Smart Key

Keyless Entry & Push Start & Remote Start

User Manual

Product Model:

PKE-100P

PKE-100PF

PKE-100K + ST

PKE-100L + ST

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*All the items inside the manual should be subject to any changes without additional notices.

1. Introduction

PKE-100 series Push Start & Remote Start System is adopted with world advanced RFID system. With the leading miniaturization and super low-power design, this series of push start system successfully integrates Remote System, Keyless Entry System, Push Start System and Remote Start System. With assistance of the whole system, you just need to put the smart key inside your pocket, including entering, starting, stopping and leaving, all the procedures make you experience hand free life, realize “My Car Knows Me” and “Say Goodbye to Inserting Key”.

PKE-100 series Push Start & Remote Start System has a wide coverage for world popular cars (more than 80% by quantities).

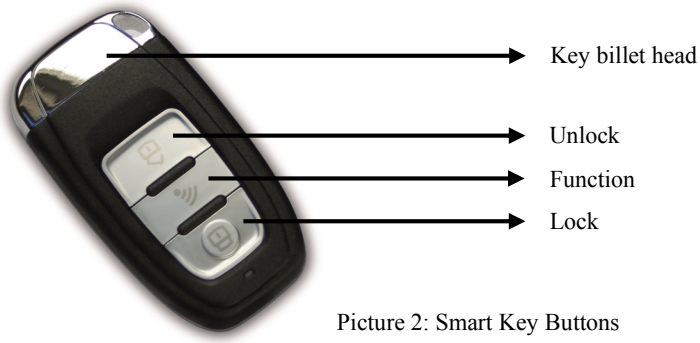
PKE-100P is applicable to specific car models according to Can-Bus signals. PKE-100PF, PKE-100K+ST and PKE-100L+ST are applied to various car models according to electric signals. Please ask your dealer for compatible models.

*To install this product, it’s possible to consume an original key and remove the steering lock.

2. Parameter & Feature

Main Unit Part(s) Electric Parameter	PKE-100P	PKE-100PF	PKE-100K +ST	PKE-100L +ST
Working voltage	DC9V-16V			
Main unit static current	< 8mA		< 18mA	
UHF frequency	442MHz - 446MHz			
LF frequency	125KHz		25KHz	
Working temperature	-40℃ - 105℃			
Working humidity	< 95%			

Smart Key Electric Parameter	PKE-100P	PKE-100PF	PKE-100K +ST	PKE-100L +ST
Working voltage	DC2.1V-3.6V			
Remoter static current	< 5uA		< 12uA	
Smart key response distance	2.0M < Distance < 2.5M			
UHF frequency	442MHz - 446MHz			
LF frequency	125KHz		25KHz	
Remote distance	Open space > 40M			
Working temperature	-25℃ - 80℃			
Working humidity	< 95%			
Battery model	3V CR2032			
Battery life (Average)	> 16 months		> 12 months	



Picture 2: Smart Key Buttons

Feature Comparison	PKE-100P	PKE-100PF	PKE-100K +ST	PKE-100L +ST
Can-Bus Technology	√	×	×	×
3D antenna professional design	√	√	√	√
Automotive qualified components	√	√	√	√
Super low-power design	√	√	√	√
RFID anti-collision tech	√	√	√	√
FHSS high security	√	√	√	√
Over loading protection	√	√	√	√
High power (current) drivable	√	√	√	√
Dual MCU controller	√	√	√	√
Adapting with original key	√ *	×	×	×
Emergency entry and start policy (Morse Password Unlock/Start)	√	√	×	√
RFID entry and start policy (Morse Contact Unlock/Star)	√	√	×	×
Passive Keyless Lock/Unlock	√	√	√	√
Remote Lock/Unlock	√	√	√	√
Starter Kill	√	×	×	×
Internal Fuel circuit disconnection	×	×	√	×
Anti-hijacking	√	√	√	√
Search Car	√	√	√	√
Trunk Open *	√	√	√	√
Release Smart Key	√	√	√	√
Low Battery Warning	√	√	√	√
Saving Power Mode	√	√	√	√
Switch Smart Key	√	√	√	√
Auto Window-Up *	√	√	√	√
Push Start/Stop Engine	√	√	√	√
Remote Start/Stop Engine **	√	√	√	√
Compatible with GSM/GPS TCU	√	√	×	×

*Enable for specific cars

**Disable for MT cars

3. Packing List

Kindly please check the components complete or not before installation:

