Installation Manual for FIT228-LC Breath Alcohol Ignition Interlock Devices

Certified to:
AS3547:1997
SAI Global
Type 4

Contents

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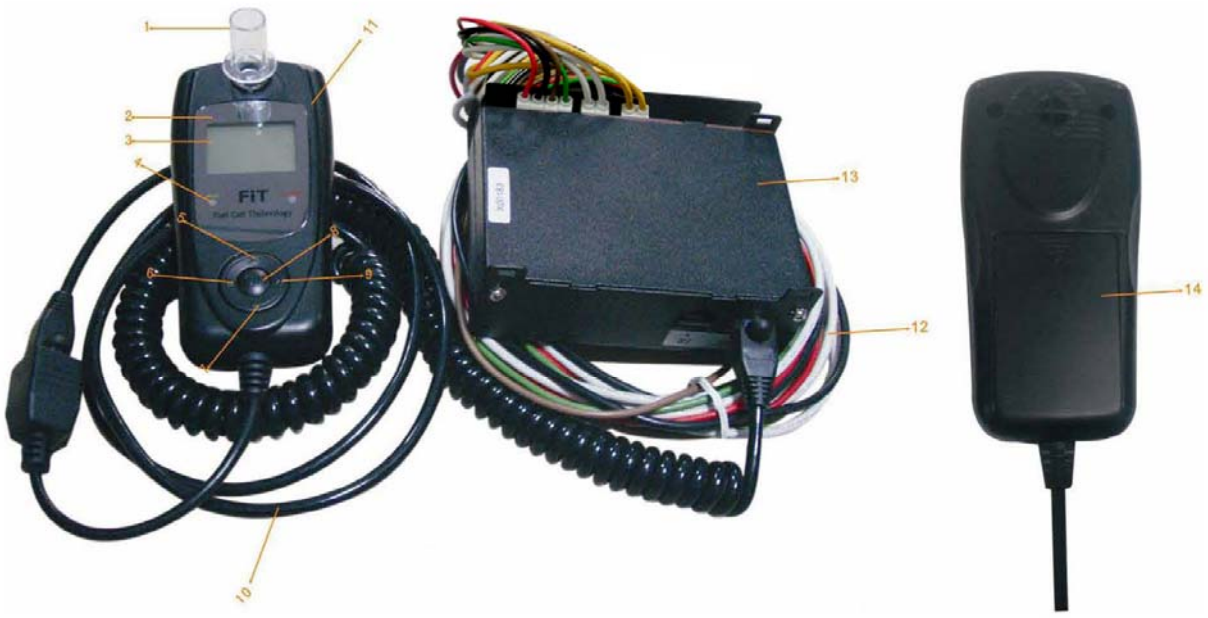
What is What



1. Mouthpiece	2. Front label	3. LCD Display	4. LED indicators
5. "Up" Button	6. [Left] Button	7. "Down" Button	8. [OK] Button
9. [Right] Button	10. Handset Connecting cable	11. Handset	12.Color cable
13.Control Box	14. Battery door		

