RW2

Operating Manual

D431684XA

Vers. 10.0

SILCA®

This manual has been drawn up by SILCA S.p.A.

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GENERAL

This machine has been designed according to CE norms. The materials used in its manufacture are not dangerous and their use makes the machine comply to standards. The machine and all its parts are completely safe to use.

Instructions manual

The instructions manual provided with the machine is essential to its proper use and to carry out the necessary maintenance.
We therefore recommend protecting the manual from damage in a safe sheltered place, easily to hand for quick cosultation.

Residual risks

There are no residual risks arising from use of the machine.

Protection and safety precautions for the operator

The operations for which the machine has been designed are easily carried out at no risk to the operator.
The machine is designed with features which make it completely safe in all its parts.

Safety

To operate in complete safety, before using the machine read and fully comprehend the concepts, instructions and regulations described in this user's manual.

- Periodically check the electric wiring. If the wires are frayed or worn, repair or replace immediately.
- Always work with dry hands, cleaning any grease or oil from them.
- Always disconnect the machine when it is not in use or when carrying out maintenance operations.
- Do not tug at the electric wiring and ensure that it does not come into contact with oil, sharp objects or heat. Never remove the earth wire from the plug.
- Ensure that the earth wire is always properly connected.
- Do not use the machine in dangerous environments (damp or wet).
- Always work in a well-illuminated location.
- Keep the working area clear and remove any tools from around the machine before turning it on.
- Any visitors, especially children, must stand at a safe distance from the machine and not be allowed to touch it or any of the wiring.
- Do not use the machine for purposes different from those described in this manual.
- Do not use the machine if the ON/OFF switch is not working properly.

Power supply

The machine is supplied with 12 Vdc electricity by means of an internal battery, or it can be powered through a 15 Vdc universal power provider, supplied with the machine.

Start-up

The machine is started up by means of the master switch (E).

Machine identification

The machine is provided with an identification label which shows the serial number (fig. 1).

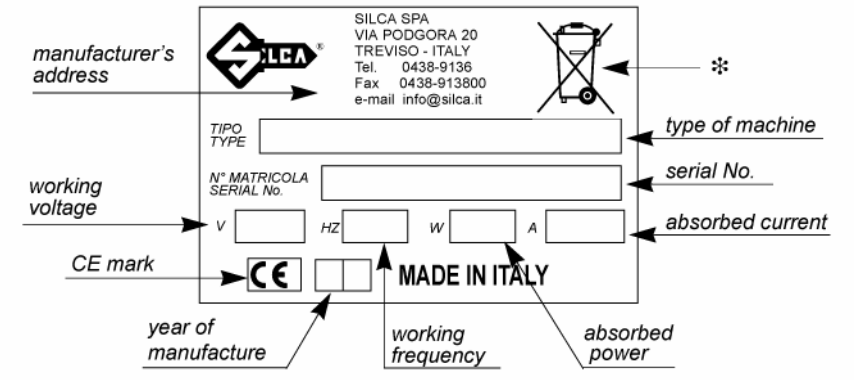


Fig. 1

(*) See chap. 11 "WASTE DISPOSAL", page 53.

1 MACHINE DESCRIPTION

The machine is designed for the making of copies of various car keys with transponders and is simple to use.
In particular, the machine is able to read and display the electronic code stored in the memory of Philips*, Megamos* and Temic* transponders used on the keys, and re-write it on a blank transponder.
The machine works alone or connected to a personal computer. Unauthorized use is prevented by a password. A functions menu is incorporated to meet all the needs arising during operation.
For a list of car makes and models whose keys can be copied, consult the articles published in the Silca catalogues and updates.

1.1 Main Features

Operation modes

- copier/detector - transponder reader/writer
- stand-alone/with personal computer

Special functions

- storage of transponder codes in the archive (max. 99)
- interface with STLM (Silca Transponder Learning Module)
- interface with TEX CODE
- interface with HOLDEN – COMMODORE
- interface with TEX CODE ADVANCED
- program in various languages
- machine test

Password

To operate as a stand-alone machine, a password issued by the supplier/dealer is needed (apply for one with the special "USER'S AGREEMENT").

Software updating

The machine can be updated by connection to a personal computer via RS232.

Power supply

- by means of a re-chargeable lead battery (internal)
- directly from the mains through an external universal power provider and special cable (used also for re-charging the battery)

1.2 Technical data

POWER SUPPLY

- battery: 12V - 2 Ah
- universal power provider: 100/240 Vac - 47/63 Hz / 15 Vdc - 2,2A

CONTINUOUS OPERATION WITH BATTERY

- over 4 hours

ANTENNA FIELD FREQUENCIES

- 125 kHz

DIMENSIONS

Width 245 mm
Length 160 mm
Depth 80 mm

WEIGHT, INCLUDING BATTERY

Kg. 1,6

1.3 Working parts

The structure of the machine is extremely simple.

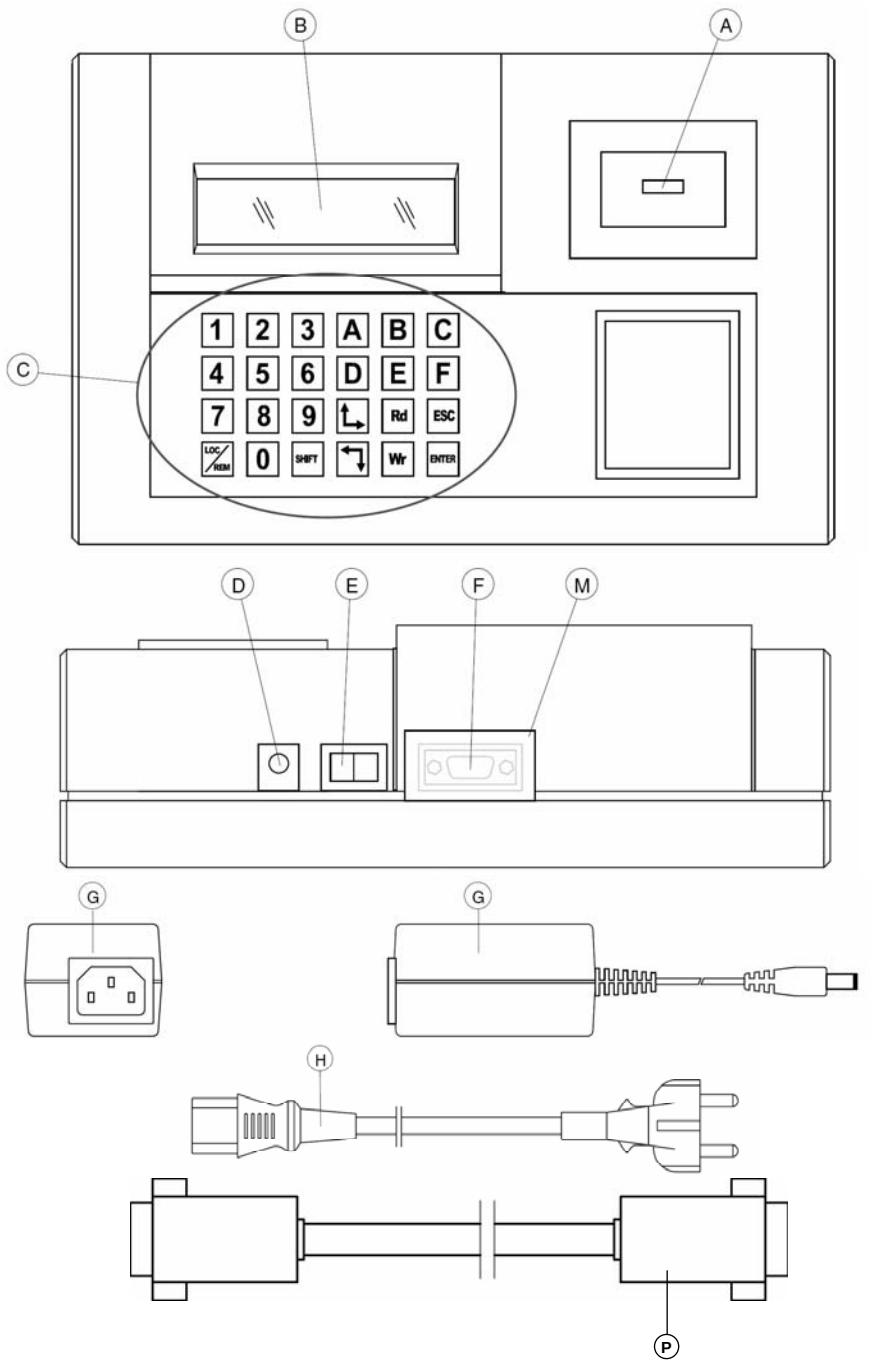


Fig. 2

A - reading/writing antenna
B - liquid crystal display for 20 + 20 characters (2 lines)
C - 24-key keyboard
D - 15 V d.c. power supply socket
E - master switch (POWER ON)
F - RS232 connector (9-pole)
G - 15 V d.c. power provider
H - power supply cable
M - cover
P - serial cable

1.4 Special features

KEYBOARD

The incorporated keyboard (Fig. 2, page 7) allows the user to interact with the machine rapidly and easily. At any given time only the keys relevant to the cycle in progress are enabled.

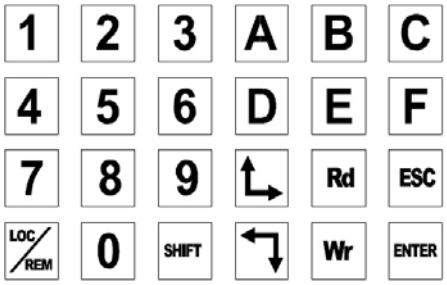
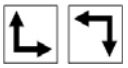


Fig. 3

The following keys are available:

Selection of local operation (STAND-ALONE)/remote (connected to a personal computer).

Entry of the password/electronic codes.



Up/down arrow keys to move the > up or down the characters on the display - selection. RH/LH operate with the shift key.

Enabling right/left-hand arrow - moving cursor to correct entry, if necessary.

Assent/confirmation for reading the data on the transponder.

Assent/confirmation for writing the data on a transponder.

Assent/confirmation function/selection.

Exit and return to main menu/sub-menus.

LIQUID CRYSTAL DISPLAY

Alphanumeric display with 2 lines of 20 characters each, illuminated from behind.

1.5 Symbols used on the display

The wording in a rectangle represents what is shown on the display.
The wording in a square at the side represents the key to press.

	I	N	S	E	R	T		O	R	I	G	I	N	A	L			
	K	E	Y												>	R	D	

Words in a rectangle (more than two lines) represent a full menu with more than two items, which can be displayed by scrolling the > cursor down or up by means of the arrow keys.
When an item has been selected from the menu, press the **ENTER** key.

>	C	O	P	Y														
	I	D	E	N	T	I	F	I	C	A	T	I	O	N				
	E	N	T	E	R	I	N	G				C	O	D	E			
	C	O	D	E		G	E	N	E	R	A	T	I	O	N			
	A	R	C	H	I	V	E											
	S	T	L	M														
	H	O	L	D	E	N		C	O	M	M	O	D	O	R	E		
	O	P	T	I	O	N	S											

If a warning appears on the display the machine cannot be used.

	W	R	I	T	I	N	G		E	R	R	O	R					

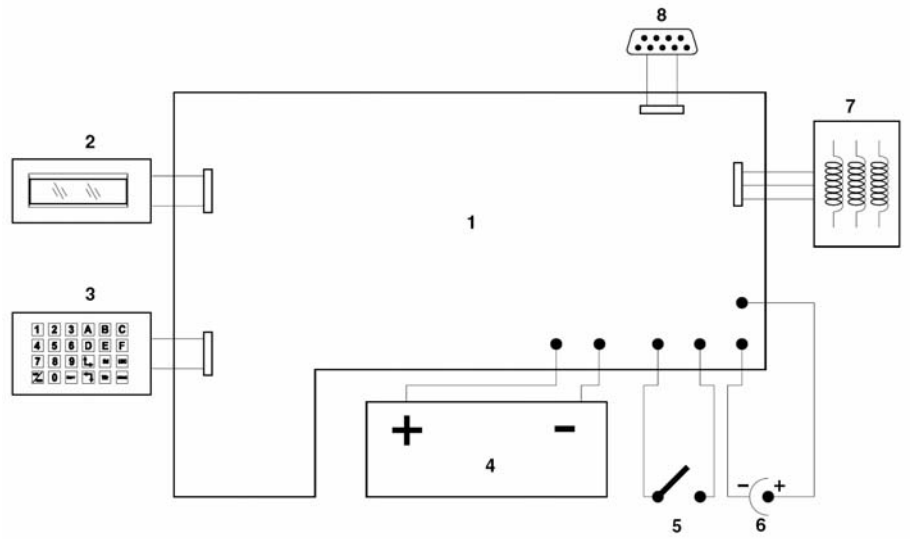
To quit this condition, press the **ESC** key.

