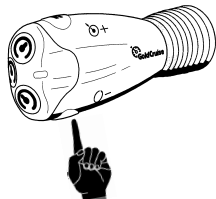
This may cause the procedure to fail, in this case repeat the setup, but only press the pedal to 95% instead of 100%.

12

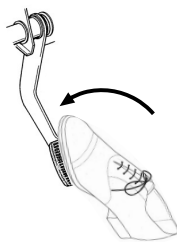
Speed signal Setup (compulsory)



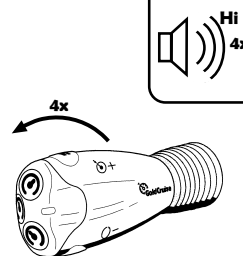
Start the engine



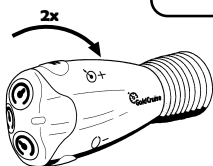
Switch the GoldCruise ON



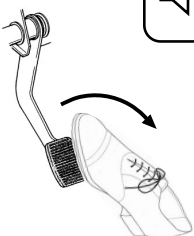
Press and hold the brake pedal



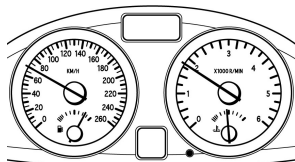
Press FIX/KM+ 4 times



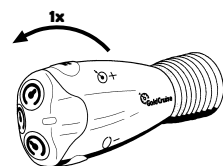
Press MEM/KM- 2 times



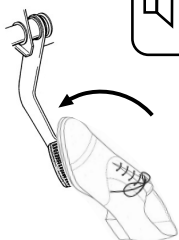
Release the brake pedal



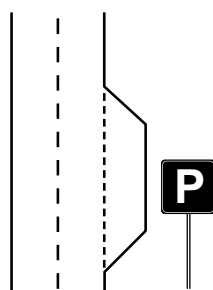
drive 72 km/h (or 45 mph)