Component	PKE-100P	PKE-100PF	PKE-100K+ST	PKE-100L+ST
Main unit	1 unit	1 unit	2 units	2 units
Smart key	*2 pieces	2 pieces	2 pieces	2 pieces
Antenna	2 pieces	2 pieces	2 pieces	2 pieces
Main cable	*1 piece	1 piece	1 piece	1 piece
*Start cable	1 piece	1 piece	1 piece	1 piece
Com. cable	N/A	N/A	1 piece	***1 piece
*Start button (with cable)	1 piece	1 piece	1 piece	1 piece
Morse decoder	1 piece	1 piece	N/A	***1 piece
*Key accessories kit	1 pack	1 pack	1 pack	1 pack
*Relay	0-3 pieces	0-6 pieces		
*Diode	0-4 pieces	0-8 pieces		
*Window Closer	0-1 unit		Optional	
**Bypass Module	Optional			
**Specialized Panel	Optional			

*Item changes according to specific car. ***Item sticked on main cable.

**Item optional for some specific cars, please ask your dealer for details.

Relay and Window Closer are both for window-roll-up purpose according to specific car.

PKE-100PF
Main Cable
Start Button
Morse Decoder
PKE-100PF
Keyless Entry
Push Start System
Main Unit
Start Cable
Short Antenna
Long Antenna
Smart Key

PKE-100K+ST
Main Cable
Com. Cable
Smart Key
Push Start
ST
Start Controller
Unit of Start Controller
Start Cable
PKE-100K
RFID
Keyless Entry
Start Button
Short Antenna
Long Antenna
Unit of Keyless Entry

PKE-100L+ST
Morse Decoder
Unit of Start Controller
Smart Key
Main Cable
Com. Cable
Start Cable
Push Start
PKE-100L
Keyless Entry Unit
Unit of Keyless Entry
Start Button
Short Antenna
Long Antenna

4. Function & Application

4.1. Passive Lock/Unlock

1. Walk close to the car 1.5-2M, the door is unlocked and the car is disarmed. (Action: Steering lamps flash twice)

2. Walk away from the car 2-3 M for 3-4 seconds, the door is locked and the car is armed. (Action: steering lamps flash once, horn sounds once.)

3. If the door is not closed properly when walking away from the car 2-3M for 3-4 seconds, the alarms will be triggered. (Action: steering lamps flash 8 times, horn sounds 8 times).

4.2. Remote Lock/Unlock

	PKE-100P	PKE-100PF	PKE-100K + ST	PKE-100L + ST
Lock	Press (Steering lamps flash once, horn sounds once, passive unlock function unavailable within 1 hour)		Long press (Steering lamps flash once, horn sounds once, passive unlock function unavailable permanently)	
Unlock	Press (Steering lamps flash 2 times)		Long press (Steering lamps flash 2 times)	
Auto-lock after remote unlock	Within 25 seconds if the smart key is not detected		Within 5 seconds if the smart key is not detected	

*Note: Remote lock action will turn off passive unlock function for 1 hour or permanently; in the meanwhile, the door must be unlocked by pressing . This function is mainly applied to long time talking or walking near the car.

4.3. Push Button Start & Stop Engine

	PKE-100P	PKE-100PF	PKE-100K + ST	PKE-100L + ST
Start	Step on the brake and press the button			
Stop	*Press button	Step on the brake and press the button Or long press the button		
Engine Off Alternation	ACC-ON cyclically and OFF-ON cyclically after door opened		ACC-ON-OFF cyclically	
Engine On Warning	10 seconds after walking away		N/A	
Max. Startup Time	By Can-Bus signal control, till to engined started then off		Max. 15 Seconds by keep button pressing	

*PKE-100P: Press the button to stop is only available when speed <10KM/H. If the speed >10KM/H, it still needs stopped by long pressing the button.

*Note: After the car switched “ON”, walking away will not trigger the passive lock action, and the engine can still be started.

4.4. Remote Start & Stop Engine

	PKE-100P	PKE-100PF	PKE-100K + ST	PKE-100L + ST
Remote Start	Long press for 3 seconds, then press		Long press over 4 seconds	
Remote Stop	Press		Long press	
Auto-Flameout after Remote Start	After 20 minutes without opening door or braking action		After 15 minutes without opening door or braking action	

*Note: After engine remote started, the door opening and stepping on brake action will trigger the car into "ON" status, no Auto-Flameout any more, and not available for Remote Stop.
*Note: For MT cars, Remote Start/Stop functions are not available.
Cellphone Start & Stop: By SMS or Android/iPhone App regarding TCU manual.

4.5. Security System
If smart key is not detected or the car is armed, the improper unlock action will trigger the alarms, at the same time the electric/oil circuit will be cut off (Action: horn sounds 30 seconds, steering lamps flash 3 minutes).
*Note: After alarms triggered, the car can only be started by smart key detected.