1.6 Electrical/electronic circuit

MAIN PARTS

1. **PRINTED CIRCUIT BOARD:** contains the microprocessor which runs the key reading/writing operations, the supply circuits, interface with the keyboard and display and the connectors between the antennas and personal computer.
2. **DISPLAY** liquid crystal, retro-illuminated, 2 lines of 20 characters.
3. Control **KEYBOARD** with 24 keys.
4. Lead buffer **BATTERY** 12V 2Ah
5. **MASTER SWITCH**
6. **MAINS SUPPLY SOCKET** 15V/800 mA
7. **ANTENNAS** for reading/writing tuned to 125 kHz
8. **RS232 9 pole RECEPTACLE**

OPERATIONAL ELECTRICAL BLOCK/CIRCUIT DIAGRAM



2 TRANSPORT

The machine is easily transported and is not dangerous to handle. The packed machine can be carried by one person.

2.1 Packing

The packing is designed to ensure safe transportation and protect the machine and all its parts.

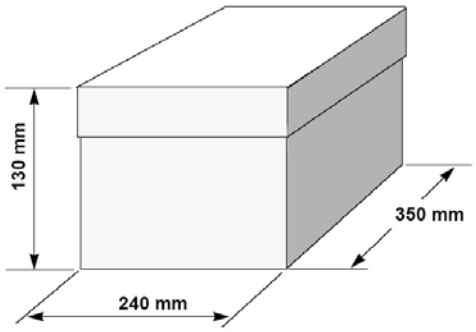


Fig. 4

2.2 Transport

It is advisable to use the packing every time the machine is transported, as this will avoid knocks causing damage.

2.3 Unpacking

To remove the machine from the packing box:

1. it is advisable to open the box without damaging it so that it may be used again (removals, dispatch to manufacturers for repairs or servicing);

2. check the contents of the box, which should comprise:

– 1 machine
– 1 universal power provider
– 1 power cable
– 1 set of documents, including: operating manual, spare parts list and agreement for use form
– 1 x 3.5” program floppy disk

2.4 Machine handling

When the machine has been unpacked, place it directly on its workbench.

3 ACCESSORIES PROVIDED

The machine is supplied complete with:

- battery (found inside the machine);
- universal power provider;
- power cable;
- user's manual;
- program disk for stand-alone operation (to be used only if the program installed on the machine is lost).

4 MACHINE INSTALLATION AND PREPARATION

The machine can be installed by the purchaser and does not require any special skills; it is supplied ready for use (battery connected). However, some checks and preparation for use need to be carried out by the operator.

ATTENTION: **when you receive your machine it must be powered from the 110/220V mains supply by means of the feeder provided and left unused for 8 hours with the power switch on, in order to fully charge the battery.**

4.1 Preparation for use - preliminary operations

- turn on and select local operation (stand-alone);
- enter password (enabling for use) (chap. 8.2, page 21);
- set up the language.

4.2 Checking for damage

The machine is solid and compact and will not normally damage if transport, unpacking and installation have all been carried out according to the instructions in this manual.

However, it is always advisable to check that the machine has not suffered any damage.

Should faults be found which are not due to the above mentioned risks, contact the Silca Aftersales Service.

4.3 Environmental conditions

To ensure that the best use is made of the machine and relative keys with transponders, the operating temperature should be restricted. Given the characteristics of the transponder on the key blanks THE KEYS MUST BE CODED IN AN ENVIRONMENT WITH A TEMPERATURE OF 20°C OR OVER.

The ideal conditions for the machine are therefore:

- temperature between 20 and 40°C;
- relative humidity approx. 60%.

4.4 Positioning

The machine does not require a special location; simply place on a horizontal surface of suitable size.

ATTENTION: **the universal feeder provided with the machine and any electronic equipment should be placed at least 150mmfrom the antenna to avoid their generating interference which could affect reading and/or writing of the transponder Fig. 5, page 13.**

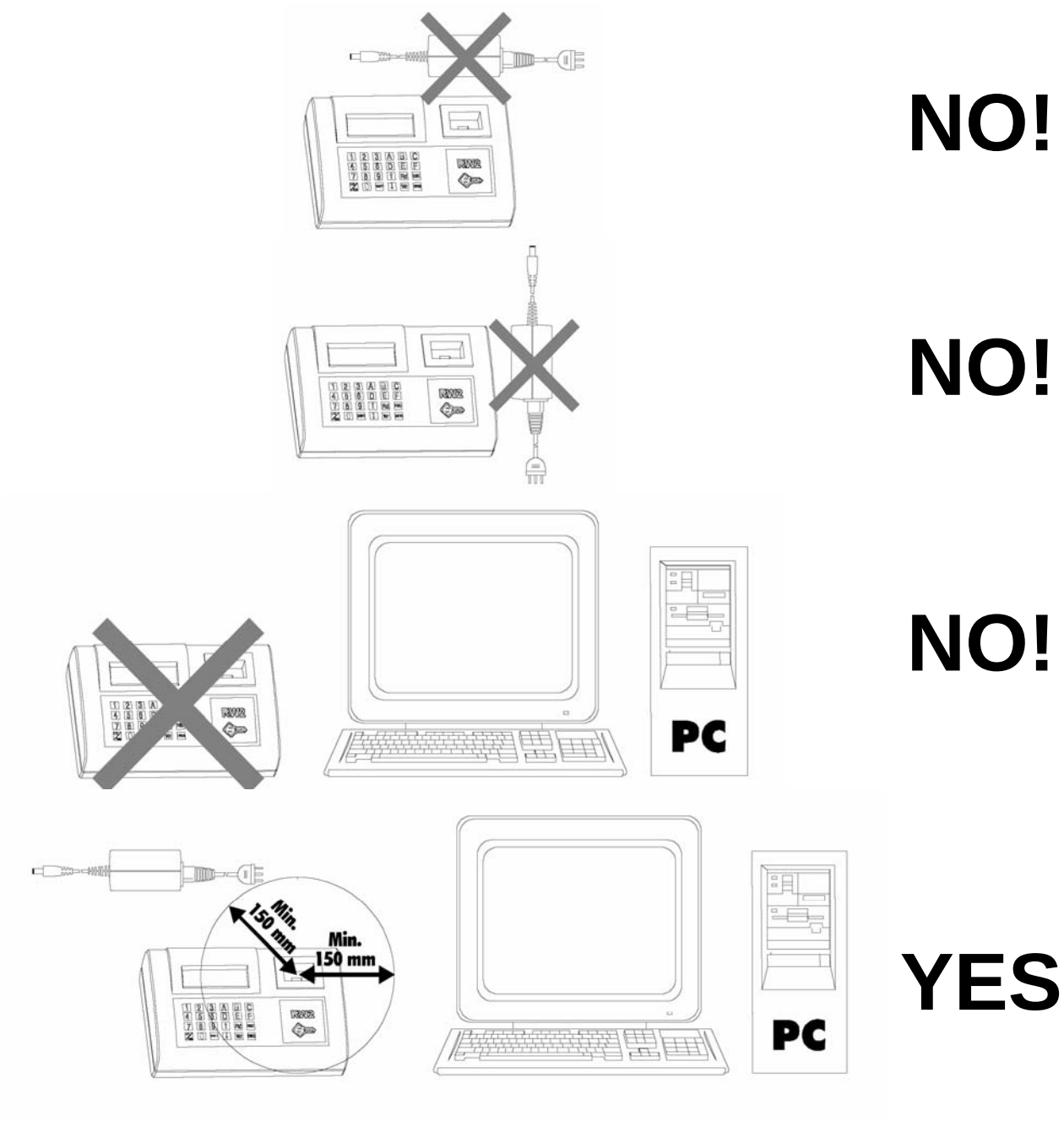


Fig. 5

4.5 Software update

The machine must be connected to a personal computer to update the internal software (for future expansion).

ATTENTION: **the RS232 receptacle required to connect to a personal computer is placed on the back of the machine. To gain access to it, lever off the cover (M) with the aid of a screwdriver (Fig. 2, page 7).**
Use an RS232 serial cable less than 3 metres long and follow the instructions given on the update floppy disk.

5 REGULATION AND SETTING OF THE MACHINE

The machine does not need any setting or regulation.

6 TEX CODE MODULE (OPTIONAL) FOR IDENTIFICATION(*) OF TEXAS* CRYPTO TRANSPONDERS, FOR THE COPY(**) OF TEXAS TRANSPONDERS WITH A FIXED CODE AND FOR THE COPY OF TEXAS TRANSPONDERS WITH A CRYPTO CODE(***)

(*) Operational from version 24.0 and higher.
(**) From version 27.0.
(***) From version 30.0. (Use the PC TEX CLONING PROGRAM or STP WINDOWS, from the 4th/2006 update on).

6.1 Operative parts

Q power cord (provided on the TEX CODE ADVANCED module)
O serial cable (provided on the TEX CODE ADVANCED module)
G universal input (provided on the machine)
P computer connection serial cable (provided on the machine)
N TEX CODE ADVANCED

N1 module power input connector
N2 serial connector for PC connection
N3 machine power input connector
N4 serial connector for machine connection

6.2 Installation

No special skill is required to connect the module to the machine; use the two cords ‘Q – power input’ and ‘O – serial’ provided on the TEX CODE ADVANCED module.

6.3 Use

The module does not interfere with machine connection to a PC. If the machine is used with power from the internal battery instead of the universal input, the battery also supplies power to the module.
The two figures “Fig. 6“ and “Fig. 7“ show the various uses for the machine and module.

✱ See Note on page 16

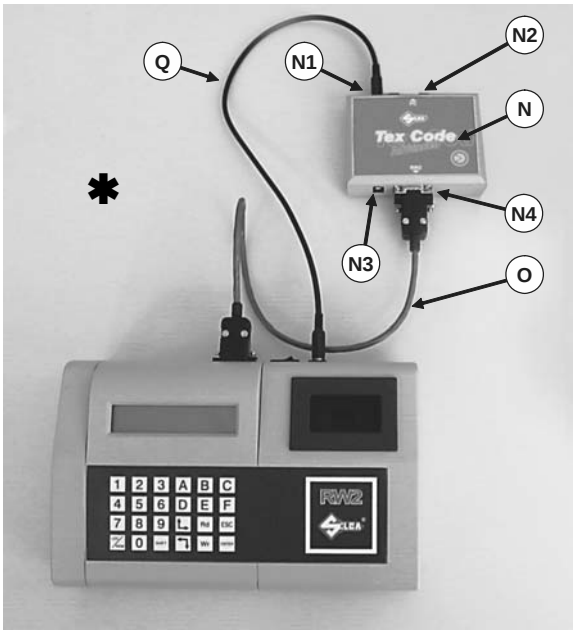


Fig. 6

Machine and module powered by an internal battery (with or without connection to a PC)

In this case the machine powers the module, with the cord connected to the input on the PC side.

* Megamos, Philips, Temic, Texas are registered trade marks.

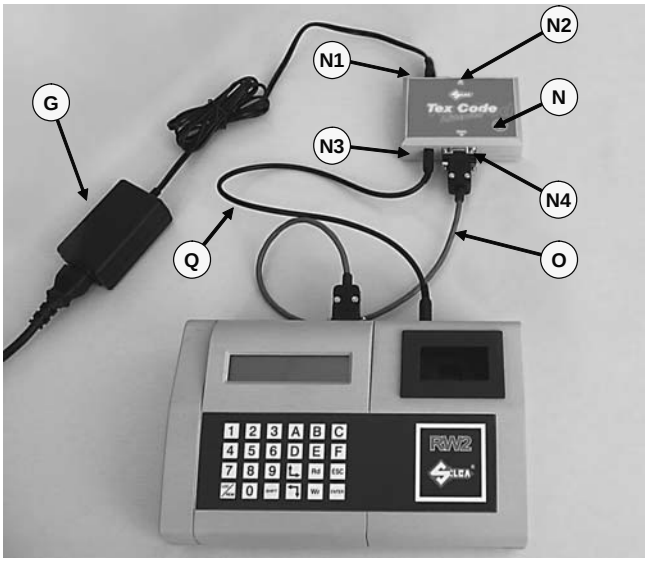
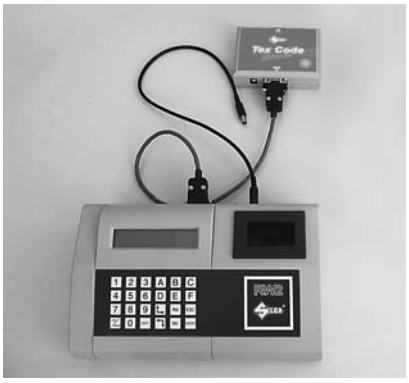


Fig. 7

Machine and module powered by the universal input (with or without connection to a PC)

ATTENTION: **After using the machine and module with this configuration, turn the machine off and disconnect the input cord from the module (see Fig. 8), otherwise the internal machine battery will go completely flat and have to be replaced.**
NEVER LEAVE THE MACHINE AND MODULE IN THIS CONFIGURATION AFTER USE, EVEN WITH THE MACHINE OFF (Fig. 8)

NO!