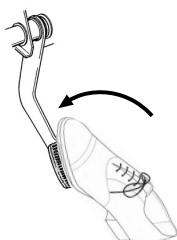
Press FIX/KM+ once GoldCruise engages



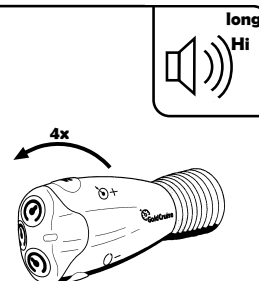
Press brake pedal briefly



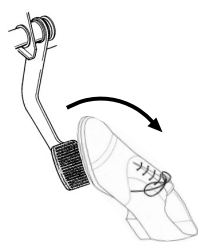
stop in a safe place



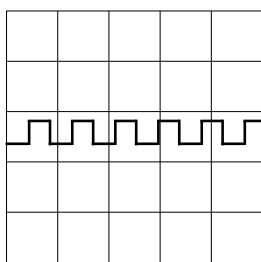
Press and hold the brake pedal



Press FIX/KM+ 4 times



Release the brake pedal



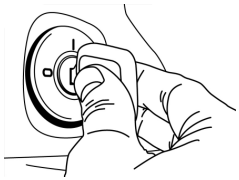
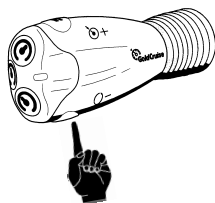
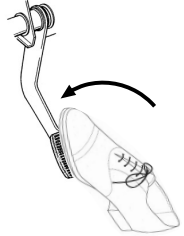
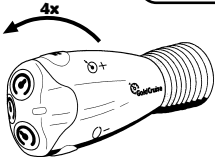
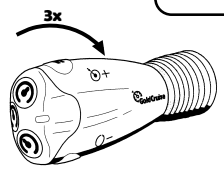
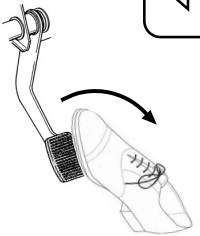
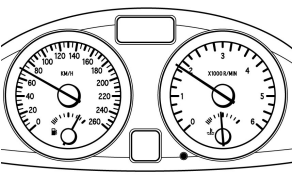
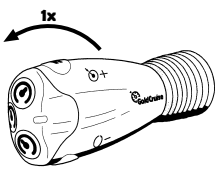
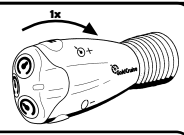
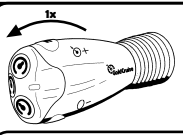
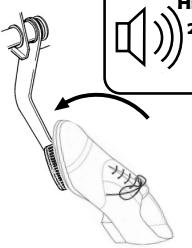
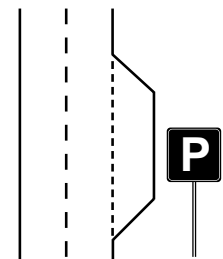
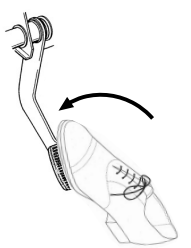
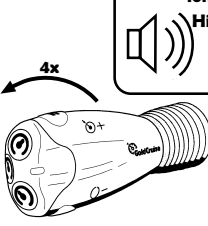
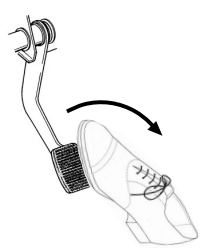
The End
Speed signal setup

13

Adjusting response time (optional)



The response time should only be adjusted in case the GoldCruise engages too aggressive or drops back at first.

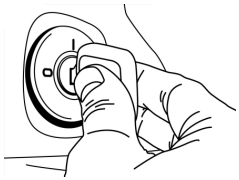
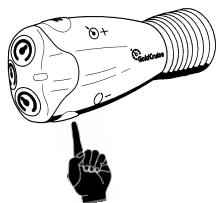
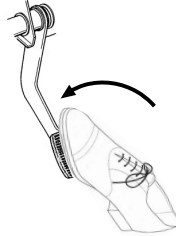
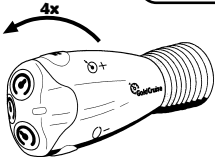
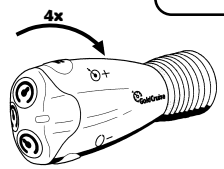
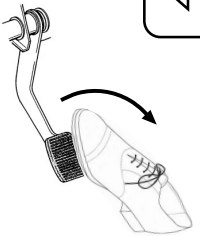
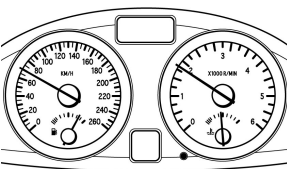
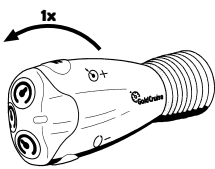
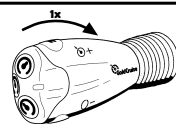
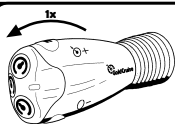
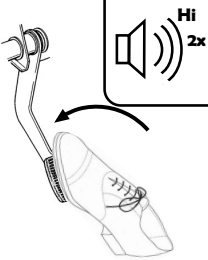
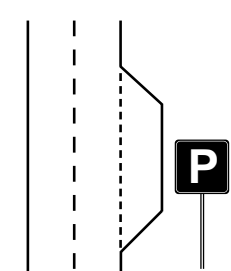
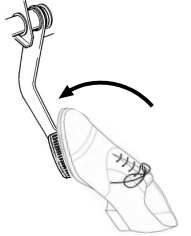
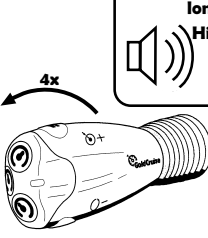
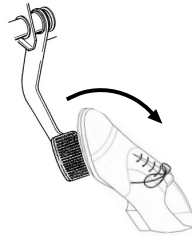
 <p>start the engine</p>	 <p>Switch the GoldCruise ON</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>																									
 <p>Press MEM/KM- 3 times</p>	 <p>Release the brake pedal</p>	 <p>Drive at least 40 km/h (or 25 mph)</p>	 <p>Press FIX/KM+ once, GoldCruise engages</p>																									
<p>← lower</p>  <p>Press MEM/KM- once per step</p>	<table border="1"> <tr> <td>step</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> </tr> <tr> <td></td> <td>3x</td> <td>4x</td> <td>5x</td> <td>6x</td> <td>7x</td> <td>8x</td> <td>9x</td> <td>10x</td> <td>11x</td> <td>12x</td> <td>13x</td> <td>14x</td> </tr> </table>	step	3	4	5	6	7	8	9	10	11	12	13	14		3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x	 <p>→ hoger</p> <p>Press FIX/KM+ once per step</p>
step	3	4	5	6	7	8	9	10	11	12	13	14																
	3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x																
 <p>Press the brake pedal briefly</p>	 <p>stop in a safe place</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>	 <p>Release the brake pedal</p> <p>the end</p>																								