4.6. Auto Window-Up
It is not necessary to close window before leaving the car. All the windows will be rolling up automatically after lock action (in OFF status).
*Note: To avoid pinching, please pay attention to your child when leaving the car.
*Note: Not all cars can realize this function, please ask your dealer for details.

4.7. Search Car
If you forget car's position, please press , the sound & horn alarms will make you locate it in soon time. When smart key or unlock action is detected, the searching will stop (Action: steering lamps flash 8 times, horn sounds 8 times at the same time).

4.8. Release Smart Key
1. Release: If you need to release the smart key (for example: washing car), press both and , steering lamps flash twice, then the smart key is released. In this status, the smart key will not be identified, and lock action will not be triggered when leave the car. But if smart key is close to the car, it also can be started.
2. Recovery: if you need to resume the smart key, directly press to wake it up.

4.9. Low Battery Warning
When smart key's battery is low, the passive unlock action will trigger the horn sounding 4 times.
*Note: If you are warned, please change the battery (3V CR2032).

4.10. Saving Power Mode

The system will enter into saving power mode automatically after long term unused. After that, the passive unlock action is not available any more. The car must be unlocked by remote unlock action.

	PKE-100P	PKE-100PF	PKE-100K+ST	PKE-100L+ST
Saving Power	After 5 days		After 67 hours	

4.11. Switch Smart Key

The system can only recognize the current using smart key. If you need to use another one, directly press its to switch.

4.12. RFID Start

In the case of keys broken or battery dead, smart keys could be still identified to allow car owner to get in. Stick the lower half of the smart key to the morse decoder for 15 seconds, unlock action will be triggered if car is armed, with steering lamp flashing twice. Then car can be started within 1 minute and will need identification again if more than 1 minute.

	PKE-100P	PKE-100PF	PKE-100K+ST	PKE-100L+ST
RFID Start	Available		N/A	

4.13. Morse Decoding Start

When emergency happens, for example the smart key completely gets damaged, missed, out of battery or other situation when smart key cannot be used, the resolution “MORSE DECODER” is supplied under security policy: By knocking outside window to input a group of password, you can make the car normally unlocked, started and driven.

	PKE-100P	PKE-100PF	PKE-100K+ST	PKE-100L+ST
Morse Decoding	Available		N/A	Available

The MORSE DECODER is available only after setting up a password. Please set up password under dealer’s instruction (See final pages in the manual):

4.14. Anti-hijacking

After door is closed and the car is driven away, it will be locked automatically and unlocked after switched off. Auto-Lock conditions:

	PKE-100P	PKE-100PF	PKE-100K+ST	PKE-100L+ST
Anti-hijacking (Auto-Lock)	Speed > 10KM/H	The second brake action after started		

*Note: This feature is excluded if the car has original function already.

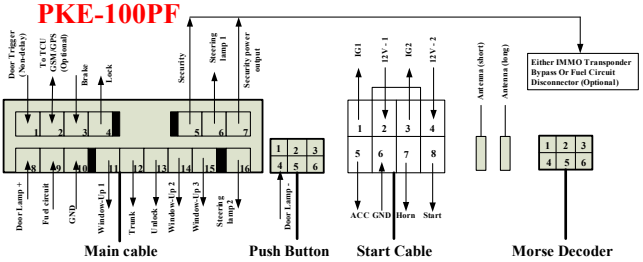
4.15. Trunk Open

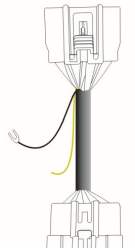
Long press to release the trunk.

5. Diagram

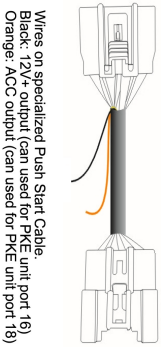
PKE-100P: No standard diagram, please see attached quick guide for specific car.