YES!

Fig. 8

(After using the module)

6.4 Software upgrade and use with PC (STP) (TEX CLONING PROGRAM)

Software for both the machine and the module is upgraded separately and independently through the connections shown in “Fig. 9“ or “Fig. 10“. Use an RS 232 serial cable of less than 3 metres in length and follow the instructions provided with the upgrade floppy disk.

✱ See Note on page 16

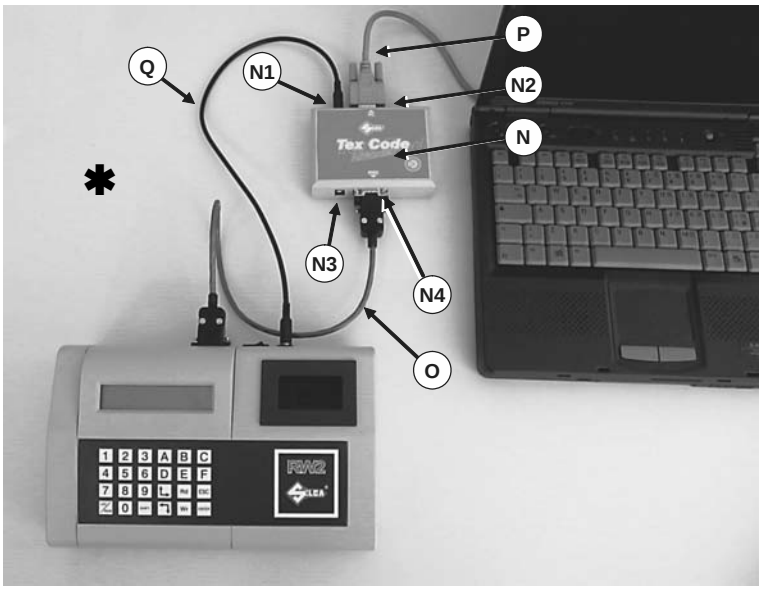


Fig. 9

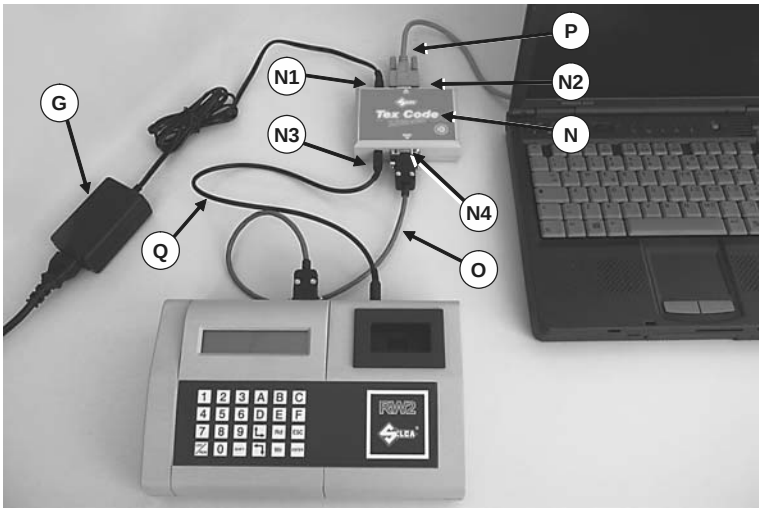


Fig. 10

✱ **Note (Figure 6 and Figure 9): configuration possible only for RW2s produced after 01/03/2000. These are identified by a red dot over the power inlet D (Figure 2, page 7). For RW2s without a red dot the only configurations possible are those shown in Figure 7 page 15 and Figure 10 page 16.**

7 COM-CODE MODULE FOR CODING HOLDEN-COMMODORE KEYS (OPTIONAL)

Operational from version 25.0 and higher.

7.1 Operative parts

Q power cord (provided on the Com-Code module)
O serial cable (provided on the Com-Code module)
G universal input (provided on the machine)
P computer connection serial cable (provided on the machine)
N Com-Code
R power lead from vehicle cigarette lighter (provided with Com-Code module) (Figure 13)

N1 module power input connector
N2 serial connector for PC connection
N3 machine power input connector
N4 serial connector for machine connection
N5 power supply warning light

7.2 Installation

No special skill is required to connect the module to the machine; use the two cords 'Q – power input' and 'O – serial' provided on the Com-Code module.

7.3 Use

The module does not interfere with machine connection to a PC. If the machine is used with power from the internal battery instead of the universal input, the battery also supplies power to the module.
Both the machine and the module can be powered through the vehicle cigarette lighter.
The three figures "Fig. 11", "Fig. 12" and "Fig. 13" show the various uses for the machine and module.

N.B: whatever power supply configuration is chosen, the module is active only if the red light (N5) is on.

✱ See Note on page 20

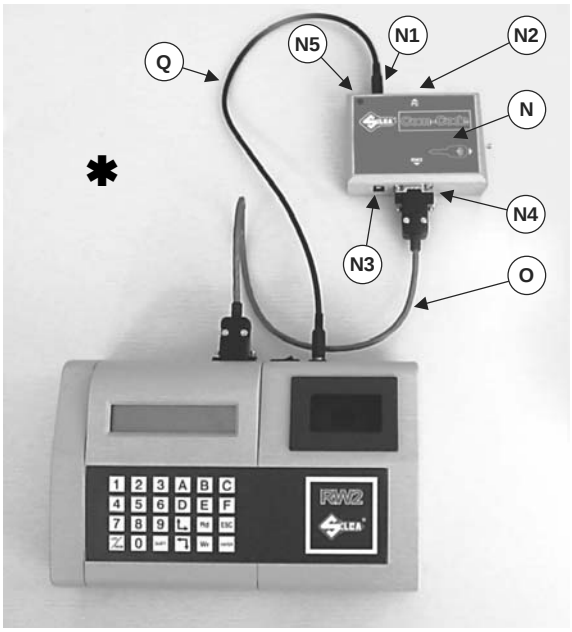


Fig. 11

Machine and module powered by an internal battery (with or without connection to a PC)

In this case the machine powers the module, with the cord connected to the input on the PC side.

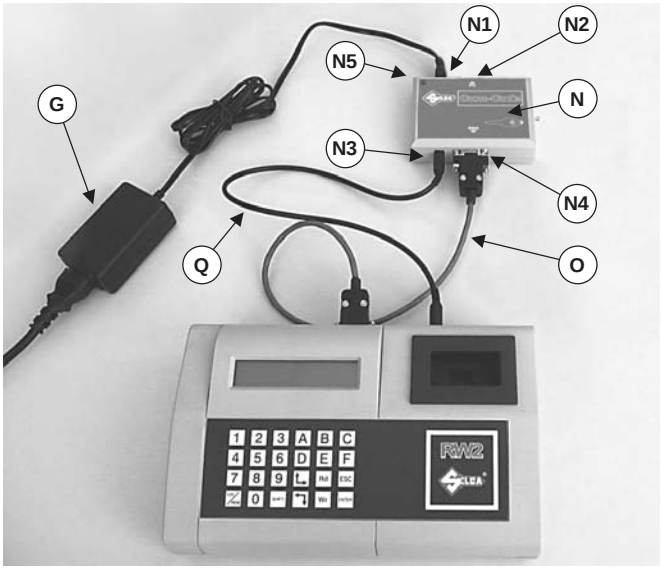


Fig. 12

Machine and module powered by the universal input (with or without connection to a PC)

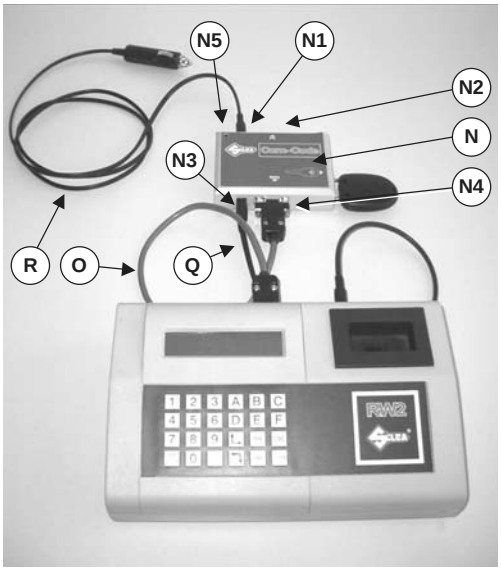
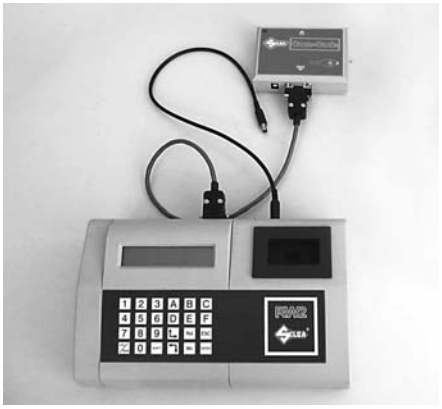


Fig. 13

Machine and module powered from cigarette lighter (with or without connection to personal computer).

ATTENTION: **After using the machine and module with this configuration, turn the machine off and disconnect the input cord from the module (see Fig. 14), otherwise the internal machine battery will go completely flat and have to be replaced.**
NEVER LEAVE THE MACHINE AND MODULE IN THIS CONFIGURATION AFTER USE, EVEN WITH THE MACHINE OFF (THE WARNING LIGHT (N5) ON THE MODULE MUST BE OFF).

NO!



YES!

Fig. 14

(After using the module)

7.4 Software upgrade and use with PC (STP)

Software for both the machine and the module is upgraded separately and independently through the connections shown in “Fig. 15“ or “Fig. 16. Use an RS 232 serial cable of less than 3 metres in length and follow the instructions provided with the upgrade floppy disk.

✱ See Note on page 20

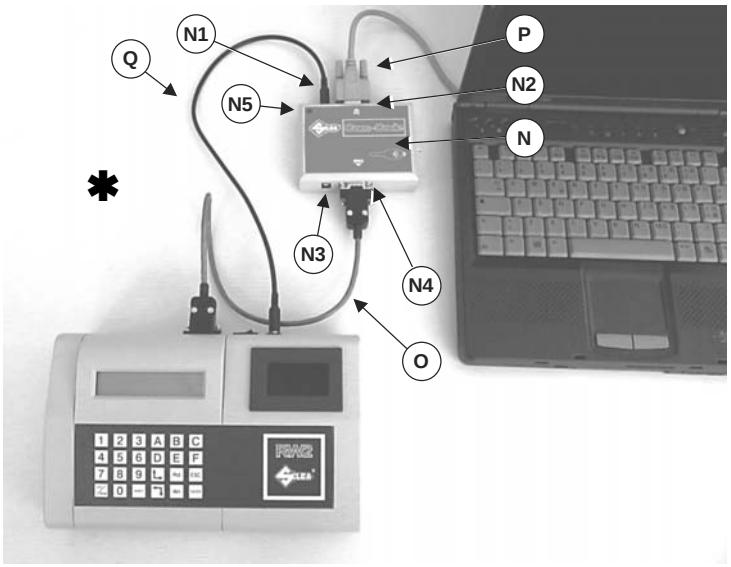


Fig. 15

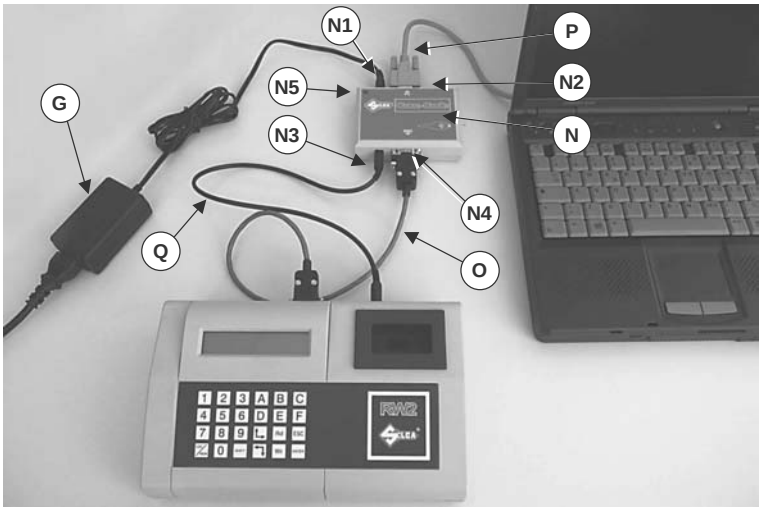


Fig. 16

✱ **Note (Figure 11 and Figure 15): configuration possible only for RW2s produced after 01/03/2000. These are identified by a red dot over the power inlet D (Figure 2, page 7). For RW2s without a red dot the only configurations possible are those shown in Figure 12 page 18, Figure 13 page 18 and Figure 16 page 20.**

8 OPERATING THE MACHINE

This chapter describes all the operations necessary to copy, detect, read and write on a key with transponder, including storage in a file of the codes read.
Also described are the sequence used to memorize new keys in a vehicle central unit by means of the STLM (Silca Transponder Learning Module) device and the use of the Tex Code Advanced module to identifying and copying Texas* Fixed Code and Crypto transponders.