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Adjusting sensitivity (optional)



The sensitivity should only be adjusted in case the GoldCruise reacts too forcefull (adjust lower) or too slow (adjust higher) whilst cruising.

 <p>Start the engine</p>	 <p>Switch the GoldCruise ON</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>																									
 <p>Press MEM/KM- 4 times</p>	 <p>release the brake pedal</p>	 <p>Drive at least 40 km/h (or 25 mph)</p>	 <p>Press FIX/KM+ once, GoldCruise engages</p>																									
<p>← lower</p>  <p>Press MEM/KM- once per step</p>	<table border="1"> <tr> <td>step</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> </tr> <tr> <td></td> <td>3x</td> <td>4x</td> <td>5x</td> <td>6x</td> <td>7x</td> <td>8x</td> <td>9x</td> <td>10x</td> <td>11x</td> <td>12x</td> <td>13x</td> <td>14x</td> </tr> </table>	step	3	4	5	6	7	8	9	10	11	12	13	14		3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x	 <p>→ higher</p> <p>Press FIX/KM+ once per step</p>
step	3	4	5	6	7	8	9	10	11	12	13	14																
	3x	4x	5x	6x	7x	8x	9x	10x	11x	12x	13x	14x																
 <p>press the brake pedal briefly</p>	 <p>Stop in a safe place</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>	 <p>Release the brake pedal</p> <p>the end</p>																								

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Fixed Speed Limit Setup (optional)



This menu allows you to set a fixed speed limit, that cannot be overridden. Only set in case the customer requests it

Switch ignition ON

Switch the GoldCruise ON

Press and hold the brake pedal

Press FIX/KM+ 4 times

Press MEM/KM- 5 times

Release the brake pedal

step	off	80	90	100	110	120	130	140	150
		km/h	km/h	km/h	km/h	km/h	km/h	km/h	km/h
		50	57	64	70	77	83	89	96
		mph	mph	mph	mph	mph	mph	mph	mph
		1x	2x	3x	4x	5x	6x	7x	8x

