VCI Operating instructions

目录

Parameters of VCI diagnostic instrument:	1
multifunction key:	2
Description of Bluetooth connection between diagnostic device and mobile APP	3
Programming learning function description	3
NFC programming	4
VCI programming	11
Replication learning	21
Other function description	30
AM	

Parameters of VCI diagnostic instrument:

- 1、VCI version: RTX002
- 2、 since shutdown time: 1 minute 58 seconds
- 3、Working current after startup: about 31 mA
- 4、 The working current when the successful programming buzzer rings: about 115 mA
- 5、 LF excitation working current: LF is about 66mA data format, LF is the carrier when the data format is about 61.9mA LF is about 0.2-0.45A carrier format
- 6、Working current during programming: about 66.1mA
- 7、 Working current during configuration: about 65.9mA
- 8、 Static current: about 11 microamps
- 9、VCI Bluetooth maximum transmission distance: 50 meters
- 10. The maximum excitation distance of VCI LF: LF is about 10-15cm in data format, LF is
- about 8-10cm in carrier format, LF is about 3-5cm in carrier format
- 11、 RF maximum receiving distance: 6-8m
- 12、LED display: not connected green light, connected blue light
- 13 、 Battery power: Red light flashing, flashing 4 battery percentage between 75%-98%,

blinking 3 battery percentage between 50%-75%, blinking 2 battery percentage between 25%-50%, blinking 1 battery percentage below 25%

multifunction key:



1, boot: press the power button indicator light 1-3 seconds green light

2, shutdown: long press the power button for 5 seconds to turn off the power indicator

3. Incentive: After VCI programming a certain protocol, the APP enters the protocol incentive interface and long presses the button for 2-3s to motivate successfully

Description of Bluetooth connection between diagnostic device and mobile APP

Login and authentication successfully enter the home page of the "Wheel Star" APP, you can perform Bluetooth connection operations as shown in the following figure

** 和D油量 RACEXING		English 💌	<	BLE Admin		BI E Connect	ion
专注胎日	E传感器		BLI	E Connection)		
匠心设计/高效节/	E/云號编程	S	🗗 Ver	sions	>		
Program	BLE Admin Dat	a Admin Settings				APP Current State: Not Connected Bluetooth automatic connection	VCI
Rankings	Names	Times			4	tsTPMS 50:07:01:0D:0D:0D	Connection
	机械师汽车维修	服务 77				TS00002020	Connection
\$ \$	广元泰杰 惠诚汽车服务中	57 N) 42				TS00002012 DE11FBBAE2FD	Connection
4	志胜汽修	40				tsTPMS	Connection
0	戴康康	37				Scanning Devices	9
Home	Academy	Shop Me				ocanning ocvices	
	Figure 1	L		Figure 2		Figure	e 3

Figure 1

Figure 2

1. Turn on the braider, turn on the Bluetooth of the mobile phone and open the APP to enter the home page

2. Click Bluetooth Management-Bluetooth Connection-Scan device successively

3. After successfully scanning out the Bluetooth address of the device, click Connect to successfully connect

Programming learning function description

Login and authentication successfully enter the home page of the "Ronchi Star" APP, you can operate programming and learn operations as shown in the following figure



In this module, the user can select the corresponding vehicle for programming according to different vehicle information

There are four main ways of programming learning: NFC programming, VCI learning, copy learning and OBD learning

NFC programming

Step 1: Go to the programming learning page from the home page



Model selection method:

"Model Selection" Select a vehicle based on the brand, model, and year

See the following figure for the page

<	Prog	Iram	
Vehicle	VIN Serch	Sensor OE	Make
Q Please	e input a search k	reyword	
	Make / Mo	odel / Year	
Make	A		A B
Model	阿巴斯		C D E
Year	阿尔宾娜		FG
C	阿尔法罗密图	灾	I J
	阿斯顿马丁		L M
	爱驰		N O P
	奥迪		Q R S
	в		T U V
	宝骏		w
	宝马		z
	200.0+146		