8.1 Start-up

When the machine has been turned on the display shows:

*	*	W	A	I	T												*	*

A few seconds later it shows:

		C	O	N	N	E	C	T	E	D		T	O		P	C		
		T	E	X	A	S		M	O	D	U	L	E					

If the TEXAS module is correctly installed and functioning, on the display will appear ‘CONNECTED TO PC’ indicate that the machine is ready to receive instructions from the personal computer (via serial line) and will be controlled by the PC.
All operations without a PC are impeded.

Stand-alone operation

To use the machine without a PC, press the **LOC/REM** key.

8.2 Password (must be entered on installation)

When the machine is installed, if the ‘MEMORIZE PASSWORD’ option has not been activated (chap. 8.15, page 46), after selection of the stand-alone function, the display shows:

							V	E	R	.			2	9	.	0		
	P	A	S	S	W	O	R	D						_	_	_	_	_	

The words “VER. 29.0“ give the version of the internal program.

Request for password

To use the machine the password issued by the supplier/dealer must be entered. It comprises 5 numerical characters: digit the password and press the **ENTER** key.

Password correct

If the password is correct, the display shows:

	P	A	S	S	W	O	R	D			O	K						

After a few seconds the program opens the main menu.

Password wrong

If the wrong password has been entered, the display shows:

	P	S	W		E	R	R	O	R									
	P	A	S	S	W	O	R	D						_	_	_	_	_	

repeat the operation and press the **ENTER** key.
If you forget your password, contact the After-sales Service.

8.2.1 Password (memorized)

If the PASSWORD (Ch. 8.15, page 46) has been memorized in the machine, after selection of the stand-alone function, the display shows:

							V	E	R	.			2	9	.	0			

Wait approximately 3 seconds for the main menu to appear on the display:

>	C	O	P	Y														
	I	D	E	N	T	I	F	I	C	A	T	I	O	N				
	E	N	T	E	R	I	N	G				C	O	D	E			
	C	O	D	E		G	E	N	E	R	E	T	I	O	N			
	A	R	C	H	I	V	E											
	S	T	L	M														
	H	O	L	D	E	N		C	O	M	M	O	D	O	R	E		
	O	P	T	I	O	N	S											

8.3 Main menu

The display shows the following indications, which represent the first two items in the main menu:

>	C	O	P	Y														
	I	D	E	N	T	I	F	I	C	A	T	I	O	N				

The possibilities of choice from the menu are shown in the subsequent display.

>	C	O	P	Y														
	I	D	E	N	T	I	F	I	C	A	T	I	O	N				
	E	N	T	E	R	I	N	G				C	O	D	E			
	C	O	D	E		G	E	N	E	R	E	T	I	O	N			
	A	R	C	H	I	V	E											
	S	T	L	M														
	H	O	L	D	E	N		C	O	M	M	O	D	O	R	E		
	O	P	T	I	O	N	S											

To select use the up/down arrow keys until the cursor > is on the item required, then press the **ENTER** key.

8.4 Copying-duplicating keys

This function is activated by selecting "COPY": the machine is ready to make a copy of the electronic transponder code on the original key, on one or more key blanks with transponders.

8.4.1 Reading the key

The display shows:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L			
	K	E	Y													>	R	D

Place the key into the special hole on the front of the machine and push all the way in. Confirm that the key must be read by pressing the **RD** key.

The reading operation begins. For a few seconds the display shows:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S

Should there be any problems when reading the transponder (transponder missing, of a type which cannot be duplicated, Crypto, reading error, etc.) a warning appears (see Ch. 9 - WARNINGS).

When the electronic code has been read successfully, the display shows:

	R	E	M	O	V	E		K	E	Y								

8.4.2 Writing the key

When the key is removed, the display shows:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

Wr

Place the key with non-coded transponder into the machine and confirm that the key must be written by pressing the **WR** key.
Checking the transponder on the key begins to ensure that it is compatible with the type of transponder previously read.

Should there be any problems when checking the transponder (transponder missing, of a type which cannot be duplicated, Crypto, reading error, etc.) a warning appears (see Ch. 9 - WARNINGS).

When the electronic code has been read successfully (transponder detected), the machine checks whether the transponder has already been coded; if so, the display shows:

	A	L	R	E	A	D	Y		P	R	O	G	R	A	M	E	D	
	O	V	E	R	W	R	I	T	E							>	W	R

Wr

To confirm re-writing of the key; press the **WR** key.

The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

When the electronic code has been written successfully, the display shows:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

Should there be any problems when writing the transponder (writing errors) a warning appears chapter 9 - WARNINGS.

After a few seconds the machine asks if further copies of the key must be made with the same code; the display shows:

	O	T	H	E	R		C	O	P	I	E	S	?					
					N	O	>	E	S	C		Y	E	S	>	E	N	T

ENTER

- to continue without making other copies, press the **ESC** key;
- to make another copy, press the **ENTER** key.

In this case the machine will repeat the writing cycle procedure, etc.

8.4.3 Copy – duplicating TEXAS keys with fixed code transponders

ATTENTION: **This function is available when using the TEX CODE ADVANCED module (vers. 3.0 and over) + RW2 (ver. 27.0 and over) properly connected (see fig. 6 and 7 or Ch. 6 of the RW2 manual).**

This function is used to copy the TEXAS fixed code transponder electronic code on the original key onto a suitable electronic key blank.
Select 'COPY' from the RW2 menu and press **ENTER**; the display will show:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L			
	K	E	Y													>	R	D

Rd

Insert the key all the way into the special hole on the vehicle dashboard.

Press **RD** to continue.
The reading operation begins. The following will appear for a few seconds:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S

After a few seconds the following will automatically appear on the display:

	T	R	A	N	S	P	O	N	D	E	R		T	E	X	A	S		
																		4	C

If the TEXAS module is connected and operational, the following appears on the display after a few seconds:

	P	U	T		K	E	Y		O	N		T	O	P		O	F		
	T	E	X	A	S		R	E	A	D	E	R			>	R	D		

Rd

Remove the key from the vehicle antenna and place in position on the accessory antenna (TEX CODE ADVANCED), as shown in fig. 17 and 18 (if there are difficulties in reading, or the reading is not correct, change to the position shown in fig. 18, as this allows better data exchange between the module antenna and the key transponder).

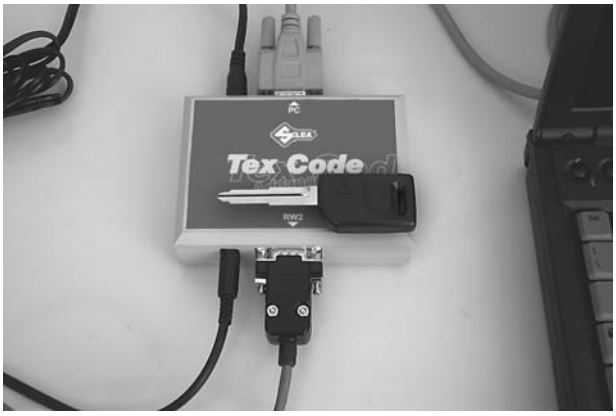


Fig. 17

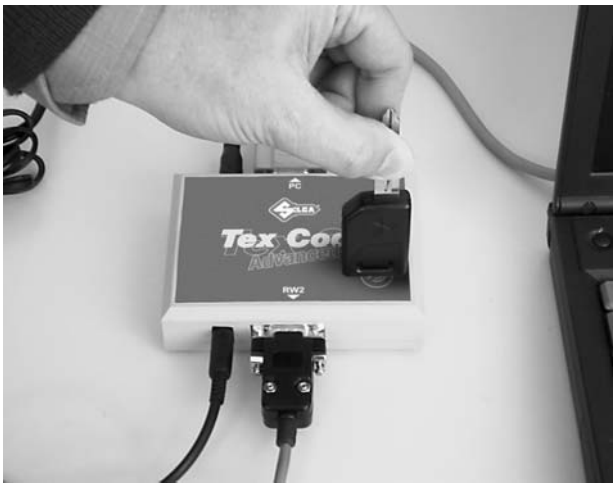


Fig. 18

Press **RD** on the machine.
The display will show:

	R	E	M	O	V	E		K	E	Y								

Remove the key from the TEX CODE ADVANCED antenna. The display will automatically show:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

Place the 'electronic' key over the accessory antenna (TEX CODE ADVANCED), as shown in fig. 17 and 18 (if there are difficulties in reading, or the reading is not correct, change to the position shown in fig. 18, as this allows better data exchange between the module antenna and the key transponder), then confirm if you wish to write the key by pressing the **WR** button.
The key transponder is then checked to see if it is compatible with the type of transponder previously read.
In the event of problems during the transponder check (no transponder, wrong, not writable, crypto, etc.) a warning message will appear (see Ch. 9 - WARNINGS – RW2 Manual).
If reading has been successful (the transponder involved is detected), the following will appear:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

If writing has been successful, the following will appear:

	C	O	P	I	A		E	S	E	G	U	I	T	A				

In the event of problems during transponder writing (writing error) a warning message will appear (see Ch. 9 - WARNINGS – RW2 Manual).
After a few seconds the machine queries whether other copies of the key are required with the same code, as follows:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

- Press **ESC** to proceed without making other copies;
- Press **ENTER** to make another copy.

In this case the machine will repeat the writing cycle procedure, etc.

8.4.4 Copy – duplicating TEXAS keys with crypto code transponders

ATTENTION: **This function is available only when using the TEX CODE ADVANCED module (vers. 3.0 and over) + RW2 (ver. 30.0 and over) + PC with TEX CLONING PROGRAM or STP WINDOWS software properly connected (see fig. 19 and 20 or Ch. 6 of the RW2 manual).**

This function is used to copy the TEXAS crypto code transponder electronic code on the original key onto a suitable electronic key blank.
Select 'COPY' from the RW2 menu and press **ENTER**; the display will show:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L			
	K	E	Y													>	R	D

Insert the key all the way into the special hole on the vehicle dashboard.
Press **RD** to continue.
The reading operation begins. The following will appear for a few seconds:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S

After a few seconds the following will automatically appear on the display:

T	R	A	N	S	P	.	T	E	X	A	S		C	R	Y	P	T	O	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	D

If the TEXAS module is connected and operational, the following appears on the display after a few seconds:

	P	U	T		K	E	Y		O	N		T	O	P		O	F	
	T	E	X	A	S		R	E	A	D	E	R			>	R	D	

Rd

Remove the key from the vehicle antenna and place in position on the accessory antenna (TEX CODE ADVANCED), as shown in fig. 19 and 20 (if there are difficulties in reading, or the reading is not correct, change to the position shown in fig. 20, as this allows better data exchange between the module antenna and the key transponder).

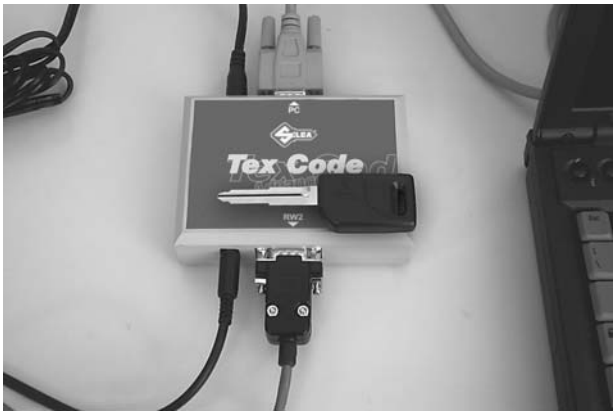


Fig. 19

Fig. 20

Launch the PC “TEX CLONING PROGRAM” or “STP WINDOWS” and follow the instructions on the PC video.

8.4.5 Memorize code*

When the machine has made one or more copies, it asks if the electronic code read must be stored in the internal memory so that it can be used to make a new key or transferred to the PC. The display shows:

	M	E	M	O	R	I	Z	E			C	O	D	E	?			
					N	O	>	E	S	C		Y	E	S	>	E	N	T

ENTER

- to continue without memorizing, press the **ESC** key;
- to memorize the code, press the **ENTER** key.

