CC-688 Car Sharing T-Box Control System-202005

Welcome to use this car rent car sharing control system, This product is with GPS tracking function, 2G/3G/4G communication system, Push start engine car alarm system, OBD II CanBus vehicle status information read & control, Bluetooth control, Password touch pad, Driving behavior record based on G sensor, Original RFID car key bypass module etc. It can connect to clients private platform server or the third party platform, It can be used for traditional car rental upgrade to mobility unmanned self-service online car rent, car sharing ride sharing group car using control.

Specification:

- Universal 2G/3G/4G suit for global using;
- Internet & SMS control lock unlock siren light & start engine etc.
- Fast GPS locating with A-GPS function;
- OBDii CanBus information reading (DTC,recharge mileage,speed,Fuel consumption etc.)
- OBDii CanBus control vehicle (lock/unlock/light/siren etc. Dependent on car model)
- OBD CAN BUS DTC code diagnostic;
- Touch pad can be used to unlock car by password when no mobile phone network;
- Optional NFC card reader can be used to unlock car when no mobile phone network;
- Bluetooth can be used to fast control car even if no mobile phone network;
- Built in G-sensor can record driving behavior and send alarm information to server
- Wiring & OBD dual control can suit almost all model vehicles;
- GPS + BeiDou dual mode GNSS module(Glonass can be selected);
- Compatible with the original car push start system;
- Mobile phone control remote start car engine can pre-cool or warm car (Optional);
- Easy change mechanical key start car to No Key Delivery online unattended car rent;
- Compatible with original RFID car key alarm system;
- OBD / GPS / GPRS power saving intelligent control;
- Car battery voltage detection for battery low alarm;
- Gasoline, Electronic, Hybrid vehicle can be used;
- Cars, Trucks, Vans, Touring Cars all can be used;
- Suit for car rent car sharing control or personal car control;
- Backup battery can be selected;
- Wifi hotspot can be selected;
- System hardware & software can be customized;
- Open protocol and protocol can be customized by client request;
- Can connect to client private server or 3rd platform server;
- Function can be customized by client request;
- Parameter can be set by SMS or internet;
- TCP/IP communicate protocol, MQTT can be customized by client request;
- Main Firmware & OBD firmware can be upgraded by internet;
- Car rent car sharing control command;
- Easy for online car rent car sharing mobility control;
- New car model adapt and test service;
- Car installation engineer online assist;

1. Products & Parts:

CC-688 Main control unit

Touch Key Pad (Optional)

Push Start Button(Optional)

OBD Wires

2/3/4G & GPS Antenna

Wires

Siren (Optional)

Car Key Bypass Module (Optional)

NFC Card Reader (Optional)

2. LED Indicator: (Flash Cycle Time: 4 seconds)

- RED LED ON continuously : T-Box searching 2/3/4G network;
- RED LED OFF continuously : T-Box power off;
- RED LED Flash once : Internet OK, GPS OK;
- RED LED Flash twice : Internet OK, No GPS Signal;
- RED LED Flash 3 times : No Internet, GPS OK; (APN or Server Error)
- RED LED Flash 4 times : No Internet, No GPS Signal; (APN or Server Error);

3. Before Using:

3.1. At first to buy a 4G LTE / 3G WCDMA / 2G GSM SIM card which have SMS service & internet data service, normally it need about 30M data per month according the different working mode, recommended order a internet data plan for the SIM card. (Note: Most M2M SIM Card have not voice & sms function, this kind of M2M SIM card can not use SMS control),Some SIM card need to send SMS or USSD command to enable the data service, the detail please see the SIM card manual or call the SIM card service hotline.

3.2. Install SIM Card

Behind the main control box, the SIM card holder can be seen, press the yellow switch button with a tool and then the holder will come out. Pull it out and put the SIM card in the holder and then push the holder into the T-Box again (Pay attention to that the SIM card metal contact pin can not face down to the holder)

3.3 Power ON / OFF

Power ON: Install SIM card, connect the 2/3/4G & GPS antenna to T-Box, and then connect the VCC and GND wire on 16Pin wire harness to 12V car battery or DC power supply, the T-Box will power on.