Note: If you choose the indirect model to program, only the learning process information will pop up



"Frame Number Search" can enter the programming page by entering

the frame number or scanning to identify the frame number. See the

following figure for the page



"Sensor OE number" selects the corresponding vehicle according to the

sensor OE number, and after entering the OE number, all models matching the OE number can be searched. Users can quickly click on the vehicle programming page according to the searched model. On the OE number search page, users can click on the historical search record to jump to the programming page

See the following figure for the page



"Sensor manufacturer" selects the corresponding vehicle according to the sensor manufacturer, after searching, the list shows all the vehicle data under the manufacturer, the user can quickly select the vehicle to enter the programming page, in the sensor manufacturer search page, the user can click the historical search record to jump to the programming page

See the following figure for the page



Step 3: Create a new ID to be used as the ID of the new sensor Method 1: Auto Create Click Auto Create to directly write the ID to the sensor: The sensor device is near the upper right corner of the mobile phone device. See the following figure for creating the ID page



Attention:

When performing NFC programming on an IOS mobile device, you need

to select the NFC type to write the ID Android mobile device NFC programming can be directly programmed to create ID writing

Method 2: Manually Create Click Manually Create, enter the decimal or hexadecimal ID, and write the ID to the sensor. See the following figure for the page

			Ţ	7	
	9		Ing DEC ©	out HEX O	
Location	ID(HEX)	 U	Please input the	sensoriu	
UF		RF	Cancel	Confirm	
RF		RR			
RR		LR			
LR					
		hotistoon	OPDCorre	locut .	

Step 4: Put the sensor close to the mobile device and write the new ID After the new sensor is written, the writing succeeds. See the following figure for the page



VCI programming

Step 1: Bluetooth connection to VCI

Bluetooth connection method 1: Click "Bluetooth Management" on the home page to enter the Bluetooth management page, then click "Bluetooth Connection" to enter the Bluetooth connection page, search for nearby devices by scanning and connect to "VCI". See the following figure for the page



You can click "Scan" to scan the QR code on the back of VCI to connect to

VCI. See the following figure for the page

<	BLE Connection	$\langle O \rangle$
		1 Ali
	APP VCI	
Current	State: Not Connected	
Bluetoot	h automatic connection	
tsTP 5C.C7.0	MS Connection	
TSO D5/EB/0	Connection	
TSO DE:11:FE	0002012 Connection	
tsTP F8:8A.5	MS Connection	
	Scanning Devices	

Attention:

Turn on Bluetooth scan nearby, you can select VCI to connect, VCI device name is "RACEXING"

Bluetooth automatic connection: After the automatic connection is

turned on, the device can be automatically connected through Bluetooth next time

Disconnect: Click "Disconnect" to select another device for connection Bluetooth connection method 2: After selecting the vehicle type, click the upper right corner of the programming page to enter the Bluetooth connection page, and search for nearby by scanning

Device and connect to "VCI". See the following figure for the page

202	2/01-2022/12(433MHz)-A18801	-4-11 OB5'	C BLE Connection	
Activation	Programming	Learning		
	Ъ.		APP	VCI
ocation ID(F	HEX) 🔻 Kpa 🔻 MHz	°C ▼ Bat	Bluetooth automatic connection	
RF			tsTPMS 5C.C7.C1.CD.CD.D6	Connection
RR			TS00002020 D5EB:C2A0.8EA0	Connection
			TS00002012 DE:11FBBAE2FD	Connection
	_		tsTPMS F88A5EC4D35D	Connection
Queryir	ng Ar	ctivation	Scanning Devices	E

Programming page icon description:

The " \checkmark " display on the VCI in the upper right corner indicates that the current mobile device has a VCI device. × indicates that the VCI device is not connected

The " \checkmark " displayed on the OBD in the upper right corner indicates that the VCI is connected to the OBD. × indicates that the VCI and OBD are not connected