If the code must be memorized, the display shows:

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	N	N

ESC

Legend of data shown on display

- **CCCC.... CCCC:** electronic transponder code
- **XX:** identification number of type of transponder (ID)
- **NN:** position in the file assigned to the code (progressive number)

- to continue, press the **ESC** key.
- The display shows:

	R	E	M	O	V	E		K	E	Y								

When the key has been removed, the cycle starts again from the beginning.

* This function is not foreseen for copies of Texas transponders.

8.5 Transponder identification

This function is activated by selecting "IDENTIFICATION": the machine is ready to check the type of transponder (Megamos*, Philips*, Temic*, Texas*) on the key.

Type of reading

The number which appears in brackets, e.g. (33), indicates the type of transponder detected on the key and is useful information for the After-sales Service in identifying faults or faulty operation of the transponder.

Type of transponder number		
SILCA blank	(21)	
SILCA blank	(22)	
SILCA blank	(23)	
TEMIC* (Fiat)	(11)	
TEMIC* (Mazda)	(12)	
MEGAMOS*	(13)	
PHILIPS* (orig. or emul.)	(33)	
PHILIPS* (orig.)	(73)	
PHILIPS* emulating MEGAMOS* (Audi)	(53)	
PHILIPS* emulating MEGAMOS* (VDO)	(93)	
PHILIPS* Crypto	(44)	
MEGAMOS* Crypto	(48)	
TEXAS*	(4C)	
TEXAS* Crypto	(4D)	
TEMIC * Crypto	(8C)	
SAAB not duplicable	(8D)	
PHILIPS* Crypto OPEL	(40)	
PHILIPS* Crypto NISSAN	(41)	
PHILIPS* Crypto VAG	(42)	
PHILIPS* Crypto PEUGEOT	(45)	
PHILIPS* Crypto 2	(46)	(new type)
(*) TEXAS* CRYPTO	(60)	
(*) TEXAS* CRYPTO MITSUBISHI 3	(61)	
(*) TEXAS* CRYPTO MITSUBISHI 2	(62)	
(*) TEXAS* CRYPTO FORD 2	(63)	
(*) TEXAS* CRYPTO (RENAULT < 2000 , CHRYSLER, JEEP)	(64)	
(*) TEXAS* CRYPTO (SUZUKI)	(65)	
(*) TEXAS* CRYPTO (TOYOTA/LEXUS)	(67)	

If the display shows the warning 'TRANSPONDER CRYPTO' it means that the key has a transponder with a code that cannot be copied (unwritable) (see chapter 8.6 - Transponder Philips* Crypto (40, 41, 42, 44, 45) and chapter 9 - WARNINGS).

8.5.1 Reading the code and type of transponder (ID)

The display shows:

	I	**N**	**S**	**E**	**R**	**T**		**O**	**R**	**I**	**G**	**I**	**N**	**A**	**L**			
	K	**E**	**Y**												**>**	**R**	**D**	

Rd

Place the key into the special hole and press the **RD** key; the reading operation begins.
For a few seconds the display shows:

	R	**E**	**A**	**D**	**I**	**N**	**G**		**I**	**N**		**P**	**R**	**O**	**G**	**R**	**E**	**S**	**S**

Should there be any problems when reading the transponder (transponder missing, of a type which cannot be duplicated, crypto, reading error, etc.) a warning appears chapter 9 - WARNINGS.
When the electronic code has been read successfully, the display shows:

* Megamos, Philips, Temic, Texas are registered trade marks.
(*) Such detailed identification of Texas Crypto transponders is only possible if the machine is connected to the TEX CODE module.

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		N	N

ENTER

- **CCC.... CCCC:** electronic transponder code
- **XX:** identification number of type of transponder (ID)
- **NN**: position in the file assigned to the code (progressive number)
- to continue without memorizing, press the **ESC** key
- to memorize, press the **ENTER** key.

Electronic codes from Megamos* and Temic* transponders.

Due to the special reading system used the same key can be read at random from different points in the code, showing codes on the display which appear to be different. In the same way, a code entered on a transponder or generated by the STP (Silca Transponder Program) can be interpreted differently. However, the code is valid in all cases as it will be detected by the car centralized system, which will begin to read from as established point and not at random.

8.5.2 Identification – Reading the electronic code on TEXAS transponders

ATTENTION: This function is available only when using the TEX CODE ADVANCED module (vers. 3.0 and over) + RW2 (ver. 27.0 and over) properly connected (see fig. 6 and 7 or Ch. 6 of the RW2 manual).

This function is used to read the electronic code on original keys with TEXAS fixed code (4C) and crypto code (4D) transponders.
Select 'IDENTIFICATION' from the RW2 menu and press **ENTER**; the display will show:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L				
	K	E	Y													>	R	D	

Rd

Insert the key all the way into the special hole on the vehicle dashboard then press the **RD** button to confirm key reading.
The reading operation begins and the display shows:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S

After a few seconds the display automatically shows (according to the type of transponder entered):

	T	R	A	N	S	P	O	N	D	E	R		T	E	X	A	S		
																		4	C

Or:

T	R	A	N	S	P	.	T	E	X	A	S		C	R	Y	P	T	O	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	D

If the TEXAS module is connected and operational, after a few seconds the display will show:

	P	U	T		K	E	Y		O	N		T	O	P		O	F		
	T	E	X	A	S		R	E	A	D	E	R			>	R	D		

Rd

Remove the key from the vehicle antenna and place in position on the accessory antenna, as shown in fig. 21 and 22 (if there are difficulties in reading or the reading is not correct, change to the position shown in fig. 22, as this allows better data exchange between the module antenna and key transponder).

* Megamos, Philips, Temic, Texas are registered trade marks.

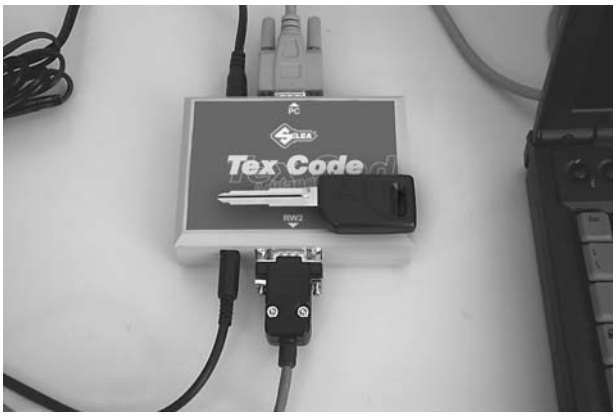


Fig. 21

Fig. 22

Press **RD** on the machine.
The display will show the electronic code:

C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**				**4**	**C**
C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**				**N**	**N**

ENTER

- **CCCC.... CCCC:** transponder electronic code
- **4C:** transponder identification number (ID)
- **NN:** position assigned to the code in the memory (progressive number)
- Press **ESC** to continue**.**

8.5.3 Memorize code

If the code must be memorized (**ENTER** key), the display shows:

	K	**E**	**Y**		**M**	**E**	**M**	**O**	**R**	**I**	**Z**	**E**	**D**						

ESC

To return to the beginning, press the **ESC** key.

8.6 Transponder Philips* Crypto (40, 41, 42, 44, 45)

One of the features of the Philips* Crypto transponder (identified by numbers 40, 41, 42, 44, 45) is a legible code (called **ID** or **DETECTOR**) which **is not the code for starting the engine** but merely a 'name' or 'identity' that is different for each transponder and cannot be changed. The detector is used by Crypto central systems on vehicles to check whether the transponder is already stored in the memory. Only if this is so can the device check the hidden Crypto code for starting the engine.
If there is no detector in the central system, it must be memorized by means of the diagnosis device in the possession of the dealer or also with the STLM device provided by SILCA, for the

* Megamos, Philips, Temic, Texas are registered trade marks.

vehicle models enabled (see HELP F5). After this operation the central system will be able to read the transponder properly and check the hidden Crypto code. With this function Philips* Crypto transponders can be used in the central system of vehicles with FIXED CODES (not Crypto), which read the **detector** as the **fixed code for starting the engine**.
In this case the full potential of the Crypto transponder is not utilized because the central system is unable to read and use the hidden part of the code (Crypto). However, it does mean that car manufacturers can already use only the Philips* Crypto transponder on their original spare keys, irrespective of whether it is used fully (on vehicles with Crypto central systems) or partially, reading the DETECTOR only (on vehicles with fixed code central systems). It is therefore possible to duplicate only the DETECTOR code of a Philips* Crypto transponder onto a Philips* or Silca blank transponder (T1 – T2 – T5).

Note: this operation can be carried out only after ascertaining that the vehicle central system is of the FIXED CODE type (this information could be provided by the vehicle owner or the dealer, based on the year of registration), otherwise the duplicated key will not work.

8.6.1 Memorizing the identification code

To memorize the identification code, proceed as follows:

– in the IDENTIFICATION function, as described in paragraph 8.5.1 - Reading the code and type of transponder (ID). If the following message appears after the original key has been read**:**

	T	R	A	N	S	P	O	N	D	E	R		C	R	Y	P	T	O	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	4

ENTER

Or one of the messages listed in paragraph 8.6.1. Press **ENTER** to memorize the code.
The display shows the electronic code for the detector:

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		4	4

– Or (40,41,42,45);

– to proceed without memorizing, press **ESC;**
– to memorize the code, press **ENTER**.

8.7 Texas* Crypto Transponder (4D, 60, 61, 62, 63, 64, 65, 67)

When a key with a Texas* Crypto type transponder is fitted into the machine, use of the 'Copy' and 'Identification' menus has two different effects, shown on the display. The different effects are the result of the TEX CODE module, which may be connected to the machine to achieve more precise identification of the various types of Texas* Crypto transponders. Below is a description of the two different situations:

8.7.1 Case "A" - the TEX CODE module is NOT connected to the machine.

Any type of Texas* Crypto transponder is identified with the number 4D (see chapter 9 WARNINGS) and the display shows the following message:

T	R	A	N	S	P	.	T	E	X	A	S		C	R	Y	P	T	O	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	D

8.7.2 Case "B" - the TEX CODE ADVANCED module is connected to the machine.

The machine automatically detects the module and after approximately two seconds, during which the type of transponder is shown on the screen:

* Megamos, Philips, Temic, Texas are registered trade marks.

T	R	A	N	S	P	.	T	E	X	A	S		C	R	Y	P	T	O	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	D

the display automatically shows the message:

	P	U	T		K	E	Y		O	N		T	O	P		O	F		
	T	E	X	A	S		R	E	A	D	E	R			>	R	D		

Remove the key from the machine aerial and place it on the device aerial, as shown in figures Figure 23 and Figure 24 (if there are problems with the reading, or incorrect readings, choose the position shown in Figure 24, which improves data exchange between the module aerial and key transponder)

Fig. 23

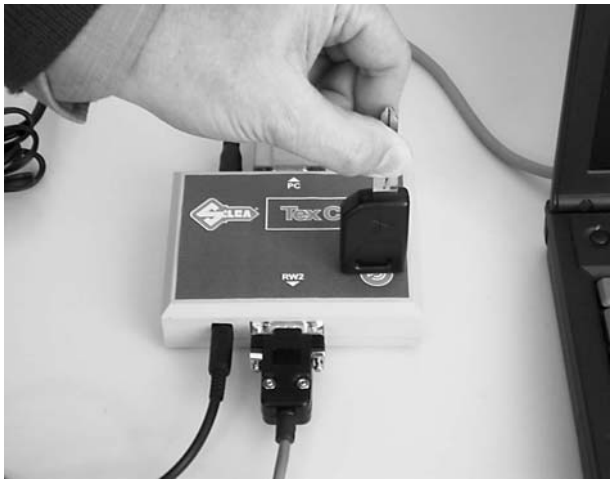


Fig. 24

Due to the type of operation of Texas* Crypto transponders, if a number of readings are taken in too short a time, the transponder is moved, or errors of any type occur during reading, wait at least ten seconds before attempting to make another reading**.**

- Press **RD** on the machine.
- If the initial selection '**COPY**' has been used, the display will show the message:

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E						X	X								-	-

ESC

The data shown mean:

- **XX** : identification number of the type of transponder (ID).
- press **ESC** to continue**.**

If the initial selection 'IDENTIFICATION' has been used, the display will show the message:

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E						X	X								N	N

ENTER

The data shown mean:

XX : identification number of the type of transponder (ID).
NN : position in the memory assigned to the data read (progressive number).
- press **ESC** to continue without memorizing**.**
- press **ENTER** to memorize**.**

N.B: If two asterisks "" appear in the place of the transponder ID, the transponder being read is unknown.**

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E						*	*								N	N

Press the "Arrow ⇩" key to see on the display some of the data for the previously read transponder. This function may be useful when reading new transponders not yet identified. Please transmit these data to Silca After-Sales Service (to facilitate this, the data can be saved in the machine memory).