Power OFF: Disconnect the 16 Pin wire harness from the T-Box, if no backup battery built in , the T-Box will power off immediately, if there is backup battery built in the T-Box, then the T-Box will send power down alarm information to server, and keep online until the battery is gone out, the battery can last about 0.5 to 1 hour depend on the battery capacity.

3.4. Back to Factory Setting (Default Setting)

Sending SMS "FACTORY*12345678" to the T-Box SIM card number, the T-Box will delete all the user setting (authorized number / Password / APN / IP etc), reset to factory default setting, and then re-power on.

3.5. Antenna

- The Antenna of 2G/3G/4G and GPS+BeiDou are built in the T-Box.
- Pleas leave the T-Box away from big metal, this will reduce the 2/3/4G and GPS signal.

3.6. Using Condition

The working temperature is -20 ^{0}C to 60 ^{0}C, over this range the specification of the T-Box maybe can not reach the standard level, the storage temperature can reach to -40 ^{0}C to 80 ^{0}C.

4. Simply Using Step

4.1 First to buy a 2G GSM or 3G WCDMA or 4G LTE mobile phone SIM card, which needs SMS service and internet function.

4.2 Install the SIM card refer to the above description, connect the 2/3/4G & GPS antenna

to T-Box, and then connect the VCC and GND wire on 16Pin wire harness to 12V car battery or DC power supply, the T-Box will power on.

4.3 Check the LED flashing to confirm the T-Box work well (Refer the above LED Flash Indicator). The GPS antenna should be outdoor to receive the GPS signal.

4.4 Set APN and internet user name & password by sending SMS to the T-Box, if the APN & internet user name & password is not right, the T-Box can not upload the location to server, send SMS "CHECK*12345678" to T-Box can check the T-Box setting including APN setting (SMS command for APN & internet user name & password: "APN*12345678*apnname" and "USERNAME*12345678*username*password", the detail please refer the following SMS command list.

4.5 This T-Box uses the TCP / IP communication protocol to communicate with the server, For detailed communication protocol, please contact client manager to obtain it. If the private or 3rd platform will be used, the IP or domain name can be set by sending SMS. the detail please refer the following SMS command list and the TCP/IP protocol.

4.6 When T-Box power on, the T-Box will send identity authentication message (login request command) to platform server **0x0102**, the platform will reply the T-Box with **0x8102** message to allow the T-Box connect to the platform, every communication command and message between the T-Box and the server is accompanied by a serial number to avoid repeated execution of commands and receiving information. When the T-Box is triggered by shock sensor or the the car engine is running (car key stay in ON position) , the T-Box will upload **0x0200 location data pack** to server **every 10 seconds**. When the T-Box stop move or the car engine turn off, the GPS module will be turned off, and the T-Box will send **0x0506 heartbeat pack** to sever **every 2 minutes**, the GPS location & car status information are not included in the heart beat pack, the heart beat pack is only used to keep the internet connected, the detail please refer to the TCP/IP communication protocol.

4.7 When using the Test Stand to test the T-Box, after turning the test stand ON switch to the "ON" position (Start car engine with car key, and the car key stays in the "ON" position), the T-Box will enter the driving status, the T-Box will upload the 0x0200 positioning pack every 10 seconds, after turning the test stand ON switch to the "OFF" position(Stop car engine with car key, and the car key stays in the "OFF" position), the T-Box will upload the 0x0506 heart beat pack every 2 minutes to keep the T-Box online.

4.8 Not all T-Box support all functions because of too many versions. Mostly the general version of the device use wiring control. It is recommended to test the wiring control and network control first. The OBD information reading and CAN BUS control can be tested after finding the proper model car. CAN BUS Reading and control need to upgrade the OBD firmware by special control program for the different vehicle model, and the program can be upgraded online by internet, and the matching test needs to be done separately for the vehicle model that is not suitable. When the OBD cannot read the information, it only affects the mileage, fuel consumption, fuel consumption, recharge mileage and other information, and does not affect other information and network control.

5. Function Description

5.1 T-Box & Server Reply Message 0x8001/0x0001

When T-Box send command or message to platform server, If there is no special response command or execution result return command, the platform will uses the 0x8001 general command to reply the T-Box to confirm the command & message has been received, the special response command please refer to the communication protocol.

When platform server send command or message to T-Box, If there is no special response command or execution result return command, the T-Box will uses the 0x0001 general command to reply the server to confirm the command & message has been received, the special response command please refer to the communication protocol.