After the VCI is successfully connected, the current power supply of the

VCI is displayed in the upper left corner

Step 2: Go to the programming learning page from the home page

See the following figure for the page



Step 3: Select the corresponding vehicle

Model selection method:

"Model Selection" Select a vehicle based on the brand, model, and year

See the following figure for the page

Note: If you choose the indirect model to program, only the learning process information will pop up

<	Progra		
Vehicle	VIN Serch	Sensor OE	Make
Q Piez	ise input a search key	word	
	Make / Mode	el / Year	
Make	A		A B
Model	阿巴斯		C D E
Year	阿尔宾娜		F G
C	阿尔法罗密欧		I J
	阿斯顿马丁		L M
	爱驰		N O P
	奥迪		Q R S
	в		T U
	宝骏		w x
			Y
	宝马		Z #
	宝马		Z #
<	宝马 Progra	am	2
< Vehicle	宝马 Progra VIN Serch	arm Sensor OE	z # Make
< Vehicle	宝马 Progra VIN Serch	am Sensor OE Mode	z # Make
< Vehicle	宝马 Progra VIN Serch Indirect I Learning P	am Sensor OE Mode rocess	z # Make
Vehicle Q ME 1.	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether tt	am Sensor OE Mode rocess he TPMS	z Make
Vehicle Q Mc 1 Mc 2	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether tt arming light is on. . Inflate the tire to	am Sensor OE Mode rocess he TPMS the nominal	z Make
Vehicle Q Mc 1. W Mo 2 ti Tř	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether th arming light is on. Inflate the tire to re pressure value ameplate.	am Sensor OE Mode rocess he TPMS the nominal of the	z Make
Vehicle Q Mc 1. Mo 2. Ye n 3.	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether ti arming light is on. . Inflate the tire to re pressure value ameplate. . Turn the ignition prome off	am Sensor OE Mode rocess he TPMS the nominal of the switch ON	z Make
Vehicle Q Mc 1 Ye n G (é é	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether ti tarning light is on. . Inflate the tire to re pressure value ameplate. . Turn the ignition ingine off). . Press the 'ENTE	am Sensor OE Mode rocess he TPMS the nominal of the switch ON R 'button on	z # Make
Vehicle Q Me 1. Ye S Q Vehicle	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether th arming light is on. . Inflate the tire to re pressure value ameplate. . Turn the ignition engine off). . Press the 'ENTE te menu. . press the '+/-' ke	am Sensor OE Mode rocess he TPMS the nominal of the switch ON R 'button on y to select	z Make
Vehicle Q Mc 1. Mo 2. Ye nn 3. (e) 4. ti 15. 7. 6.	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether ti arning light is on. . Inflate the tire to re pressure value ameplate. . Turn the ignition engine off). . Press the 'ENTE he menu. . press the 'ENTE he menu. . press the '+/-' ke	am Sensor OE Mode rocess the TPMS the nominal of the switch ON R 'button on y to select ay to select	z Make
Vehicle Ma R Ma 1. Ye n G G	宝马 Progra VIN Serch Indirect I Learning P eset steps: Check whether ti tarming light is on. . Inflate the tire to re pressure value ameplate. . Turn the ignition engine off). . Press the 'ENTE te menu. . press the 'H-1' ke PMS RESET. . Press the '+/-' ke	am Sensor OE Mode rocess he TPMS the nominal of the switch ON R 'button on y to select ey to select	z # Make

HAMAION

"Frame Number Search" can enter the programming page by entering the frame number or scanning to identify the frame number. See the following figure for the page



"Sensor OE Number" selects the corresponding vehicle according to the sensor OE number, and after entering the OE number, all models matching the OE number can be searched. Users can quickly click on the vehicle programming page according to the searched model. On the OE number search page, users can click on the historical search record to jump to the programming page