P	W		*	*			I	D		*	*							X	X
M	C		*	*			*	*	*	*	*	*		*	*			N	N

XX : identification number of the type of transponder (ID).
NN : position in the memory assigned to the data read (progressive number).
All the other information on the display shows the data read on the transponder.
- press **ESC** to continue without memorizing.
- press **ENTER** to memorize.

8.8 Copies with code entry

A key with transponder can be copied if the electronic code is known.
The function for copying keys from a code entered by the user is activated by selecting "ENTERING CODE".
The display shows the first two items in the sub-menu: the choices possible are shown in the following way:

O	R	I	G	I	N	A	L		T	R	A	N	S	P	O	N	D	E	R
>	M	E	G	A	M	O	S		1	3	-								
	P	H	I	L	I	P	S		3	3	-	7	3						
	P	H	I	L	I	P	S		5	3	-	9	3						
	T	E	M	I	C				1	1	-								
	T	E	M	I	C				1	2	-								

The numbers 13, 33, 73, 53, 93, 11, 12 indicate the type of transponder.

Select the type of transponder from which the code to be copied was originally read, then press the **ENTER** key.

8.8.1 Entering the code

The electronic transponder code is made up of numbers, from 0 to 9, and the letters A B C D E F.
If Philips* is selected, two fields of 16 characters appear on the display.

-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-			

If MEGAMOS* or TEMIC* are selected, one field of 16 characters appears on the display.

-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-			

* Megamos, Philips, Temic, Texas are registered trade marks.

Enter the code, then press the **ENTER** key.
To alter any wrong data use the **SHIFT** and **LH/RH ARROWS** to move to the character to be corrected, then press the **ENTER** key.
The machine makes a check on the special code fields; if any data is incorrect, a warning message appears:

	I	N	C	O	R	R	E	C	T		C	O	D	E				

– to quit, press the **ESC** key and repeat the operation.

8.8.2 Writing the key

If the code entered is correct, the display shows:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

Place the key with non-coded transponder into the machine and press the **WR** key.
The transponder on the key blank is checked.
Should there be any problems when checking the transponder (transponder missing, wrong transponder, of a type which cannot be written on, Crypto,) a warning appears (see Ch. 9 - WARNINGS).
When the electronic code has been read successfully, the machine checks whether the transponder has already been coded; if so, the display shows:

	A	L	R	E	A	D	Y		P	R	O	G	R	A	M	M	E	D
	O	V	E	R	W	R	I	T	E	?						>	W	R

– press the **WR** key to confirm.

The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

When the electronic code has been written successfully, the display shows:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

Should there be any problems when writing the transponder (writing errors) a warning appears (see Ch. 9 - WARNINGS).
After a few seconds the machine asks if further copies of the key must be made; the display shows:

	O	T	H	E	R		C	O	P	I	E	S	?					
					N	O	>	E	S	C		Y	E	S	>	E	N	T

– to continue without making other copies, press the **ESC** key;
– to make another copy, press the **ENTER** key.

8.9 Code generation

If you are not in possession of the key or original code with which to make a copy of a transponder key, the automatic CODE GENERATION function on RW2 can be used. The electronic code is automatically calculated by the software, which retraces the structure of the original code (specific for each make of vehicle).

In this way a valid key can be made, ready to be memorized in the vehicle central unit.

When the electronic key code has been generated **the key must be programmed in the vehicle central unit by means of the specific programming procedure** (see SDD PROGRAMMING SECTION column 15, 27 or CAR KEYS SECTION column 15, 16 in the transponder guide).

This function is activated by selecting “CODE GENERATION”.

The display will show the first two items in the sub-menu; the choices are given in the following illustrations:

	C	O	D	E		G	E	N	E	R	A	T	I	O	N			
>	(	B	-	F	)		B	O	S	C	H	-	F	I	A	T		
	(	M	E	G	)		M	E	G	A	M	O	S					
	(	M	-	V	)		M	E	G	A	M	O	S	-	V	D	O	
	(	T	-	F	)		T	E	M	I	C	-	F	I	A	T		
	(	S	-	O	)		S	I	E	M	E	N	S	-	O	P	E	L
	(	S	-	V	)		S	I	E	M	E	N	S	-	V	W		
	(	G	-	V	)		P	S	A		V	A	L	E	O			
	(	G	-	C	)		P	S	A		C	H	P					
	(	G	-	N	)		N	I	S	S	A	N						

Select the type of generation using as a reference the generation associated with the car model (see “SDD PROGRAMMING SECTION” column 12 or “CAR KEYS SECTION” column 12 in the transponder guide), and press **ENTER**.

The display will show the code:

X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X

– Press **ENTER** to continue, press **ESC** to quit:

	I	N	S	E	R	T		B	L	A	N	K		KEY				
																>	W	R

Place the key all the way into the special hole on the vehicle dashboard then confirm that the key is to be written; press the **WR** key.

If problems occur when checking the transponder (transponder absent, wrong, unwritable, crypto) a message will appear (see chapter 9 - WARNINGS).

If the key has been properly read, the machine checks whether the transponder has already been coded; if the result is positive, the display will show:

	A	L	R	E	A	D	Y		P	R	O	G	R	A	M	M	E	D
	O	V	E	R	W	R	I	T	E	?						>	W	R

– to confirm press the **WR** key**.**

The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

If the key has been properly written, the display will show:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

If problems occur when writing the transponder (writing error), a warning message will appear (see chapter 9 - WARNINGS).

After a few seconds the machine queries if other copies must be made; the display shows:

	O	T	H	E	R		C	O	P	I	E	S	?						
					N	O	>	E	S	C		Y	E	S	>	E	N	T	

ENTER

- to continue without making other copies, press the **ESC** key**;**
- to make another copy, press the **ENTER** key.

8.10 Codes archive

Up to 99 codes for keys with transponders can be stored in the machine's memory. After it has been read, a code can be archived in position 'NN'. With this function access can be gained to the archive, the code can be recalled and displayed and, if required, used to make further copies.

8.10.1 Display of archived code

This function is activated by selecting "ARCHIVE". The display shows:

	D	I	S	P	L	A	Y		C	O	D	E							
	P	O	S	I	T	I	O	N	?								>	N	N

ENTER

Enter the required 'NN' position in the memory and press the **ENTER** key.
If there is no code in position 'NN', the display shows:

	N	O		C	O	D	E		A	T									
	P	O	S	I	T	I	O	N										N	N

ESC

- to return to the beginning, press the **ESC** key.

If there is a transponder code in position "NN", the display shows:

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		N	N

ENTER

- to continue without making a copy, press the **ESC** key.
- to make a copy of the key from the code, press the **ENTER** key.

Note: when the file is full (100 codes memorized) the message in the NN is: =

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		=	=

ENTER

In this state new codes cannot be memorized. Delete, or transfer the file to STP then delete, in order to continue the code memorizing operation.

8.10.2 Writing the key

The display shows:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

Place the key with non-coded transponder into the machine and press the **WR** key.

Should there be any problems when checking the transponder a warning appears chapter 9 - WARNINGS.

When the electronic code has been read successfully and the transponder has already been coded, the display shows:

	A	L	R	E	A	D	Y		P	R	O	G	R	A	M	M	E	D
	O	V	E	R	W	R	I	T	E	?						>	W	R

– to confirm, press the **WR** key.

The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

When the electronic code has been written successfully, the display shows:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

Should there be any problems when writing the transponder (writing errors) a warning appears chapter 9 - WARNINGS.

After a few seconds the machine asks if further copies of the key must be made; the display shows:

	O	T	H	E	R		C	O	P	I	E	S	?						
					N	O	>	E	S	C		Y	E	S	>	E	N	T	

– to continue without making other copies, press the **ESC** key;
– to make another copy, press the **ENTER** key.

8.11 STLM

The STLM device is used to programme new keys on a vehicle, even when all the original keys have been lost, delete the code for a lost key from the vehicle memory, check the number of keys in the central unit memory, display the ID of the central immobilizer unit (IM. ID) and display and delete any anomalies stored in the memory of the central immobilizer unit.
For instructions on how to use the STLM device, consult the user's manual.

Programming new keys/number of keys in the memory

Connect the STLM to the machine (with a serial cable) and the car (with the special cable), then select the "STLM" function; the machine is ready to establish contact with the STLM to carry out the tests.

Interacting with the STLM

If the STLM is not connected, the display shows:

	S	T	M	L		N	O	T		F	O	U	N	D				

ESC

– to return to the beginning, press the **ESC** key.

If STLM is properly connected, the display will show:

	S	T	M	L		F	O	R				V	A	G				
																O	K	?

ENTER

the red warning light on the STLM begins to flash: this message indicates that the STLM device is connected to a car model of the Volkswagen group (VAG-VOLKSVAGEN system, AUDI, SEAT, SKODA, etc.).

Press **ENTER** to confirm.

The display shows the following items:

>	K	E	Y	S		L	E	A	R	N	I	N	G					
	N	O	.		O	F		K	E	Y	S		S	E	T			

Select the required item, press the **ENTER** key.

Note: all the functions in this menu require a four-figure PIN CODE – secret number assigned to the purchaser of a vehicle.

8.11.1 Programming new keys

This function makes it possible to add new keys to the immobilizer system or delete them. To activate the function select 'PROG. KEYS'.

The display shows:

	I	N	S	E	R	T		N	U	M	B	E	R		O	F		
	K	E	Y	S						<	1	-	8	>			X	

ENTER

Enter the **total number of keys** to be used on the vehicle (including the new ones to be programmed), press the **ENTER** key;

– to return to the beginning, press the **ESC** key.

The display shows:

	P	I	N		C	O	D	E										
	<	0	0	0	0	-	9	9	9	9	>							

ENTER

Car system PIN code required (PIN code - 4 digits - secret number assigned to the owner when taking delivery of a new car).
Enter the PIN code, press the **ENTER** key
– to return to the beginning, press the **ESC** key

Displaying the data for confirmation

The display shows:

	P	I	N		C	O	D	E					N	N	N	N		
	K	E	Y	S									X		O	K	?	

ENTER

ATTENTION: before pressing "ENTER" to confirm that the data entered are correct, fit the first key into the vehicle ignition block (turn to the ON position).

Memorize keys

The display shows:

	C	O	M	U	N	I	C	A	T	I	O	N						
	W	I	T	H		T	H	E		C	A	R						

The key is now memorized on the car by means of the STLM.

The STLM led will go from flashing to still light. The learning time for the first key is a few seconds and when it has been accepted **the STLM led will begin to flash again.** Remove the first key and fit all the others, one at a time. Each key must be turned until contact is made for approx. 1 second so that the central unit can learn the code.

STLM response - memorization successful

Memorizing successful; the display shows:

	L	E	A	R	N	I	N	G		M	O	D	E					
	C	H	E	C	K		K	E	Y	S								

Testing the memorized keys

– to check that the memorized keys work, try turning on the car engine;
– to return to the beginning, press the **ESC** key.

STLM response - memorization unsuccessful - repeat

Memorizing not successful; the display shows:

	L	E	A	R	N	I	N	G		E	R	R	O	R				
	R	E	P	E	A	T										O	K	?

ENTER

– to repeat, press the **ENTER** key;
– to return to the beginning, press the **ESC** key.

8.11.2 Reading the keys in the memory

This function makes it possible to view the number of keys currently stored in the central unit memory. Select "NUMBER KEYS PROG.". The display shows:

	P	I	N		C	O	D	E										
	<	0	0	0	0	-	9	9	9	9	>							

ENTER

The PIN code for the vehicle central unit is required (PIN CODE - 4 numbers – secret number assigned to the purchaser of the vehicle).
– To return to the beginning, press the **ESC** key**.**
Enter the code, press the **ENTER** key;
The display shows:

	M	E	M	O	R	I	Z	E	D		K	E	YS					
	X	X																

ESC

– XX = number of keys stored in the immobilizer central unit memory.

Press **ESC** to quit.

ATTENTION: **the procedure described above is also used as an emergency ignition procedure because when the number of keys has been read, the vehicle can be started (ONCE ONLY) even with a key without transponder.**

8.12 Holden Commodore

This function is used when the machine is connected to the relevant module for copying or coding Holden - Commodore keys.
When this function is selected the display shows the two items on the menu for this type of key.

>	C	O	P	Y															
	E	N	T	E	R	I	N	G		C	O	D	E						

Select the relevant item, press the **ENTER** key.