5.2 T-Box Login Platform Request Message 0x0102

When the T-Box is powered on, the T-Box will connects to the platform server and sends a login request command (identity authentication message) 0x0102 to server, the server need reply the T-Box with 0x8102 to allow the T-Box connect to the server. The 0x0102 request command contains the ICCID information of the SIM card. The detail please refer the CC888 TCP/IP communication protocol.

5.3 GPS Data Pack Uploading 0x0200

When car is moving or engine is started, the system will upload the GPS & car status information (0x0200) to platform server every 10 seconds (can change to other time interval), 2 minutes after the car stop moving or the engine is off, the system will stop upload GPS & car information to server, only send heart beat (0x0506) to platform server every 2 minutes. The upload data format & protocol please refer the CC888 protocol document.

5.4 Internet Control Command

Internet server can send command to device to control the car, the internet command detail please refer the the CC888 protocol document. Some command also can be used to control the car, the SMS commands please refer the following SMS list.

Lock 0x8323

Lock the door, when the door is locked, the engine start is disabled.

Unlock 0x8323

Unlock the door, when the door is unlocked, the engine start is enabled.

Flashing Light Finding Car 0x8322

The car light will flash 4 times to indicate where the car is, it is suit for finding car in night.

Beep Siren Finding Car 0x8322

The siren will beep and light will flash 4 times, it is suit for finding car in day time.

Remote Start Engine 0x8323

The car flash, and the siren beep one time, the system enter start engine process, the system will check hand brake and car status, and the start the car engine (the T-Box will try to start car engine 6 times till the engine is started), after the engine is started, the system will turn on the ACC and and enter warm car status, the system will turn off the engine after warming car 30 minutes, and back to lock state again.

Notes:

1. If the hand brake is not pull ON and the gear is not in P position, the car will not start the engine.

2. If the original car key is has RFID security system, the RFID bypass module should

be installed to remote start engine.

It is not recommended for hand gear car to use remote start engine, if the gear is not in parking gear, the car will move, it is dangerous !

5.5 Car Rent Return Relative Command

Car Rent

The car rent is controlled by platform server, the T-Box will report every lock unlock event to platform server, the T-Box will not decide the car rent is OK or not, it is controlled by server.

Car Return 0x8410

After received the car return command, the car will lock automatically, and check the door and engine, and disable the engine start and old password & NFC card, also will generate new password, and then reply the server to finish the car return, if the door is open or the car engine is running, the car return operation will fail.

5.6 Stress Event Upload Description

T-Box upload touch pad lock unlock operation 0x0421

When the door is lock & unlock by touch pad password, the T-Box will upload the lock unlock information to the platform server, the detail please refer the CC888 protocol.

T-Box upload NFC card lock unlock operation 0x0430

When the door is lock & unlock by swipe NFC card, the T-Box will upload the lock unlock information to the platform server, the detail please refer the CC888 protocol.

Platform request device status 0x8320

After the T-Box receives platform request device status command, the T-Box will reply platform with 0x0200 command, the detail please refer the CC888 protocol.

Upload Stress Event Information 0x0300

The event including LBS Base station positioning, Bluetooth beacon positioning and driving behavior alarm, the detail please refer the CC888 protocol.

5.7 Platform download to set T-Box parameter 0x8329

Platform download command to set T-Box parameter by TCP/IP command, the detail please refer the CC888 protocol.

Parameter ID list:

Parameter ID	Data type	Description
0x0001	DWORD	Device heart beat uploading time interval, unit is seconds.
0x0013	STRING	Main server IP
0x0017	STRING	Backup server IP
0x0018	DWORD	TCP port
0x0027	DWORD	Uploading time interval when sleep, unit is seconds.
0x0029	DWORD	Uploading time interval when driving, unit is seconds.
0x002C	DWORD	Uploading distance interval when driving, unit is meters
0x002E	DWORD	Uploading distance interval when sleep, unit is meters
0x0000F400	STRING	Wifi Hot Pod Name, ASCII Code, 8-16 Bytes
0x0000F401	STRING	Wifi Hot Pod Password, ASCII Code, 8-16 Bytes
0x0000F402	BYTE	Enable or Disable WiFi Hot Pod, 0:Disable, 1:Enable
0x0000F403	BYTE	ON/OFF WiFi Hot Pod, 0:OFF,1:ON
0x00FF0101	DWORD	
0x00FF0102	BYTE	
0x00FF0103	DWORD	
0x00FF0104	DWORD	Upload time interval when car is rent, unit is seconds
0x00FF0105	DWORD	Server set device total mileage, unit is km

5.8 Platform download to upgrade T-Box Firmware 0x8330

Platform download command to upgrade the T-Box firmware, the T-Box will automatically upgrade the main box firmware & OBD firmware, the detail please refer the CC888 protocol.