"Sensor Manufacturer" selects the corresponding vehicle according to the sensor manufacturer, and after searching, the list displays all the vehicle data under the manufacturer. Users can quickly select the vehicle to enter the programming page. On the sensor manufacturer search page, users can click the historical search record to jump to the programming page



Step 4: Create a new ID: Write to the new sensor ID

Method 1: Auto Create Click Auto Create to directly write the ID to the sensor: The sensor device is near the upper right corner of the mobile phone device. See the following figure for creating the ID page



14:00 📞			all 🗢 🕼
(激励	Atlas X(博越X) /01 - 2022/12	Geely(吉利 (433MHz)2	vcP oab ^p
153,1013		±.	44
	自动的	创建	
	选择编利	呈方式	
12.22	VCI O	NFC 🖲	
左前	取消	确定	- 11
右前			
右后			
左后			
-		_	_
激活复制	OBD 复制	手动创建	自动创建

Attention:

When performing NFC programming on an IOS mobile device, you need

to select the NFC type to write the ID

Android mobile device NFC programming can be directly programmed

to create ID writing

Method 2: Manually Create Click Manually Create, enter the decimal or hexadecimal ID, and write the ID to the sensor. See the following figure for the page

Activation	Programming	Learning	Activati	on Pros	gramming	Learning
	ij		ľ	DEC O	nput HEX	0
Location	ID(HEX)	-	Loca	Please input th	e sensor ID	
			20	Cancel	Confirm	n.
RF			RR			
RR			LR			
LR						
			ActiveCop		Inout	Autoinc

Step 5: Close the sensor to the VCI and write the new ID

After the new sensor is written, the writing succeeds. See the following

MA



figure for the page

Replication learning

Step 1: Bluetooth connection to VCI

Bluetooth connection method 1: Click "Bluetooth Management" on the home page to enter the Bluetooth management page, then click "Bluetooth Connection" to enter the Bluetooth connection page, search for nearby devices by scanning and connect to "VCI". See the following figure for the page



You can click "Scan" to scan the QR code on the back of VCI to connect to

<	BLE Conne	ction
	APP 😣	
Current S	itate: Not Connecte	d
Bluetooth	automatic connection	on 💽
tsTPM 5C:C7:C1	VIS CD:CD:D6	Connection
TSOC D5/EB/C2	0002020 2:A0:8E:A0	Connection
TSOC DE:11/FB	0002012 BAE2FD	Connection
tsTPM F8.8A.5E	MS :C4:D3:5D	Connection
	Scanning Device	s E

Attention:

Turn on Bluetooth scan nearby, you can select VCI to connect, VCI device name is "RACEXING"

Bluetooth automatic connection: After the automatic connection is turned on, the device can be automatically connected through Bluetooth next time

Disconnect: Click "Disconnect" to select another device for connection Bluetooth connection method 2: After selecting the vehicle type, click the upper right corner of the programming page to enter the Bluetooth connection page, and search for nearby by scanning

Device and connect to "VCI". See the following figure for the page

<	吉利 A 2022/01-2022/	tlas X(博越X) 12(433MHz)-A18801	-4-11 VCP	<	BLE Connect	ion
Activatio	on Pro	ogramming	Learning			
					APP 8	
Location	ID(HEX) -	Kpa 👻 MHz	*C 🔻 Bat	Current S	itate: Not Connected	
LF						
RF				tsTPM 50.07.01	MS ICD:CD:D6	Connection
RR				TSOC	002020	Connection
LR				D5:EB:Ca	2:40:8E:40	
				TSOC DE:11.FB	0002012 BAE2FD	Connection
				tsTPM F8/8A5E	VIS 64.03.50	Connection
Qu	erying	A	ctivation		Scanning Devices	3

Programming page icon description:

The " \checkmark " display on the VCI in the upper right corner indicates that the current mobile device has a VCI device. \times indicates that the VCI device is not connected