lower

Press MEM/KM- once per step

higher

Press FIX/KM+ once per step

Press the brake pedal

Press and hold the brake pedal

Press FIX/KM+ 4 times

Release the brake pedal

The end
Fixed speed limit setup

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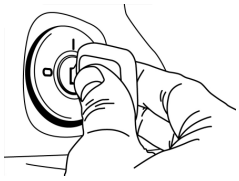
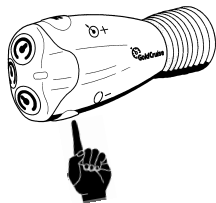
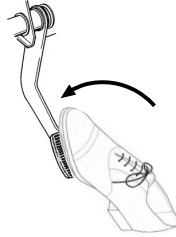
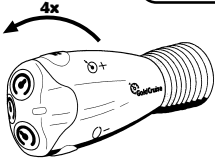
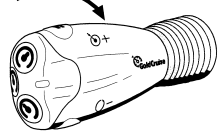
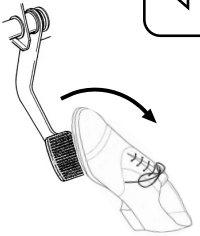


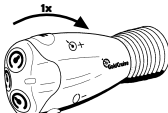
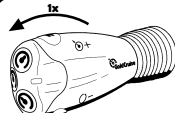



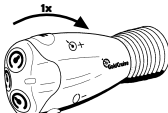
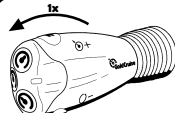



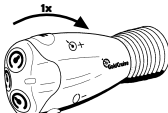
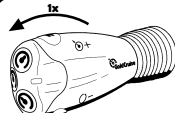

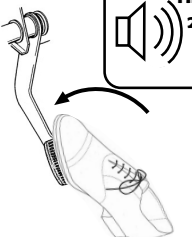
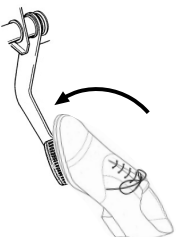
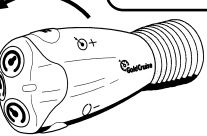
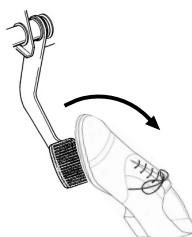
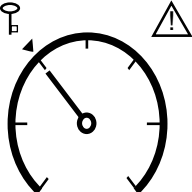
voluntary limiter or speed alert (optional)



This menu allows you to choose between a voluntary speed limiter or an audible warning at a certain speed (speed alert)

Also in this menu you can choose whether the set limit can be overridden when the pedal is pressed to full throttle abruptly (override)

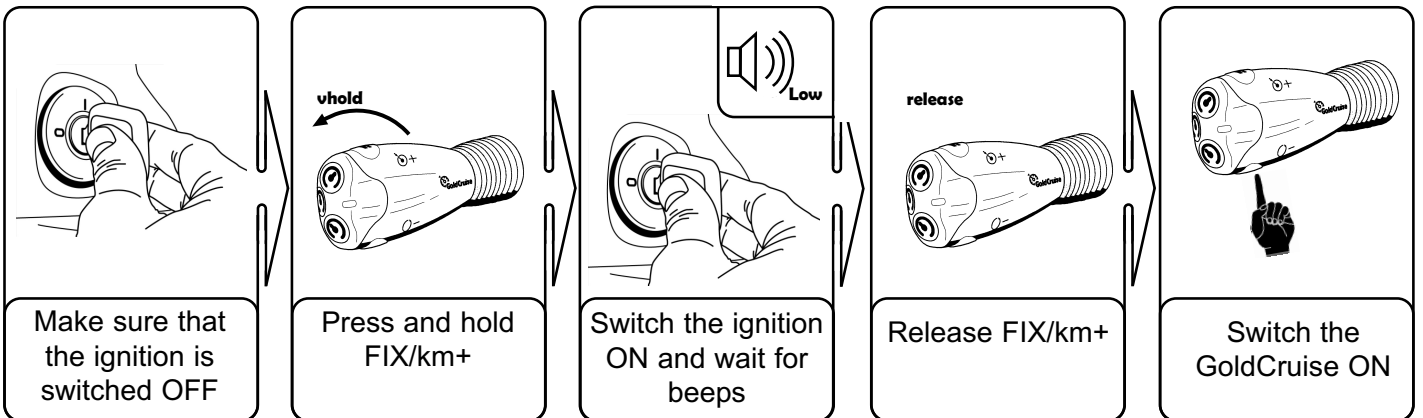
The default setting is: limiter ON, override ON