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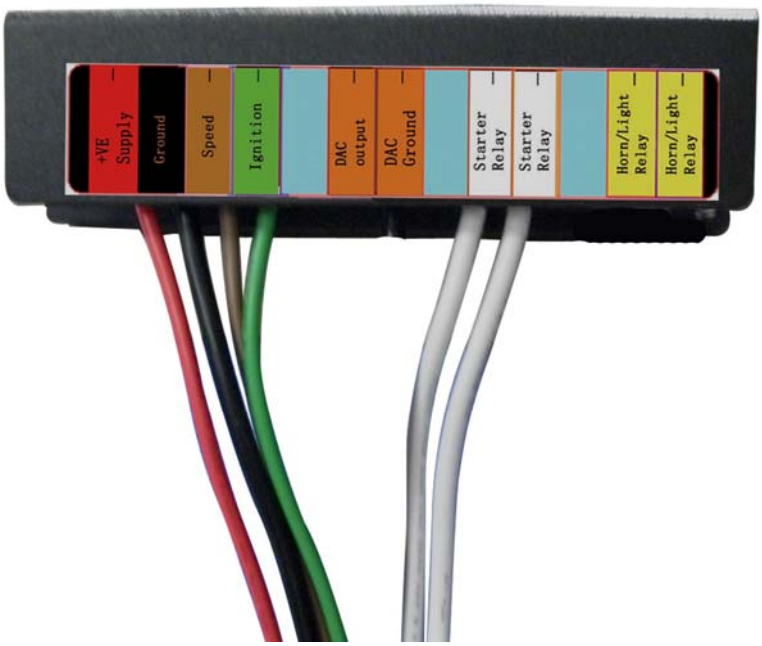
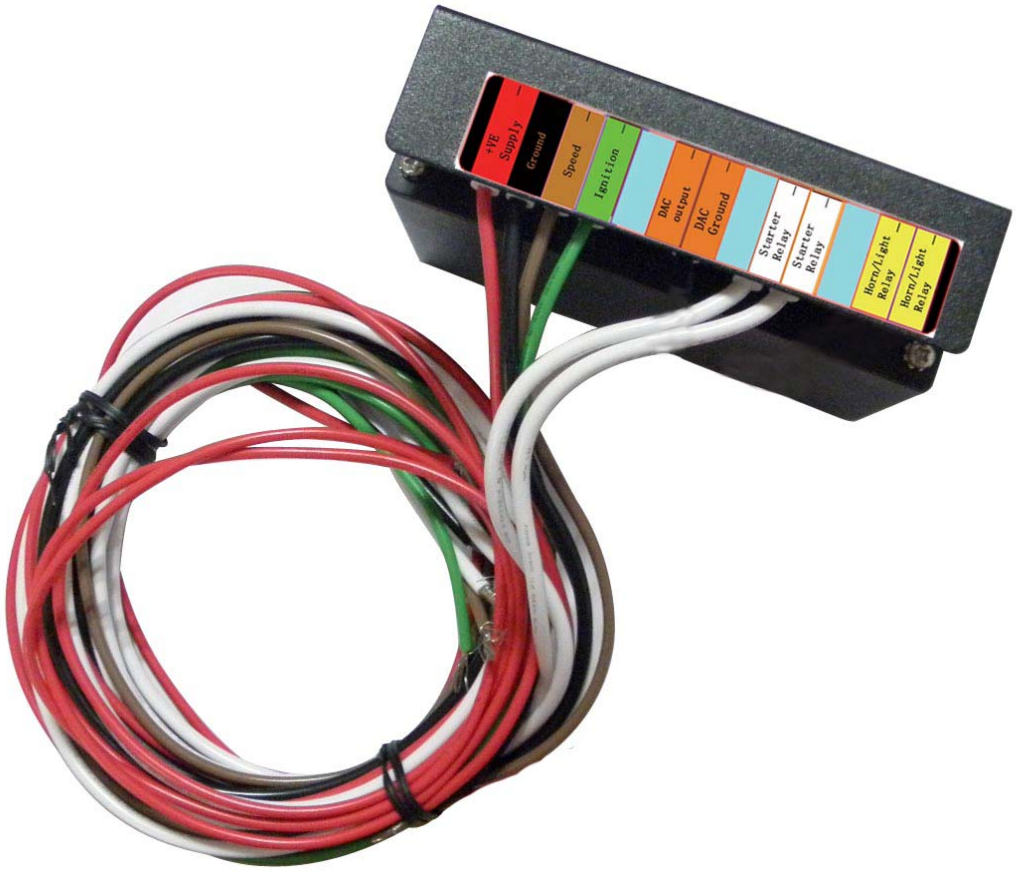
Description of Connecting Cables at the Control Box:-

Terminal		Color	Description
Back Side of Control Box			
+ VE Supply	1	Red	Positive power supply
Ground	2	black	Ground
speed	3	brown	Input for pulse transmitter (optional)
Ignition	4	Green	Connection "Ignition" of the ignition switch
Starter Relay1	7	White	Connection to starter relay
Starter Relay2	8	White	Connection "Starter relay" of the ignition switch
Front Side of Control Box			
Port 1	1	RJ-45	connection for wired cable (charger output also)
Port 2	2	RJ-45	connection for data download to PC





Install FIT228-LC

- Before installing FIT228-LC, please decide upon suitable mounting location and method on the vehicle.
- Follow the existing regulations of installations FIT228-LC in the interior of vehicles, any alterations or additions may cause dangers.
- Install FIT228-LC only for interruption and connection to the starter relay lead.
- If the stand-by current consumption (see technical data of the instructions for use) is too high, vehicle should employ a vehicle battery with higher capacity.
- FIT228-LC can not be used to be a vehicle immobilizer to protect vehicle.