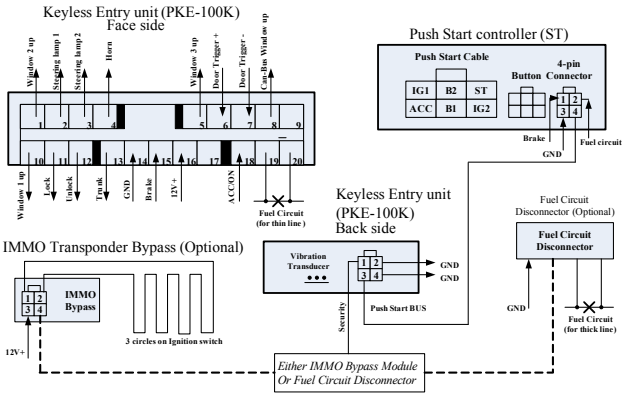
PKE-100PF



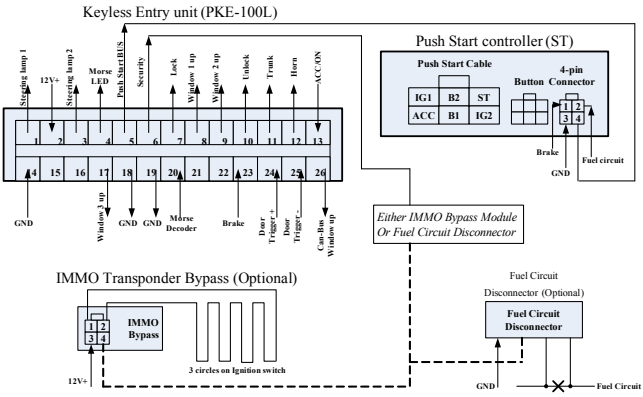


PKE-100K + ST





PKE-100L + ST



6. Warm Suggestion

1. Please do not use smart key and original remote key crossways.
2. Please do not put smart key inside car for long time if you are not driving.
3. Please press to unlock the door if passive unlock action fails.
4. Please do not put smart key and smart phone together.
5. This product must be installed by professional vehicle electrical technician.
6. The battery model must be 3V CR2032, please buy from your dealer.

7. Safety Caution

The driver must follow the following instructions to avoid dangers and injuries.

1) To avoid pinching injury or other accident, do not put hand, head or other things on the window when leaving the car.

2) To protect children from pinching injury or other accident by triggering the window closer, do not leave them alone inside the car.

Change the battery in time when receiving low power warning. If smart key is put inside the car or keep battery for long time without changing, the car could possibly be locked.

8. FAQ

8.1. Smart key (PKE) failure (Attached picture 8.1)

1) Long press button on smart key, LED no work. Battery runs out or damaged;

2) In 2M range, lock/unlock repeatedly. Check 3D antenna wire damaged or not;

3) Key A not working, Key B working, UHF sender of A might be damaged.

8.2. General start failure

1) Check lamp, steering lamp, interior lamp turned off or not? Maybe battery out;

2) If the battery is normal, check if the fuel circuit is cut off or not? Recover it then check if the car can be started or not;

3) Check if the IMMO is released or not; Check if the DIP set is correct or not;

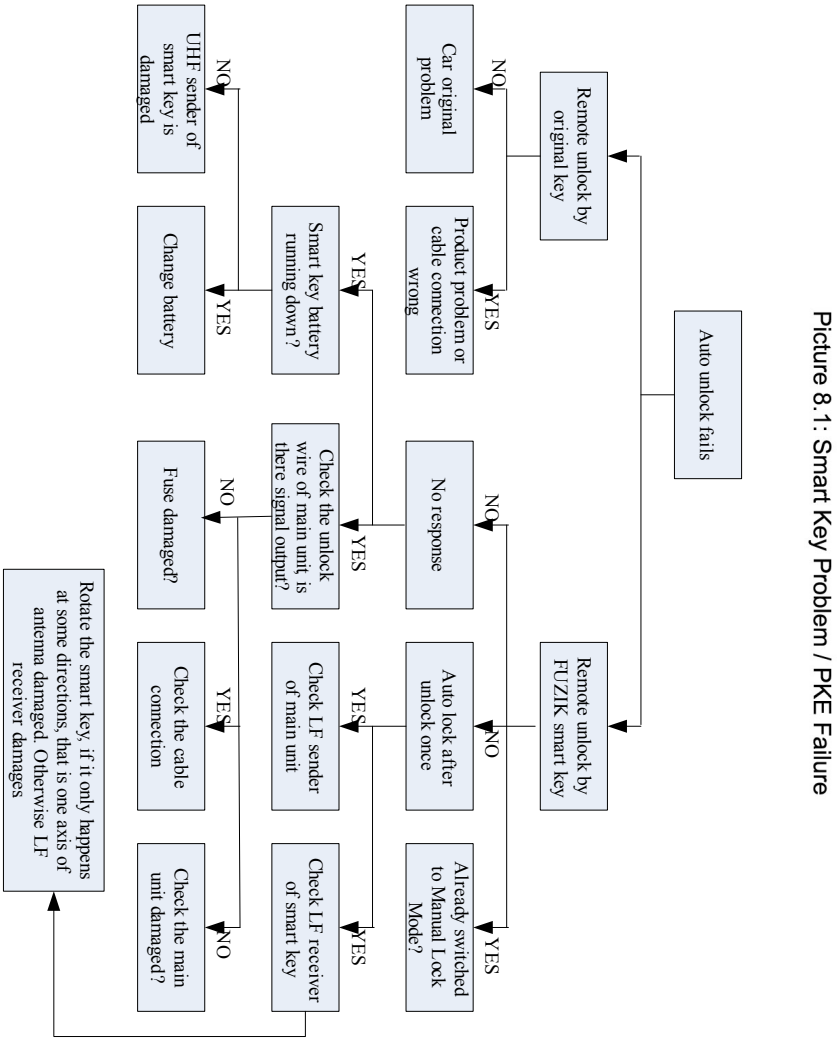
4) The Start button can be switched at “ACC”, “ON”. Step on the brake, the green led on button lights, but there is no start output (by listening, normal starting can trigger the relay voice from push start main unit); Check the communication cables between Start Controller and PKE unit, are they connected in bad contact?

