

MB Key Expert.

Manual.





MB programme is used to test the efficiency of any Mercedes keys which use IR information transmission.

To start your diagnostics insert the key into the device key lock.

Press "start" button. You will see the readable information or you will see that there's no connection.

The key number is within 1 - 8, the same as in STAR DIAGNOSIS.

The key ID is 4 bytes, according to which an identically named log file of all the events is created. The log can be viewed during the process by pressing VIEW LOG or at the end of work by opening the appropriate log file in the same directory, where the programme itself is.

The key status is 2 bytes, actually 1 byte, the other byte is the negative supplement of the first byte (byte 2=NEG(byte 1) or simpler byte 1+byte2=00).

If this type of connection is not present - the key is apparently out of order!!!

And the key might have a number of statuses, each bit in the first byte describes the eeprom status.

I will give several examples Status = 04 FC - the key is new, ready to work, but unauthorized.

= 14 EC - the key is unfaulty, authorized.

Different status values speak about different eeprom key statuses and whether different groups of commands which depend on the status and allow to carry out operations work .

Counts is 3 bytes, to specify the are meters in the 3 hash blocks accordingly.

As it is known, hash is mathematical 8 bytes or a word, a coded word.

And the level of coding depends on the number of hash functions calculations.

The hash functions feature is one side coding. Let us have an 8 byte word like initial hash or password. Using this initial (first) hash, we can calculate second hash, then third hash, using second hash etc. up to 200 000 hashes. But hash function has one important property. We are able to calculate it forward only, hash has not back calculation. Then we can not calculate first hash when we have second one etc. CPU inside the key has 200 000 hashes and send them hash by hash from 200 000-th hash to 1st hash to the EIS. So we can not calculate next hash which the key will send next time. CPU in EIS saves the hash every time when key send it. So if we send the same hash on the next time EIS will not accept it and car will not start. EIS calculates next hash from previous hash which had been received from the key. So we can write to the EIS that hash the key has sent to program this key into this EIS.

We can see the limit of starts by this key in "Life" window.

When hashes inside the key will left this key will not start the car any more.

There are 6 bytes we can read and write inside the key. You can write some information there. For example, dealers phone number, VIN information etc. Write down information you need to "Write Remark" window and press "Wr" button.

There are two buttons in this program for testing of Infra Red function of the key. "On red lamp" - for LED operation test, and "Dec count" - for imitation of real work of the key in EIS.

Make "Dec counts", then press "Start" button. Hashes will be calculated for one less. Now you can test the key with "Dec count" and "Life" functions again. If these volumes will be for one value less it means this key is 100% good working.

Radio Frequency operation test.

Insert the key into device and press "On" button in "Radio test" window. Keep the key in device within all time of test.

Progress bar will grow in the down part of this window.

Within next 10 seconds press any button on the key. Radio frequency volume and power of radio signal will appear in the window. Then you can find these information in log file.

If in 10 seconds you see a message "No radio" it means RF operation in this key is damaged.

There are two RF standards for Mercedes:

433.92 MHz for European market.

314.998 MHz for US market.