Positioning Components Temporarily

- Before permanently fixing the control box, make sure all components mounted into their intended positions.
- Ensure adequate cable lengths as well as suitable location. The whole installations do not obstruct normal use of the vehicle.

Control Box

- Install the control box as much as possible in the hidden place (for example, under the wheel or the seat). With cable ties. Other more lasting method can only be used after consultation with the owner of the vehicle.
- Draw vehicle leads along steering column and to be sure the control box be safe in the place. If vehicle leads are too short for connecting to ignition-switch wire harness, to change the position of control box located.

Handset

- Decide upon suitable mounting location of handset to ensure minimal obstruction and accessibility for the driver.
- If cable from the control box to the handset is too tightly stretched or too short, relocate the handset or the control box or both.

Connecting Leads

Tracing Ignition Wiring of the Vehicle

- Disconnect ignition switch and wire harness of the steering column.
  If the vehicle wiring is unknown, should consult the data of vehicle or use a multi-meter to check the circuits 12 V (24V for big truck).
- Switch multi-meter to DC measuring range of 20V (40V for big truck).
- Connect a wire to vehicle ground, for example vehicle frame.
- Connect other wire to test and identify the terminations at the back of the ignition switch: turn the ignition switch slowly on to trace the voltage at different key positions.

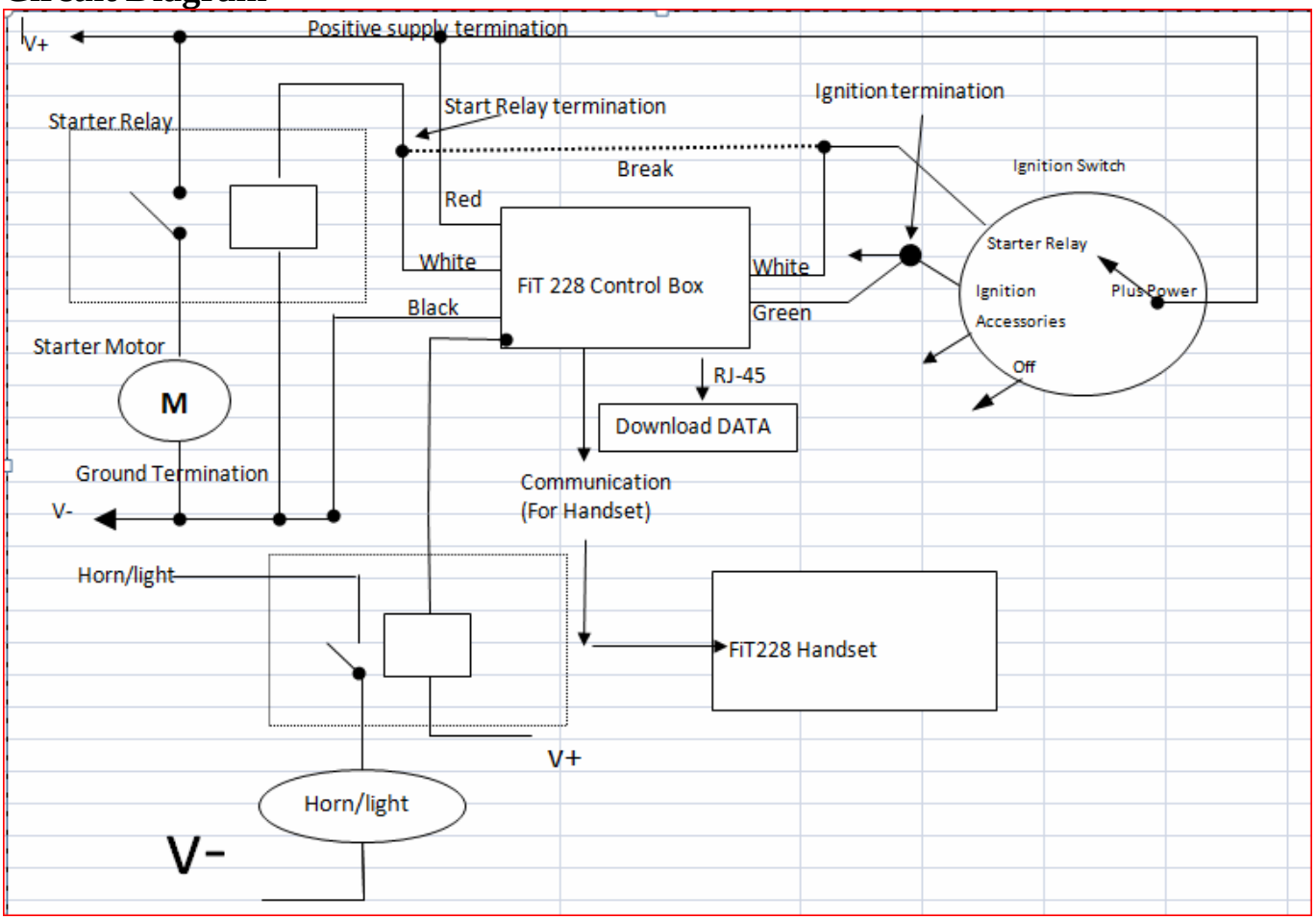
	Key position"START"	. Key position"IGNITION"/“ON“	Other positions
Lead starter relay	Voltage	---	---
Lead ignition 1)	Voltage	Voltage	---
Lead positive supply	Voltage	Voltage	Voltage