The " \checkmark " displayed on the OBD in the upper right corner indicates that the VCI is connected to the OBD. × indicates that the VCI and OBD are not connected

After the VCI is successfully connected, the current power supply of the VCI is displayed in the upper left corner

Step 2: Go to the programming learning page from the home page See the following figure for the page



Step 3: Select the corresponding vehicle

Model selection method:

"Model Selection" Select a vehicle based on the brand, model, and year

See the following figure for the page

Note: If you choose the indirect model to program, only the learning process information will pop up

<	Prog	Iram	
Vehicle	VIN Serch	Sensor OE	Make
Q Pleas	e input a search k	eyword	
	Make / Mo	idel / Year	
Make	A		A B
Model	阿巴斯		C D E
Year	阿尔宾娜		F G
C	阿尔法罗密欧	t	I J
	阿斯顿马丁		L
	爱驰		N O P
	奧迪		Q R S
	в		T U V
	宝骏		w x
	宝马		z
<	Prog	jram	
Vehicle	Prog VIN Serch	jram Sensor OE	Make
Vehicle	Prog VIN Serch Indirect	yram Sensor OE t Mode	Make
< Vehicle	Prog VIN Serch Indirect	sensor OE t Mode Process	Make
Kehicle	VIN Serch Indirect Learning set steps: Check whether rining light is of	sensor OE t Mode Process the TPMS	Make
Vehicle Q Me 1.0 Wa Mo 2.1	Prog VIN Serch Indirect Learning set steps: Check whether rrning light is or inflate the tire t o pressure valu	Sensor OE t Mode Process the TPMS n. to the nominal e of the	Make
Vehicle Q Me 1.0 wa Mo 2.1 tire Ya na 3.3	Prog VIN Serch Indirect Learning set steps: Check whether rrning light is or inflate the tire t p pressure valu meplate. Turn the ignitio	sensor OE t Mode Process the TPMS n. o the nominal e of the n switch ON	Make
Vehicle Q Ma 1.0 Wa Mo 2.1 tir Ys na 3.3 (er 4.1)	Prog VIN Serch Indirect Learning set steps: Check whether rming light is or Inflate the tire tt e pressure valu meplate. Turn the ignitio rgine off). Press the 'ENT	Sensor OE t Mode Process the TPMS n. to the nominal e of the n switch ON ER 'button on	Make
Vehicle C. Me 1.C Wa Mo 2.I Vie na 3. (er 4.I the 5.J	Prog VIN Serch Indirect Learning set steps: Check whether rming light is or inflate the tire t e pressure value meplate. Turn the ignitio ngine off). Press the 'ENT e menu. orees the '+/-' 1	ram Sensor OE t Mode Process the TPMS n. to the nominal e of the n switch ON ER 'button on wey to select	Make
Vehicle Q Mc 1.0 Wa Mo 2.1 tire Ye na 3.3 (er 4.1 the 5.1 TF 6.1	Prog VIN Serch Indirect Learning set steps: Check whether rrning light is or inflate the tire t e pressure valu meplate. Turn the ignition ggine off). Press the 'ENT e menu. press the '+/-' i VMS RESET.	Sensor OE E Mode Process the TPMS n. to the nominal e of the n switch ON ER 'button on wey to select key to select	Make
 Vehicle Me 1. C Wa Mo 2.1 Mo 2.1 Tire a.3. (er 4. the 5. TF 6. 	Prog VIN Serch Indirect Learning set steps: Check whether irming light is or inflate the tire t e pressure value meplate. Turn the ignitio ingine off). Press the 'ENT e menu. press the '+/-' } DMS RESET.	Tram Sensor OE Thode Process the TPMS n. to the nominal e of the n switch ON TER 'button on key to select key to select	Make



"Frame Number Search" can enter the programming page by entering the frame number or scanning to identify the frame number. See the following figure for the page