6. T-Box Parts

6.1 Password Touch Pad (Optional)

The touch keypad is usually installed inside the driver seat front windshield glass corner. Click on the digital circle directly with a single finger outside the glass. The blue LED lights up, indicating that the digit number has been input. Release the finger to enter the next digit password. After input all the password digits, press the "#" to finish the input, if the blue LED flashes three times, it means the password is correct, if the red LED flashes four times, it means the password is incorrect. The password length is not fixed, the password can be set by SMS or internet TCP/IP command.

Lock (No Password Necessary)

Press the "#" key with finger till the blue LED flash 3 times, release the touch pad, the system will lock the door and enter arm state. it is not necessary to input password for lock function, just long press “#” key is OK.

Unlock (Need Password)

Click on the digit to input the password digit one by one, after input all the password digits, press the "#" to finish the input, the blue LED flashes three times, it means the password is correct, the system will unlock the door and disarm the system, if the red LED flashes four times, it means the password is incorrect, the system will not do anything.

Note 1: there will be 2 kind of password can be used, one is car owner password, this password will not changed anytime till it is changed by SMS or internet TCP command, this password can be used as car owner & operation or maintain; Another password is car rent password, this password is generated by T-Box automatically, this password will be disabled after the car is returned, and the password can not be used any more, the T-Box will generate a new car rent password & upload to the platform.

Note 2: User can use SMS (SUPERUSER*12345678*112233, set the car owner password to 112233#) or internet TCP command to set the car owner password. Please note that the touch pad password is different from the device SMS control password. In this command, 12345678 is

the SMS control password of the T-Box device.

Note 3: The TCP/IP command to set the password is 0x8420, the detail please refer the CC888 protocol.

6.2 NFC Card Reader (Optional)

The NFC card reader is usually installed inside the driver seat front windshield glass corner. Swipe the authorized NFC card directly outside the glass , the T-Box will unlock the car door, and then swipe it again can lock the door. The card stays on the card reader at least 1 second when swiping the card. There is no response when the card is not authorized to swipe, the NFC card authorized can be set by SMS or internet TCP/IP command.

Note 1: there will be 2 kind NFC card authorization can be used, one is car owner NFC card, this card will not been disabled anytime till it is changed by SMS or internet TCP command, this NFC card can be used as car owner & operation or maintain; Another NFC card authorization is car rent NFC authorization, this NFC card authorization will be disabled after the car is returned, and this NFC card can not be used any more, the NFC authorization is set by internet TCP command through platform server.

Note 2: User can use SMS (ADDNFCCARD*12345678*1*1234ABCD, set the car owner NFC card to 1234ABCD) or internet TCP command to set the car owner NFC card.

Note 3: The TCP/IP command to set the NFC card is 0x8430, the detail please refer the CC888 protocol.

6.3 Push Start Button (Optional)

After the car is unlock, the car engine can be started, step the foot brake, and then press the start button a few seconds till the engine is started, if the start button is pressed and not released, the system will keep start car motor 5 seconds.

After the car is started, step the footbrake, press the start button 1 seconds then release, the car engine will be turn off, if the footbrake is not step, the buzzer will beep 3 times to warn you and will not turn off. But if the start button is pressed over 3 seconds, the car engine will be forced to off.

If press once start button can not start car engine success, step the footbrake & don’t

release and press the start button 1 seconds to turn off the system, and then press again the start button and hold on a little long time, then the car engine will be started. Then release the footbrake.

If the footbrake is not step, press once the start button, the car will turn on ACC, press once again, the car will back to OFF.