Disconnecting Vehicle Battery

- For any maintenances or installation, should disconnect battery ground lead before further work.

— Before disconnecting the vehicle battery need erase battery dependent instrument settings (e. g. the theft code for the radio or the preset stations). On some vehicles, before disconnecting the vehicle battery need turn the air bag light on, which can be turned off only by the vehicle manufacturer.

Circuit Diagram



Connecting Ground Lead

- Connect vehicle ground to the control box ground (black).
- Connect the control box ground to vehicle frame by a self tapping screw or ground lead in the wire harness via a crimp or solder joint. Ensure a clean and reliable contact!

Connecting Starter Relay Lead

- Cut starter relay lead in the ignition-switch wire harness ensuring adequate cable has been left for termination on both leads of the control box.
- Trim, as necessary, both starter relay leads on the control box (white color) and strip.

  Do not trim the wires of the vehicle to be used again after reinstallation of the control box.
- Put special thermo-shrinkable tubing on the starter relay lead from the ignition switch.
- Connect this starter relay lead of the wire harness with the starter relay lead (white color) of the control box by soldering or crimping.
- To prevent from a future change or manipulation at the joint, push special marking thermo-shrinkable tubing over the joint and shrink by heat application.

- Connect in the same way also the two remaining starter relay leads using the special thermo-shrinkable tubing.
- Connect in the same way also the Horn/ Light relay leads using the special thermo-shrinkable tubing.

Connecting Ignition Lead

The FIT228-LC must be connected to an ignition lead of the ignition switch that remains live during start up of the vehicle (position "START" of the ignition switch) and when the ignition is switched on (position "IGNITION" or "ON" of the ignition switch) manipulation at the joint can be detected.

Connecting Speed meter Lead (Optional)

The FIT228-LC provide the option to connect to Speed meter signal lead. The input for pulse transmitter to the controller box. (brown color lead)

Connecting Positive Supply Leads

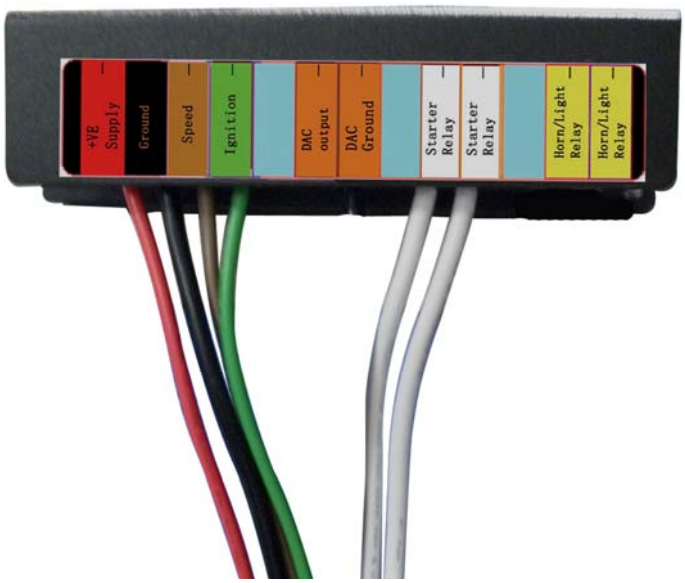
- Locate suitable connection position in the positive supply lead of the ignition-switch cable harness ensuring adequate cable has been left for termination of the positive supply lead (red) on the control box.
- Connect positive supply lead of the ignition-switch cable harness with the positive supply lead of the control box (red) by crimping without cutting or strip 10 mm (without cutting) of the positive sup-ply lead of the ignition-switch cable harness, solder with the positive supply lead of the control box (red) at the stripped position and cover with high-quality insulating tape.
- Power ON/OFF Switch (Optional), for safety issue a ON/OFF switch for the Positive power supply is necessary. (Install the ON/OFF switch to front panel was suggested.)
- Trim, as necessary, ignition lead on the control box (Green).
- Put special thermo-shrinkable tubing on the ignition lead.
- Connect ignition lead of the control box (green) with both cut ends of the ignition lead of the wire harness by soldering or crimping.
- To prevent from a future change or manipulation at the joint, push special marking thermo-shrinkable tubing over the joint and shrink by heat application.
- Cut ignition lead in the ignition-switch wire harness ensuring adequate cable has been left for termination on the ignition lead (green) on the control box.