"Sensor OE Number" selects the corresponding vehicle according to the sensor OE number, and after entering the OE number, all models matching the OE number can be searched. Users can quickly click on the vehicle programming page according to the searched model. On the OE number search page, users can click on the historical search record to jump to the programming page



"Sensor Manufacturer" selects the corresponding vehicle according to the sensor manufacturer, and after searching, the list displays all the vehicle data under the manufacturer. Users can quickly select the vehicle to enter the programming page. On the sensor manufacturer search page, users can click the historical search record to jump to the programming page



Step 4: Connect the VCI to the body and read the sensor ID of the

original car

Click "Read ID" to read the tire ID in the VCI. See the following figure for

the page

Information of original parts ensor Manufacturer: Bind Middle Schwader) ismor Frequency: 4 Learning Type BD Learning Learning Process ismore Free ismore Free <td< th=""><th>Activation</th><th>Programming</th><th>Learning</th><th>Activation</th><th>Programming</th><th>Learning</th></td<>	Activation	Programming	Learning	Activation	Programming	Learning
Information of original parts iensor Manufacturer: 施耐信(Schrader) iensor Preve 0732445 iorque value of tire nut(Nm): NA iensor PN: 2016DJ4019/AG8FP4 Learning Type Learning Type Learning Process .proper TPMS tool is required to learn the new sensor ID.						
ierror Frequency: 433MHz ierror Frequency: 433MHz ierror PN: 01732445 reque value of tire nut(Nm): NA ierror PN: 2016DJ4019/AG8FP4 RR Learning Type Learning Process .proper TPMS tool is required to learn the new sensor ID.	Information of	original parts		Location	ID(HEX)	•
Inside request, process Inside required to learn the new sensor ID.	Sensor Manufactu	irer: 施耐德(Schrader)		LF		
iersor PN: 2016DJ4019/AGSFP4 Learning Type RR LR RR Larning Process proper TPMS tool is required to learn the new sensor ID.	Sensor PN: 0173	32445 e nut(N.m): NA		RF		
Learning Type LR LR LR LR Learning Type Learning Process	Sensor PN: 2016	3DJ4019/AG8FP4		RR		
IBD Learning Learning Process proper TPMS tool is required to learn the new sensor ID.	Learning Type			LR		
Learning Process uproper TPMS tool is required to learn the new sensor ID.	BD Learning					
proper TPMS tool is required to learn the new sensor ID.	Learning Proc	ess				
	proper TPMS to earning steps:	ol is required to learn the	new sensor ID.	4		

Step 5: OBD replication

Click OBD Copy to copy the ID that has been read. See the following

figure for the page

Location	ID(HEX)	•
RF		
RF		

Step 6: Put the sensor close to the VCI and write the new ID

After the new sensor is written, the writing succeeds. See the following

MA

figure for the page



Other function description

About programming page function description

Bluetooth automatic connection: After the Bluetooth automatic connection button is opened, the device will automatically reconnect to vci after shutdown and restart, or after re-entering the APP, but will not automatically reconnect after shutdown.

Note: After the switch is set, you need to restart the APP to take effect.

Note: If the IOS mobile device exits the APP, it will not automatically reconnect. If it is disconnected due to distance, it will automatically reconnect. Shutting down and restarting the VCI device is automatically reconnected

Query:

(1) Attach the NFC chip to automatically sense and obtain the sensor information

Note: For IOS NFC query, you need to manually click the NFC query button to trigger the IOS NFC query function. For Android, you only need to manually place the sensor in the NFC identification module on the back of the phone in the query page

(2) Query the sensor button to obtain sensor information through the VCI

NFC creation: Programming directly through NFC recognition

OBD learning: After the motivation is successful, the tire displays the

corresponding ID, and OBD learning can be carried out with the ID, and

the ID is written into the VCI.

Code reading: Read the VCI fault code

Clear: Clear the VCI fault code

For all Class B Digital Devices, a statement like the following is needed:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

"Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment".

"This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

The device has been evaluated to meet general RF exposure requirement

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.