Notes:

1. **This function only suit for the original car have not push start button system, after install this device can add the push start button system to replace the car key start system.**
2. **If the car has original RFID car key remote security, the bypass module should be installed to control the original security system. Also the original steering wheel lock should be disabled.**

6.4 OBD CAN BUS Reading & Control

This T-Box has a dual CAN BUS bus interface, which can read the vehicle information on the OBD socket. The general public information of the standard is generally only the information of the engine. Vehicle status information such as cruising range, fuel consumption, total mileage, etc. are basically private protocol of different car manufacturers. The car status information that can be read by vehicles of different brands, models, and years is different, so the reading of OBD information needs to be based on the brand Different models and generations match different program software. When the car model generations do not match, the testing for sample car can be done by us.

The CANBUS on the OBD of some vehicles can control door lock unlock / flashing lights / beep siren / trunk release etc. This T-Box device has a dual CAN BUS bus interface can control the special model vehicle, which need to be tested and confirm it is can be controlled or not by CAN BUS.

Note: Not all vehicles support external CANBUS device control vehicle. Some models do not accept the CANBUS to control the vehicle for security reason, this kind of the vehicle can only

read some information through the CANBUS.

7. SMS Command List

SMS command also can control the T-Box, just sending a SMS to the T-Box is OK, the password is necessary for SMS command control, this password is saved in the device. The T-Box factory default password is 12345678. This password and web page It is not related to user passwords such as App and others. This password is only the password controlled by SMS command and can be modified by client.

Function	SMS Command	Reply
Lock	LOCK*12345678	LOCK OK
Unlock	UNLOCK*12345678	Unlock OK
Falshing Light find car	FLASHFINDING*12345678	Car is in arm/disarm
Siren find car	HORNFINDING*12345678	
Light+Siren find car	FINDINGCAR*12345678	
Start car engine	START*12345678	remote start success
Locate with map link	DW*12345678	Location map link
Disable engine start	STOPENGINE*12345678	cutrelay ok
Enable engine start	STARTENGINE*12345678	prerelay ok
Change T-Box password	CHANGEPASSWORD*12345678*11112222	Password:11112222
Set G alarm threshold	GSENSOR*12345678*50	SET G sensor OK
Set time interval	INTERVAL*12345678*xxx	Interval: xxx s
Set internet APN	APN*12345678*Apnname	APN:Apnnname
Set internet user name & password	USERNAME*12345678*username*password	Internet username:xx, Password:xx
Set server IP & port	IP*12345678*IPorDomainname,port	IP SET OK
Repower on T-Box	RESET*12345678	Reset OK
Back to factory setting	FACTORY*12345678	Factory OK
Check T-box setting	CHECK*12345678	Setting message
Set rent password	SETKEY*12345678*123321	set touchkey ok, keynumber xxxx
Set car owner password	SUPERUSER*12345678*112233	set superuser password ok,password xxxx
Change T-Box ID	CHANGEID*12345678*888123456123456	New ID:888123456123456
Upgrade firmware	UPGRADEMAIN*12345678*112.95.126.105,8011	Upgrade main or OBD starting !
Set rent NFC card	ADDNFCCARD*12345678***0***AAAABBBB	Add NFC card ok!
Set car owner NFC card	ADDNFCCARD*12345678***1***CCCCDDDD	Add NFC card ok!
Del rent NFC card	DELNFCCARD*12345678***0**	Del NFC card ok!
Del owner NFC card	DELNFCCARD*12345678***1**	Del NFC card ok!
Del all NFC card	DELNFCCARD*12345678***2**	Del NFC card ok!

8. SMS Check T-Box Setting CHECK*12345678

Send SMS “CHECK*12345678” to T-Box SIM card number, “CHECK” is the fixed command, “12345678” is T-Box device password. The T-Box will send back information including software version, ID S/N number, IP address, authorized phone number, GPS and GSM signal etc. if the password is not right, the operation is fault, the tracker will send back information “Wrong Password”. The following is an example:

C1 V Mar 3 2020, 18:16:24, 202001688988, ezgps1.igps.info, 112.35.48.48, 6666, 10, 100, 450, 600, 192, A:13987654321, +00, GPS OK, GPRS/WCDMA Ok, -95dBm, E_Bat_Level:11.35 V, I_Bat_Level:0.00 V, APN:CMNET,UAERNAME:, USERPWD:, MCCMNC:46000, SuperUser key:00000000,key:00000000