8.12.1 Copy

ATTENTION: **before pressing ENTER, thereby activating selection, place the original key to be cut on the module, taking care that there is contact between the terminal on the key and the sprung contact on the module through which the code is communicated (see Figure 25).**

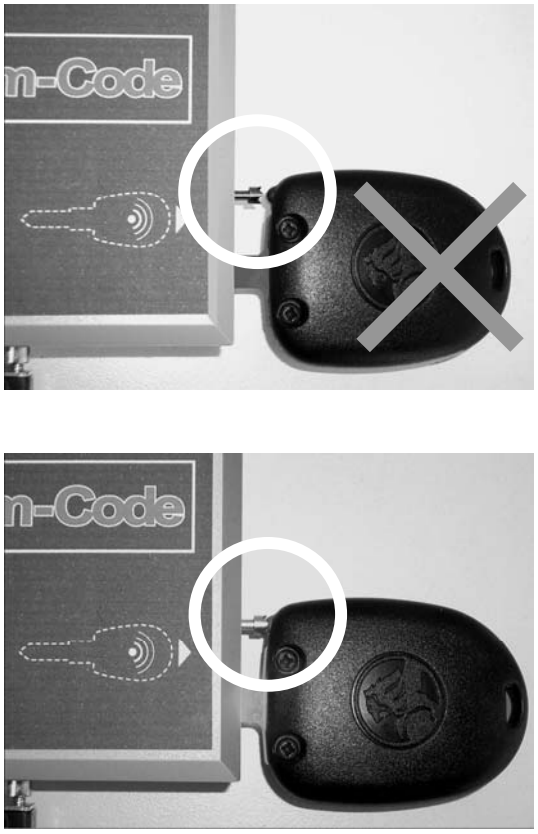


Fig. 25

The reading operation begins. For a few seconds the display shows:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S

If there are reading problems (key missing, not positioned correctly, reading error, etc.) a warning message appears (see Ch. 9 “WARNINGS“).

If the electronic code has been read properly, the words below appear:

	R	E	M	O	V	E		K	E	Y								
X	X	X	X	X	X													

N.B: XXXXXX is the electronic code read from the original key.

The original key can now be removed from the module.
Press **ENTER**, the message appears:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

When the key blank is fitted into the module and the **WR** key pressed, the following message appears for a few seconds:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S

If writing has been carried out properly, the message below appears:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

If there are problems during writing (key missing, not positioned correctly, reading error, etc.), a warning message appears (see Ch. 9 “WARNINGS“).
Press **ESC** to return to the initial menu.

>	C	O	P	Y														
	E	N	T	E	R	I	N	G		C	O	D	E					

8.12.2 Enter code

When “ENTER CODE“ is selected on the display, the following message appears:

	H	O	L	D	E	N		C	O	M	M	O	D	O	R	E		
_	_	_	_	_	_													

Digit the code, which comprises numbers from 0 to 9.

ATTENTION: **fill the whole field with 6 numbers, adding zero to the beginning of the code, if necessary. E.g. if the code is 1368 digit 001368.**

This security code must be the one for the vehicle on which the key will operate and must be known. If this is not so the vehicle system will not enable the key to start the engine.
Press **ENTER**, the message appears:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y		
																>	W	R

After the key blank is fitted into the module and the **WR** key pressed, the following message appears for a few seconds:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

If there are problems during writing (key missing, not positioned correctly, reading error, etc.) the following warning message appears (see Ch. 9 “WARNINGS“).

8.13 Options

This function is activated by selecting "OPTIONS". The display shows the first two items in the sub-menu. The choices possible are shown in the following illustration:

>	L	A	N	G	U	A	G	E										
	C	A	N	C	.	C	U	S	T.		A	R	C	H	I	V	E	
>	K	E	Y	B	O	A	R	D		C	H	E	C	K				
	T	E	S	T		S	T	L	M									
	M	E	M	O	R	I	Z	E		P	S	W						
	M	O	D	U	L	E												

Select the item required and press the **ENTER** key.

8.13.1 Language

Selecting ‘LANGUAGE’ gains access to a menu with which to vary the language to be used:

>	I	T	A	L	I	A	N	O										
	E	N	G	L	I	S	H											
	F	R	A	N	C	A	I	S										
	D	E	U	T	S	C	H											
	E	S	P	A	N	O	L											

Select the language required and press the **ENTER** key.
This is confirmed by the display showing the selected language. E.g.:

>	E	N	G	L	I	S	H											

– to return to the beginning, press the **ESC** key.

8.13.2 Deleting archive

With this option the memory for the file containing the keys read and stored can be deleted.
The display shows:

C	O	N	F	I	R	M		C	A	N	C	E	L	L	A	T	I	O	N
					N	O	>	E	S	C		Y	E	S	>	E	N	T	

You are required to confirm deletion of the code file; press the **ENTER** key.
When the operation has been carried out, the display shows:

	C	A	N	C	E	L	L	A	T	I	O	N						
	C	A	R	R	I	E	D		O	U	T							

– to return to the beginning, press the **ESC** key.

8.13.3 Testing the keyboard

With this option the operation of all the keys can be checked.
The display shows:

	P	R	E	S	S		K	E	Y									

When each key is pressed the corresponding number or letter appears on the right hand side of the display.

Key	Display
0 - 9	0 - 9
A B C D E F	A B C D E F
Right-hand arrow	>
Left-hand arrow	<
SHIFT	SH
RD	RD
WR	WR
ENTER	EN

– to return to the beginning, press the ESC key.

8.14 Test STLM

This option is used to check the STLM software version, STLM communication, the existence of anomalies stored in the immobilizer central unit memory, eliminate such anomalies, read the immobilizer ID (IM. ID), and identify the type of connector.
The function is activated by selecting “TEST STLM“. The display shows the first two items of the sub-menu. The choices possible are shown below:

>	S	T	L	M		V	E	R	.									
	S	E	L	F		T	E	S	T		S	T	L	M				
	R	E	A	D		I	M	.		F	A	U	L	T	S			
	C	L	E	A	R		I	M	.		F	A	U	L	T	S		
	R	E	A	D		I	M	.	.	I	D							
	C	O	N	N	E	C	T	O	R		I	N	F	O				

– Select the item required, press the **ENTER** key.

8.14.1 Software version

– Select “STLM VER.”
– This option is used to check the version of the software on the STLM.
– The display shows:

	S	T	L	M		V	E	R	.					R	:	4	.	8

– Press **ESC** to quit.

8.14.2 Diagnostics

– Select “DIAGNOSTICS STLM”
– This option is used to check the operation of the STLM device.
– The display shows:

	S	E	L	F		T	E	S	T		S	T	L	M				
	O	K																

– Press **ESC** to quit.
– If there are any anomalies, the display shows:

	S	E	L	F		T	E	S	T		S	T	L	M				
	E	R	R	O	R		(	X	X	)								

– (XX) Error code.

In such cases contact the after-sales service, giving the error code displayed.

8.14.3 Reading anomalies on the immobilizer

Note: the vehicle ignition block must be on.

– Select “READ IM ERRORS.”
– This option is used to check the existence of anomalies in the immobilizer central unit memory.

– - If there are no anomalies, the display shows:

	R	E	A	D		I	M	.		F	A	U	L	T	S			
	N	O		E	R	R	O	R										

ESC

– Press **ESC** to quit.
– If there are anomalies in the immobilizer central unit memory, the display shows:

	R	E	A	D		I	M	.		F	A	U	L	T	S			
	E	R	R	O	R	S												

ESC

– in this case delete the anomalies using the 'DELETE IM. ERRORS', and check again to ensure that there are no other errors.

8.14.4 Deletion of immobilizer anomalies

Note: the vehicle ignition block must be on.

– Select "DELETE IM. ERRORS".

This option is used to delete the anomalies in the immobilizer central unit memory:

– The display shows:

	C	L	E	A	R		I	M	.		F	A	U	L	T	S		
	E	X	E	C	U	T	E	D										

ESC

– press **ESC** to quit.

8.14.5 Reading the immobilizer ID code (IM ID)

Note: the vehicle ignition block must be on.

– Select "READ IM. ID".
– This option is used to view the immobilizer ID (IM. ID), a code comprising 14 alphanumeric characters, essential for those who have to ask the automobile manufacturer to replace a lost PIN CODE.
– The display shows:

X	X	X	X	X	X	X	X	X	X			I	M	M	O			
X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	

Immobilizer ID

ESC

– Of all the characters shown on the display, only the 14 following the word IMMO make up the immobilizer ID.
– Example:

4	A	0	9	5	3	2	3	4	A		I	M	M	O				
A	U	Z	9	Z	0	W	4	2	5	2	7	5	5		D	7	7	

ESC

The immobilizer ID in this case is: **AUZ9Z0W4252755.**

8.14.6 Connector

– This option is used to identify the type of connector used to connect the STLM to the vehicle.
– The display shows:

	C	O	N	N	E	C	T	O	R		I	N	F	O				
	V	A	G															

ESC

– Press **ESC** to quit.

8.15 Memorize PSW

This option can be used to bypass the PASSWORD.
Select ‘MEMORIZE PSW’ from the options menu; the display will show:

	M	E	M	O	R	I	Z	E		P	S	W	?					
						N	O	>	E	S	C		Y	E	S	>	E	N	T

ENTER

- When **ENTER** is pressed the password will be memorized by the machine and it will not be necessary to enter it every time (chap. 8.2.1, page 22).
- Press **ESC** to return to original operation which requires the password to be entered (chap. 8.2.1, page 22) whenever the machine is turned on.

8.16 Module

This option makes it possible to check proper operation of any modules connected to the machine.
Select the option and press the **ENTER** key.
If the modules are not connected to the machine, or are faulty, or connected to the machine but not properly powered (see Ch. 6) the display will show:

	M	O	D	U	L	E		N	O	T		D	E	T	E	C	T	E	D

ESC

- press **ESC** to continue.

If the modules are properly connected to the machine, the module identification and the software version it uses will appear.

	T	E	X	A	S		M	O	D	U	L	E						
	V	.		X	.	X												

ESC

	H	O	L	D	E	N		C	O	M	M	O	D	O	R	E		
	V	.		X	.	X												

ESC

- press **ESC** to continue.

9 WARNINGS

When the machine is turned on, the state of the battery is checked.

During normal operation, when carrying out the different procedures/functions from the main menu (copying, detecting, entering codes, filing) the machine can detect any problems or faults which may occur when reading, checking or writing the transponder in the key.

The following paragraphs illustrate all the possible situations which can stop the machine, and the warning messages which appear for the operator's information.

9.1 Battery flat

If a machine is used without mains power, the battery is checked at each ignition and before every writing operation. If voltage lower than the internally set minimum is read, the display shows the message:

	F	L	A	T		B	A	T	T	E	R	Y						

The machine cannot operate. Use the power provider to re-charge the battery and to use the machine immediately.

ATTENTION: **do not leave the machine on with this message on the display as the battery could be damaged. Turn off the machine, connect the feeder, turn on again and leave the battery to recharge for at least 2/3 hours.**

Note: it is possible to recharge with the machine switched off or running.

9.2 Messages during key reading

If there are problems during reading of the transponder, a warning message appears.

TYPES OF MESSAGES WHICH MAY APPEAR AT THE END OF THE READING STAGE

1

	T	R	A	N	S	P	O	N	D	E	R							
	N	O	T		D	E	T	E	C	T	E	D						

2

	R	E	A	D	I	N	G		E	R	R	O	R					

3

T	E	X	A	S		T	R	A	N	S	P	O	N	D	E	R		
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	C

4

T	E	X	A	S		T	R	A	N	S	P	.	C	R	Y	P	T	O
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	D

5

C	R	Y	P	T	O		T	R	A	N	S	P	O	N	D	E	R	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	X	X

6

C	R	Y	P	T	O		T	R	A	N	S	P	O	N	D	E	R	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	4

7

	T	R	A	N	S	P	O	N	D	E	R							
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	8	D

8

O	P	E	L		T	R	A	N	S	P	.		C	R	Y	P	T	O
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	0

9

N	I	S	S	A	N		T	R	A	N	S	.		C	R	Y	P	T	O
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	1

10

V	A	G		T	R	A	N	S	.		C	R	Y	P	T	O			
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	2

11

P	E	U	G	E	O	T		T	R	A	N	S	.	C	R	Y	P	T	O
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	5

12

C	R	Y	P	T	O	2		T	R	A	N	S	P	O	N	D	E	R	
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E		4	6

13

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	0							-	-

14

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	1							-	-

15

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	2							-	-

16

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	3							-	-

17

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	4							-	-

18

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	5							-	-

19

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O
T	Y	P	E							6	7							-	-

MEANING: THE ORIGINAL KEY:

1) has no transponder or is badly positioned;
2) has a faulty transponder, cannot be read properly or does not work;
3) has a type (4C) TEXAS* transponder;
4) has a type (4D) TEXAS* CRYPTO transponder;
5) has a MEGAMOS* (48) or TEMIC* (8C) CRYPTO transponder;
6) has a PHILIPS*(44) "CRYPTO" transponder;
7) has a SAAB (8D) transponder (cannot be copied);
8) contains a Crypto transponder, PHILIPS (40) for OPEL;
9) contains a Crypto transponder, PHILIPS (41) for NISSAN;
10) contains a Crypto transponder, PHILIPS (42) for VAG;
11) contains a Crypto transponder, PHILIPS (45) for PEUGEOT;
12) contains a Crypto 2 transponder, PHILIPS (46).
13) contains a Crypto Texas* transponder, type (60)
14) contains a Crypto Texas* transponder, type (61) for Mitsubishi
15) contains a Crypto Texas* transponder, type (62) for Mitsubishi
16) contains a Crypto Texas* transponder, type (63) for Ford
17) contains a Crypto Texas* transponder, type (64) for Renault < 2000 , Chrysler, Jeep
18) contains a Crypto Texas* transponder, type (65) for Suzuki
19) contains a Crypto Texas* transponder, type (67) for Toyota/Lexus.