8.3. Start failure after short time parking

1) On site check lamp, steering lamp, interior lamp are turned off or not? Maybe battery is dead;

2) Test the static current after locking, normally less than 80mA or not;

3) If the static current is a bit higher, for example 100mA, but lock the car by original key only causing 40mA, please change the connection point of lock signal wire (necessarily connect with primary lock).



Picture 8.1: Smart Key Problem / PKE Failure

9. MORSE Setup/Decode:

9.1. Setup:

Turn to "ON", Press of smart key, LED on MORSE DECODER flashes 10 times very fast (or 1 time lasting 2.5 seconds), now it enters the setup status. Complete the procedure in 4 minutes; otherwise the setup status will be canceled.

Knock 10 times on MORSE DECODER (at place of windshield glass). After every knock action, wait 1 second, the MORSE DECODER will flash 0.2 second to mean it receives the knock action, Then do next knock action.

After all 10 knocks, wait 5 seconds, the MORSE DECODER will flash 1.5 seconds to mean it acts correctly. The password is made up of 6 digits from 1 to 9 times knocks. Now we are permitted to start to setup password: example "123456".

Knock 1 time to setup first digit "1", LED responses 1 time; after 5 seconds LED keeps lighting 1.5 seconds, then go to next step.

Knock 2 times to setup second digit "2", LED responses 2 times; after 5 seconds LED keeps lighting 1.5 seconds, then go to next step.

Knock 3 times to setup second digit "3", LED responses 3 times; after 5 seconds LED keeps lighting 1.5 seconds, then go to next step.

Knock 4 times to setup second digit "4", LED responses 4 times; after 5 seconds LED keeps lighting 1.5 seconds, then go to next step.

Knock 5 times to setup second digit "5", LED responses 5 times; after 5 seconds LED keeps lighting 1.5 seconds, then go to next step.

Knock 6 times to setup second digit "6", LED responses 6 times;

After 5 seconds LED lights 10 times, the unlock action is triggered to mean password setup successfully!

9.2. Decode:

When the door is locked, the security system is ON, LED lights 2 times every 2.5 seconds. If you want to use MORSE DECODER to release the security system, follow below instructions:

Step 1: Knock 10 times to make LED response 10 times. After 5 seconds, LED keeps lighting 1.5 seconds, start to input password.

Step 2: Input password.

We have set the password as example “123456”.
For first digit, knock 1 time, LED responses 1 time. If the password is correct, after 5 seconds, LED keeps lighting 1.5 seconds, then go to next step.
For second digit, knock 2 times, LED responses 2 times. If the password is correct, after 5 seconds, LED keeps lighting 1.5 seconds, then go to next step.
For third digit, knock 3 times, LED responses 3 times. If the password is correct, after 5 seconds, LED keeps lighting 1.5 seconds, then go to next step.
For fourth digit, knock 4 times, LED responses 4 times. If the password is correct, after 5 seconds, LED keeps lighting 1.5 seconds, then go to next step.
For fifth digit, knock 5 times, LED responses 5 times. If the password is correct, after 5 seconds, LED keeps lighting 1.5 seconds, then go to next step.
For sixth digit, knock 6 times, LED responses 6 times.
After 5 seconds, LED flashes 10 times, the unlock action is triggered to mean password input correctly!
Notice: each time when you input (knock) wrong password, LED will not keep lighting 1.5 seconds. At this time, you need to return to first step (knock 10 times).
Total 5 times continuous wrong input will shut down MORSE DECODER until the ACC/ON is triggered again.
After the security system is released, you have 2 minutes to get in the car and start engines. If the time goes over 2 minutes, you have to input password again to start it.