Connection horn and park light(Optional)

If specially require to connect FIT228-LC and horn and park light. Need do as below:

- At first to check the vehicle horn and light circuit and make sure how to wired.
- Connect vehicle horn wire to FIT228-LC horn relay, Refer to above **Circuit Diagram (see page7)** 。
- Connect vehicle light wire to FIT228-LC light relay, Refer to above **Circuit Diagram (see page7)**。

Remark: very important



1. When control box the +VE Supply、Ground、Speed、Ignition wires connect correctly，alcohol lock system will normal start work; The two Starter Relay and two Horn/Light Relay are respectively similar as A power of the positive and negative。When Starter Relay or Horn/Light Relay closing like a leading wire，which Can withstand high voltage and large current (240V/30A)，so can not connect directly vehicle live end or ground to two Starter Relay or two Horn/Light Relay ，otherwise will cause short circuit to damage vehicle circuit.
2. DAC Ground (Orange) and Ground(Black) both are similar as a power of negative, can not connect directly vehicle live end or ground to DAC Ground and Ground.

Lead cover install for the controller:
After checked all leads connected, insert the leads cover to the controller and install the screws to fix the cover. Stick the service centre label on top of the screw.

Fixing Components

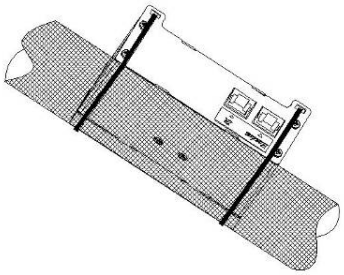
Control Box

- Secure the control box with cable ties at a support (such as the steering column). Thread the cable ties through the tabs of the control box and secure at the support or wrap the cable ties around both the support and the steering column. Example:

1 Control box

2 Cable ties

3 Steering column



- Secure cables from the control box. Where possible, lay cables out of sight.
- Plug in curly cord for handset into the control box.
- Re-assemble cover of the steering column.

Handset

- Decide upon mounting location ensuring minimal obstruction by the handset and accessibility for the driver.

Functional Test

• After installation, reconnect vehicle battery ground lead.

● Test function of the FIT228-LC.

ID matching (If using different handset with control box)

After installation, turn on the machine by press “OK” key. If communication success, the display will show “INTERLOCK SYSTEM, CONNECTED”. Then press “UP” key to enter into the system menu and select the [SERVICE]. Press “OK” to confirm. Then select [ACCESS CODE] and press “OK” to confirm.

Enter the default password (00000000) and press “OK” to confirm. Select “ID MATCHING” and press “OK” to confirm. If matching success, it will go back to the previous menu. If fail, “Disconnected” will be shown.

Installation Certificate

After installation, complete the installation certificate contained in the instructions for use.

Record the “Supervisor Assess Code” (for service centre or install only) and “Bypass Assess Code) for the user after modify it.

“Supervisor Assess Code”:_ _ _ _ _ _ _ _

“Bypass Assess Code”:_ _ _ _ _ _ _ _

Instrument Setting

This work may only be carried out by an authorized FIT228-LC Service Center.

● If required, set the variable instrument settings of the FIT228-LC

● Calibrate the FIT228-LC, if necessary.

Order List

Name and Description	**Part no.**
FIT228-LC Breath-alcohol controlled vehicle immobilizer (handset and control box) for installation in motor vehicles, 12 V (or 24V), mouthpieces (5 pieces) and mounting accessories	
Accessories Mouthpieces (5 pieces) separately packed **Set of cables** for connecting horn and Parking Light	

External indicator light **Mounting plate**	

After installation, reset the data log and unlock...