C1 V Mar 03 2020: PCB name & firmware version
202001688688: T-Box ID Number
ezgps1.igps.info: Server domain name or IP
112.35.48.48, 6666: Server IP and port
10: Uploading time interval when driving, unit is seconds
100: Shock triggered sensitivity, max is 255
450: Hash acceleration alarm threshold, max is 1024
600: Hard brake alarm threshold, max is 1024
192: Hard crash alarm threshold, max is 255
A:13987654321: Authorized phone number
+00: Time zone
GPS OK: GPS has been located (or NO GPS)
GPRS/WCDMA Ok: Network has been connected
-95dBm: Communication signal strength
E_Bat_Level: Car battery voltage
I_Bat_Level: Backup battery voltage
APN: Internet APN name
USERNAME: Internet Visiting Username
USERPWD: Internet Visiting Password
MCCMNC: SIM card MCCMNC code
SuperUser: Super password or super user NFC
Key: Car rent temporioly password or NFC

9. Bluetooth Control Operation

Device can be controlled by the bluetooth connection, it is suit for fast control without

mobile phone network, the detail protocol please refer the bluetooth protocol.

10. Trouble Shooting

1. The device is not power on, please check the power supply, voltage, power wire fuse, etc.
2. The device can not connect the server, please check the following:

   A: SIM card balance / internet available / APN / internet user name / password.

   B: Device ID / IP / Port / Protocol.

   C: 2/3/4G & GPS antenna is well connected.

   D: The current place mobile phone network is well.

   E: Move the vehicle to open air to get well GPS signal.
3. Some time the device is off line.

   A: Check the 2/3/4G antenna connection, try to put 2/3/4G antenna to another place.

   B: SIM card balance.

   C: Try to check device current status by SMS.

   D: Confirm the offline area network signal.
4. The GPS antenna should face to sky.
5. The 2/3/4G antenna should keep away from big metal.
6. After go out the under ground park, some few tracking point maybe lost, the 2/3/4G and GPS module will take a few minutes to receive signal and re-locate, this is normal.
7. If can not get the car information from the OBD, please check the OBD software version is suit for the car model or not.

Specification:

Working Voltage	9-18V DC	Communicate Network	**2G GSM / 3G WCDMA / 4G LTE**
2/3/4G Module**(Can be Customized)**	EC25-EC (Quectel)	2G GSM Band	B3(1800 MHz)/B8(900 MHz)
3G WCDMA Band	**B1(2100 MHz)/B8(900 MHz)**	4G LTE-FDD Band	B1/B3/B7/B8/B20/B28A
2/3/4G & GPS Antenna	External & External	GNSS Module	GPS+BeiDou (N303)
Locate precision	5-10 Meters	GPS Hot Start Time	1 second average
GPS Cold Start Time	36 seconds average	Tracking Current	<100mA /12V
Standby Current (Stop Moving)	< 20mA /12V	Recharging Current	<100mA 5V
Backup Rechargeable Battery	100mAh (Polymer)	**Siren & Light** Relay Output	5-10A
Lock / Unlock Relay Output	10A	Working Temperature	-20 ^{0}C to +55 ^{0}C
Absolute Working Temperature	-40 ^{0}C to +80 ^{0}C	Storage Temperature	-40 ^{0}C to +80 ^{0}C

Packing List

Parts name	Quantity	Description
Main unit	1	Software is different by different car model
Touch key pad	1	**Optional**
NFC card reader	1	**Optional**
Push start button	1	**Optional**
OBD Harness	1	Special wiring harness can be customized
Function & start harness	1+1	Special wiring harness can be customized
2/3/4G & GPS antenna	1+1	External antenna
Alarm Siren	1	**Optional**
Bypass module	1	**Optional**
Manual & installation manual	1+1	online version

Warranty

This system has been tested before sold. We strongly recommend you to get this system installed by professional. There is a one-year warranty except the following condition:

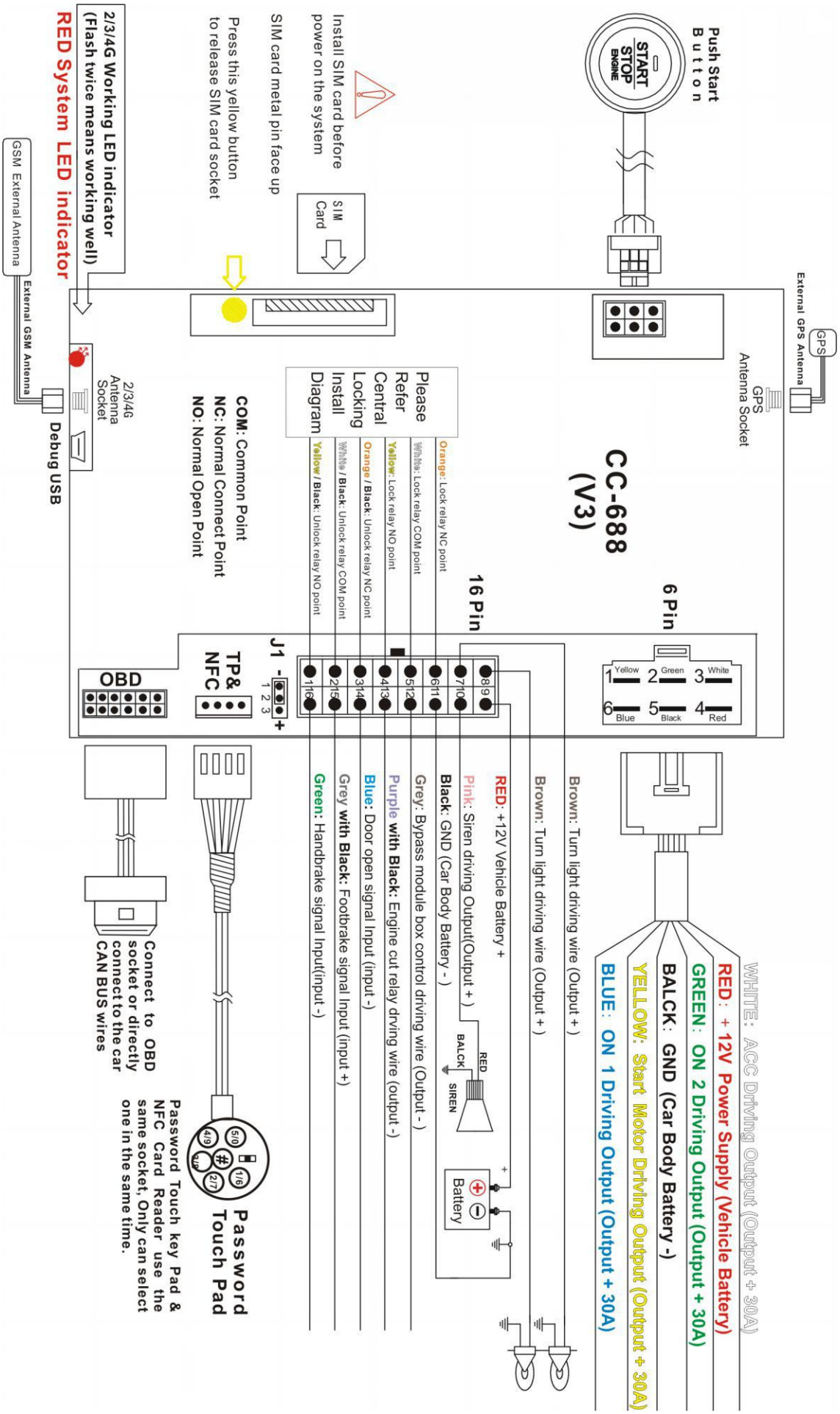
1. Installed, fixed, or changed by personally or unprofessional.
2. Warranty will eliminate if the ownership of the T-Box has been changed.
3. Parts damaged by man-made.
4. siren , adapter , wires , etc.

Warning: this device is just an auxiliary product that enhanced car security & alarm and driving car freely, it can not replace assurance, we have not any responsibility if you have damage or lost in using this system.

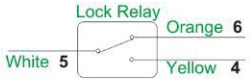
Customer	
Mobile phone	
Date	Year month day
Model	CC-688 (V3-4G)
Serial Number	
Distributor	

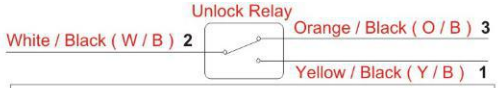
Notes: The explanation of this manual is belonged to our company, some small changes may not notice customer, any problems please contact us, thanks !