* Megamos, Philips, Temic, Texas are registered trade marks.

In case 1, try placing the key in different positions to be read.
In case 2, use another key with transponder and repeat the operations.
In cases 3, 4, 5, 12 the code cannot be read and the key cannot be copied.
In cases 6, 8, 9, 10, 11 only the ID can be copied, and not the key itself (paragraph 8.4.1 – Reading the key).
In case 7 the key cannot be copied.
Cases 13, 14, 15, 16, 17, 18, can be seen only if the machine is connected to the TEX CODE module.

- To return to the beginning, press the **ESC** key.

9.3 Messages during key writing

If there are problems during checking of the transponder, a warning message appears.
TYPES OF MESSAGES WHICH MAY APPEAR AT THE END OF THE CHECKING STAGE

1

	T	R	A	N	S	P	O	N	D	E	R							
	N	O	T		D	E	T	E	C	T	E	D						

2

	I	N	C	O	R	R	E	C	T								X	X
	T	R	A	N	S	P	O	N	D	E	R							

3

T	E	X	A	S		T	R	A	N	S	P	O	N	D	E	R		
	C	A	N	N	O	T		W	R	I	T	E					4	C

4

C	R	Y	P	T	O		T	R	A	N	S	P	O	N	D	E	R	
	C	A	N	N	O	T		W	R	I	T	E					X	X

5

C	R	Y	P	T	O	2		T	R	A	N	S	P	O	N	D	E	R
	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E	4	6

MEANING: THE KEY BLANK:

1) has no transponder or is badly positioned;

2) has a transponder which is not compatible with the type of transponder needed to make a copy;

3) has a type (4C) TEXAS* transponder;

4) has a PHILIPS* (40) (41) (42) (44) (45), crypto 2 (46), MEGAMOS* (48), TEXAS* (4D) or TEMIC* (8C) CRYPTO transponder;

5) has a PHILIPS* CRYPTO 2 transponder.

In cases 1 and 2, repeat the writing operation on a new key.
In cases 3, 4 the key cannot be written and therefore cannot be copied.

– To return to the beginning, press the ESC key.

If there are problems during writing of the transponder, a warning message appears.

TYPES OF MESSAGES WHICH MAY APPEAR AT THE END OF THE WRITING STAGE

	W	R	I	T	I	N	G		E	R	R	O	R					

MEANING: THE KEY BLANK:
- has a faulty transponder, one which cannot be written properly or one which is protected during writing operations.
- contains an EH2 key previously written as a Texas Crypto (4D). To make a copy of this key it must be reset by means of the special program.
- To return to the beginning, press the **ESC** key.

* Megamos, Philips, Temic, Texas are registered trade marks.

10 MAINTENANCE

ATTENTION: for repairs or replacement of parts for maintenance, the 'CE' mark is guaranteed only if original spare parts provided by the manufacturer are used.

The machine does not need any special maintenance.

Periodically clean the key housing hole with a brush.

This operation should be carried out with the machine disconnected from the mains and turned off.

ATTENTION: do not use compressed air

ATTENTION: do not open the machine for any reason whatsoever

Before starting any type of maintenance (check-up or replacement of parts) read the following instructions:

- never carry out any maintenance operation with the machine on;
- always disconnect from the mains;
- follow the instructions in the manual;
- use original spare parts.

10.1 Trouble shooting

FAULT	PROBABLE CAUSE
DISPLAY - WHEN THE MACHINE IS ON THE DISPLAY IS BLANK	A) BATTERY FLAT - CONNECT THE SUPPLY CABLE AND CHECK THAT THE MACHINE GOES ON. B) CHECK WIRING, CONNECTIONS C) REPLACE THE BATTERY - REPLACE DISPLAY (AFTER-SALES SERVICE) - REPLACE CONTROL PCB (AFTER-SALES SERVICE)
KEYBOARD - IS NOT WORKING ON STAND - ALONE - DOES NOT OBEY COMMANDS	A) CHECK THE CONNECTING CABLES - REPLACE THE KEYBOARD (AFTER-SALES SERVICE)
ANTENNA - DOES NOT READ, DOES NOT WRITE	A) CHECK WIRING - REPLACE ANTENNA (AFTER-SALES SERVICE)

The indications above relate to the probable causes of the faults described. They are to be considered indicative and not a comprehensive list of the likely causes of faulty operation.

In the event of any other problems of faulty operation, contact the After-Sales Service.

10.2 Checking the wiring and replacing the battery

When it becomes necessary to check the internal wiring on the machine, or to replace the battery, proceed as follows:

- turn off the machine;
- disconnect the supply cable;
- remove the 4 plastic feet;
- remove the 4 screws inside the housing for the feet;
- remove the cover carefully, paying attention to the wiring.

CHECKING THE WIRING

Check that all the connectors are properly fitted.

REPLACING THE BATTERY

DIMENSIONS:

ELECTRICAL FEATURES: 12 V dc - 2 AH (recognised universal standard)

- disconnect the wiring;
- remove the feet (I) and screws (J);
- remove the screws (K) on the battery support;
- remove and replace the battery;

ATTENTION: **connect the red wire to the positive pole (+) and the black wire to the negative pole (-).**

- replace the screws (K) and wiring;
- close up the machine, tighten the screws (J) and adjust the position of the feet (I).

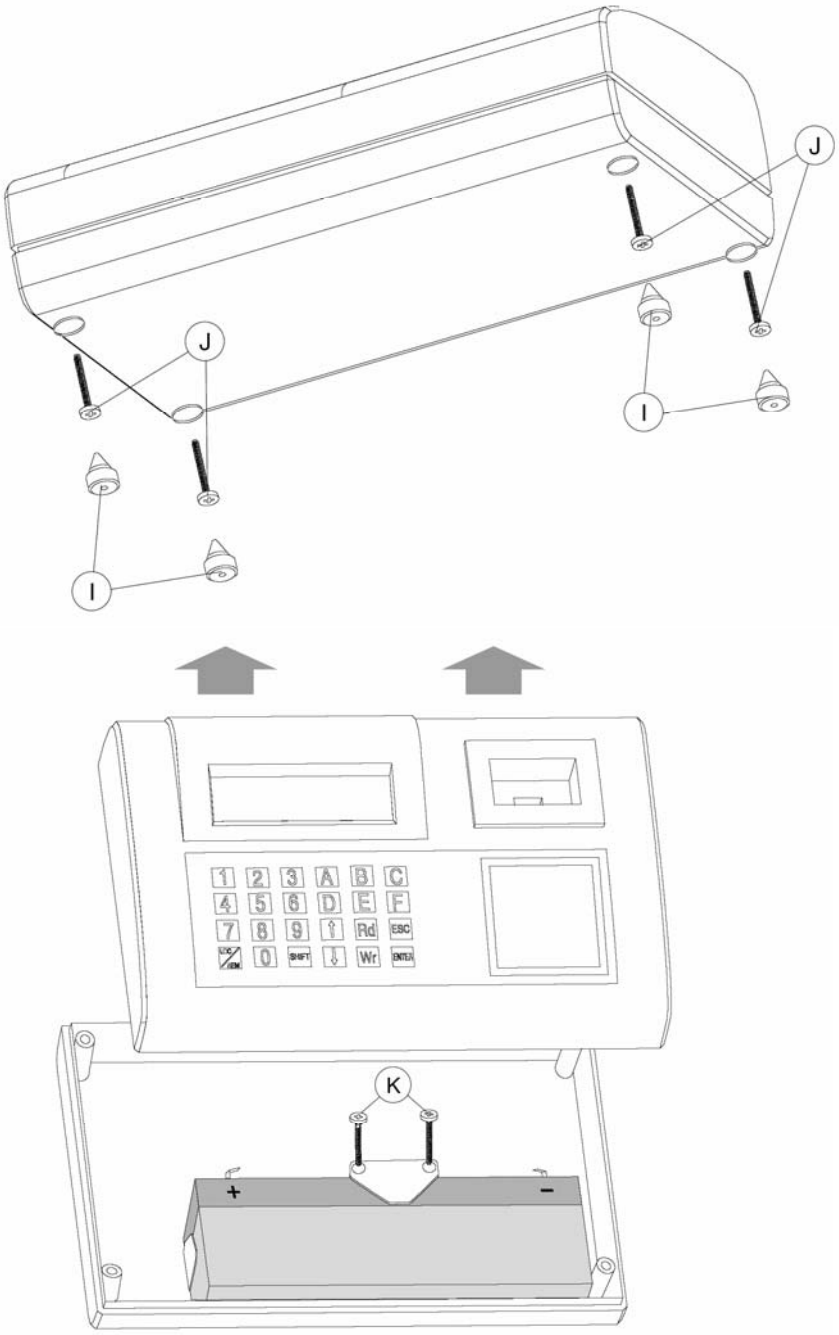


Fig. 26

11 WASTE DISPOSAL

EU regulations establish special arrangements for the disposal of waste*.

Waste deriving from the machine

The machine produces no waste during its use.

Machine

The machine is made of re-usable materials. Re-cycling is recommended ecological practice.

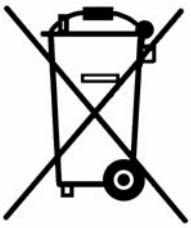
Packing

The machine is consigned in a cardboard packing box which can be re-used if undamaged. When it is to be thrown away it is classified as solid urban waste and it should be placed in the special paper collecting bins.

(*) "Waste" is any substance or object deriving from human activity or natural cycles, thrown way or to be thrown way.

Disposing of the battery

The battery must be disposed of according to current regulations.



INFORMATION FOR USERS

as per art. 10 of Directive 2002/96/CE of 27/01/2003
regarding waste from electric and electronic appliances (RAEE),

- The symbol illustrated above, also found on the machine, indicates that it has been placed on the market and must be included in separate rubbish collection when the user wishes to dispose of it (including all components, sub-assemblies and consumables that are integrated in the product).
- For information about the collection system for such appliances please contact **SILCA S.p.A.** or another subject registered in the various National Rolls for other countries in the European Union. Household waste (or of similar origin) can be included in the separate collection system for urban waste.
- On purchasing a new appliance of equivalent type, the old one can be consigned to the dealer. The dealer will then contact whoever is responsible for collecting the appliance.
- Suitable separate collection of the unused appliance and its dispatch for treatment, recovery and environmentally compatible disposal, makes it possible to avoid potential negative effects on the environment and human health, and aids recycling and the recovery of the materials used.
- Unauthorised disposal of the product by users involves the application of the sanctions provided for in received Directives 91/156/CE and 91/689/CE.

12 ASSISTANCE

Silca provides full assistance to purchasers of the machine. To ensure complete safety for the operator, any job not specified in this manual should be carried out by the manufacturer or in the special Service Centres recommended by Silca.

On the back cover of this manual there is a list of the Service Centres and relative addresses.

12.1 How to request service

The guarantee attached to the machine ensures free repairs or replacements of faulty parts within 12 months of purchase. All other service calls must be arranged by the customer with Silca or with a Silca service centre.

Note: the rechargeable lead battery is not included in the guarantee.

Silca S.p.A.
Vittorio Veneto

VITTORIO VENETO 11/11/2005

CE DECLARATION OF MACHINE COMPLIANCE

SILCA S.p.A. - VIA PODGORA 20 (Z.I.)
31029 VITTORIO VENETO (TV) - (ITALY)
TEL. 0438 9136 - FAX. 0438 913800

Declares under its own responsibility that the **Duplicating Machine For Transponder Keys** model

RW2

complies with the requirements of the following European Directives:

European Union **DIRECTIVE 89/336/CEE** (Electromagnetic Compatibility)
and with the EN 55022 / EN 50082 – 1 / EN 300 330 – 1 :2002
EN 300 330 – 2 :2002 Standards

General Manager Basic Production Center

Corrado Fischer