 <p>Switch the ignition ON</p>	 <p>Switch the GoldCruise ON</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>																
 <p>Press MEM/KM- 6 times</p>	 <p>Release the brake pedal</p>	<table border="1"> <thead> <tr> <th>step</th> <th>limiter override ON</th> <th>limiter ON override OFF</th> <th>speed alert</th> </tr> </thead> <tbody> <tr> <td></td> <td>3x</td> <td>1x long</td> <td>2x</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Press MEM/KM- once per step</td> <td>Press FIX/KM+ once per step</td> <td></td> </tr> </tbody> </table>		step	limiter override ON	limiter ON override OFF	speed alert		3x	1x long	2x						Press MEM/KM- once per step	Press FIX/KM+ once per step	
step	limiter override ON	limiter ON override OFF	speed alert																
	3x	1x long	2x																
																			
	Press MEM/KM- once per step	Press FIX/KM+ once per step																	
 <p>Press the brake pedal</p>	 <p>Press and hold the brake pedal</p>	 <p>Press FIX/KM+ 4 times</p>	 <p>Release the brake pedal</p>	 <p>The end limiter option setup</p>															

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Diagnostic mode

to activate the diagnostic mode:



Test 1

Testing command module, brake connection and clutch connection (optional)

Press **Fix/km+**, a beep is audible. The LED will turn orange.

Doesn't operate go to table 1

Apply the brakes, a beep is audible. The LED will turn green again.

Doesn't operate go to table 2

Press **Mem/km-**, a beep is audible. The LED will turn orange.

Doesn't operate go to table 1

Optional: Press the clutch pedal or the **Coast** or **II** button, a beep is audible. The LED will turn green again.

If there is no clutch switch or coast button, apply the brakes again

Operates, go to **Test 2**

Test 2

Testing throttle setup and speed signal

Activate the diagnostic mode as described above, but on step 3 start the engine

Press **Fix/km+**, until the engine revs. release the button, now the engine revs should become constant.

Does not operate: Redo the pedal setup

Press **Mem/km-**, so the engine revs drop. Now apply the brakes, so the engine revs drop to idle..

Drive at least 30 km/h, the LED on the ECU will flash and a beep is audible simultaneously

Does not operate: Check the speed signal wire and connection

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Diagnostic mode

Table 1

Check whether the LED on the ECU glows on pressing the **Fix/KM+** button. Also check this for the **Mem/KM-**

Doesn't operate:
check the 8-pin connector for solid colour-to-colour connections

Check the connection for the orange wire on an ignition feed (+15)

Check that the Command Module is switched **ON**

Go to Table 2

Check the feed, fuse and ground connection

Check that the LED on the ECU glows orange and a low beep is audible when the brake pedal is pressed. If not go to table 2

Table 2

Check if the brown wires are both connected to the brakelight switch

Check if one wire has 12V and the other has ground through the brakelights. (brakepedal released)

If incorrect:
Check brakelight fuse, brakelights and connection of brown wires

If correct, contact your supplier

To turn OFF diagnostic mode

Switch OFF the ignition.

Gold Automotive B.V. does not accept any liability for damages due to the following:

- 1) **incorrect assembly of the GoldCruise parts**
- 2) **damage to the GoldCruise-system by mechanical effects and overvoltages**
- 3) **use for any purpose, not described in this manual**
- 4) **changes, modifications and manipulations of the GoldCruise without the explicit approval of van Gold Automotive B.V.**

Always leave the enduser manual behind in the vehicle!

Notes