Installation Diagram

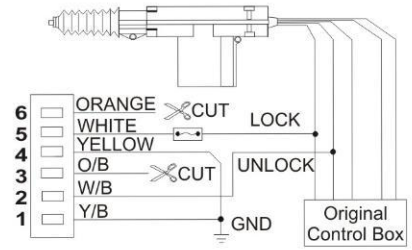


Central Lock Wire Connection Guide

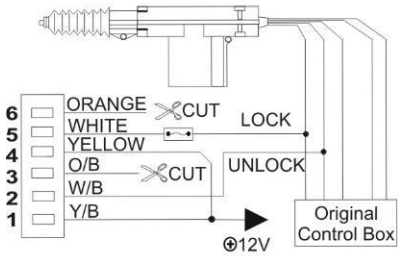




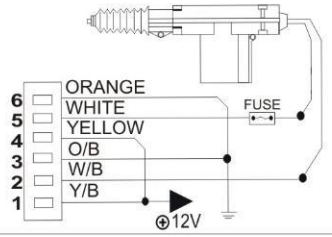
A: If the car have original lock system, check the trigger signal is positive or negative, if lock unlock is triggered by Negative, install as follow:



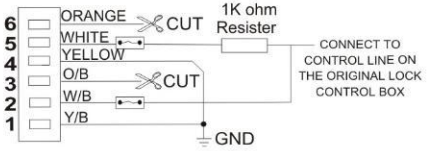
B: If the car have original lock system, check the trigger signal is positive or negative, if lock unlock is triggered by Positive, install as follow:



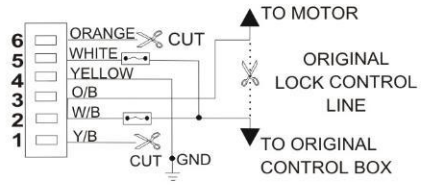
C: If the car have not the original central lock system or the car only have 3 door lock, install a 2 wires lock or a full set central lock system. single 2 wires lock connect as follow, most after market full set central lock is negative trigger, refer diagram A.



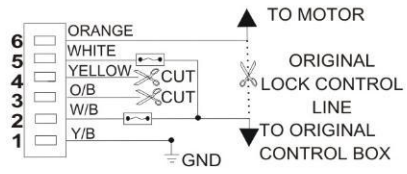
D: Dual voltage single wire trigger, use the multi-meter to check the control wire on the original lock control box, lock and unlock is controlled by one wire, Lock Unlock signal are 2 difference level voltage pulse signal, unlock signal is GND directly , and lock signal is 4-8V pulse, add a 1K ohm resister in the control wire can output 2 level signal,connect as follow. For example: Volkswagen Polo、Bora、Passat.



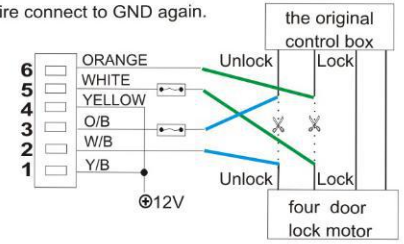
E: One wire negative trigger, check use multi-meter, when lock the door the control wire is connect to GND, when unlock the control wire is opened. For Example: Volkswagen Jetta etc.



F: One wire negative trigger, check use multi-meter, when unlock the door the control wire is connect to GND, when lock the control wire is opened.

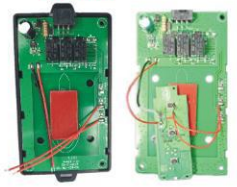


G: Positive Pulse Trigger, use the multi-meter to check the control wire on the original lock control box, the control wire normally is GND, lock & unlock trigger signal is positive pulse, after lock unlock the control wire connect to GND again.



H: Original Remoter Control Lock Unlock, if the original car lock unlock control wire is not easy to find or it is controlled by internal CAN BUS, use Bypass Box can control the original remoter key button to lock unlock door, almost all cars with original remoter can use.

T-Box use negative triggered to control bypass box, Please refer the Diagram A.



Red wire (Left): 3V connect to remoter power

Black:GND Connect to remoter GND

2 RED wires (Right) one is lock output, another is unlock output, soldering to remoter lock unlock button input.